

THE PERSPECTIVES OF STAKEHOLDERS ON DEFINITION, CRITICAL CRITERIA, AND
SUPPORTING MEASURES FOR AFFORDABLE HOUSING IN BANGKOK



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This research aims to explore stakeholder perspectives on developing affordable housing in Bangkok through in-depth interviews and questionnaires. The study investigates three areas: definitions, critical criteria, and supporting measures. The data will be collected from stakeholders representing three sectors: the public sector, the private sector, and academia and non-governmental organizations. This research has established a framework for developing in-depth interviews and questionnaire surveys as part of its study from case studies of affordable housing development in other countries. During the literature review of case studies from other countries, it was discovered that affordable housing targets not only low-income households but also middle-income households, as housing affordability affects everyone. In contrast to the findings of this study, most respondents across all sectors believe that affordable housing is aimed at low-income households in the 41st - 60th percentiles of the income distribution, with a price that should not exceed 25% of their target income. Such examples are only part of the discussion that arises from the results of this study. This research will serve as a starting point for discussions on key factors in developing affordable housing, and will be useful for policymakers as a framework to exchange views among stakeholders and create housing policy in Bangkok.

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Affordable housing is a topic of great interest to me, and I sincerely hope for the development of effective affordable housing policies in Bangkok. Thus, this topic was chosen with the aim of being a small starting point for future research and the formulation of affordable housing policies in Bangkok. Over the course of nearly one year, I have learned and experimented with policies that I believe can be beneficial to society, to varying degrees.

Panissara Kitisuthatham

TABLE OF CONTENTS

	Page
.....	iii
ABSTRACT (THAI).....	iii
.....	iv
ABSTRACT (ENGLISH)	iv
ACKNOWLEDGEMENTS.....	v
TABLE OF CONTENTS.....	vi
LIST OF TABLES.....	xiii
LIST OF FIGURES	xv
Chapter 1: Introduction	16
1. Introduction.....	16
1.1. Problem Statement and Research Significance.....	16
1.2. Purposes of the Study.....	19
1.3. Research Question	21
1.4. Scope of the Study.....	21
1.5. Research Methodology.....	22
1.5.1. Research Framework	22
1.5.2. Data Collection	23
1.5.3. Data Analysis.....	24
1.6. Benefits of the Study	25
Chapter 2: Literature Review.....	26
2.1. The importance of stakeholder perspective on Public Policy	26

2.1.1. Definitions of Stakeholders on Public Policy	26
2.1.2. The importance of stakeholder perspective on Public Policy	28
2.1.3. Complementary Resources of Different Sectors in Public Policy Process..	29
2.2. Definition of Affordable Housing	31
2.2.1. Target income group for affordable housing.	35
2.2.2. The housing model, whether it is based on homeownership or renting.	36
2.2.3. The pricing criteria for determining affordability.....	37
2.2.4. The entities responsible for providing affordable housing and the role of housing authorities.	37
2.3. Critical Criteria.....	42
2.3.1. Aged group and Household Types in Affordable Housing	44
2.3.2. Type of building in Affordable Housing Development.....	46
2.3.3. Additional Facilities within the Affordable Housing Project	47
2.3.4. Size of affordable housing	48
2.3.5. Location of Affordable Housing	49
2.3.6. Car Parking within Affordable Housing Development	53
2.4. Measures.....	56
2.4.1. Financial Subsidization	56
1) Housing Loans	56
2) Housing grants.....	56
2.4.2. Funding and Financing Model	56
1) Housing Fund.....	56
2) Public Private Partnership.....	57

3) Tax incentives	57
2.4.3. Urban Planning Incentives	58
1) Inclusionary Zoning.....	58
2) Capacity Building (FAR Bonus).....	58
3) Reduce Parking Requirement.....	59
2.4.4. Land Management	59
1) Public land	59
2) Land Tax Readjustment.....	60
2.5. Theoretical Framework.....	61
2.5.1. Qualitative research	61
2.5.2. In-depth interview.....	62
2.5.3. Narrative Method.....	64
2.5.4. The Analytical Hierarchy Process (AHP)	66
Chapter 3: Methodologies.....	69
3.1. Conceptual Framework.....	69
3.2. Sampling in this study.....	72
3.3. Data Collection.....	73
3.3.1. Definition.....	73
3.3.2. Critical Criteria	76
3.3.2. Supporting Measures	81
3.3.3. Barriers and Supporting Measures	81
1) Barriers.....	81
2) Supporting Measure	82

3.4. Data Analysis	86
Chapter 4: Housing Situation in Bangkok	87
4.1. Housing Situation	87
4.1.1. Demand Side	87
4.1.2. Supply Side	93
1) Habitat III	96
2) Sustainable Development Goals (SDGs)	96
4.2.2. Country Level	98
1) The Thai Constitution	98
2) The 20-Year National Strategy	98
3) The 10-Year Housing Development Strategic Plan (2016 – 2025)	99
4) The 20-Year Housing Strategy	99
4.3. Existing Policies	100
1) Urban Planning Policies: Bangkok Master Plan (2013) - FAR Bonus	100
2) Tax Incentive (BOI Condo)	102
4.4. Discussion	104
Chapter 5: Data Collection and Data Analysis	106
5.1. Definition of Affordable Housing	106
5.1.1. Targeting Specific Income Groups for Affordable Housing	106
5.1.2. The role of affordable housing should follow either a homeownership model or a renting model	110
5.1.3. The appropriate price for Affordable Housing	115
5.1.4. Determining Optimal Loan Lengths for Affordable Housing	117

5.1.5. Providers in Affordable Housing Development	118
5.2. Critical Criteria of Affordable Housing	121
5.2.1. The importance in each aged group in Affordable Housing Development	121
5.2.2. The Significance of Household Types in Affordable Housing Development	123
5.2.3. Selecting the Appropriate Building Type for an Affordable Housing Project	124
5.2.4. The provision of crucial facilities within an affordable housing project.....	127
5.2.5. Determining the Appropriate Size of Affordable Housing	130
5.2.6. The Appropriate location for Affordable Housing	133
5.2.7. The Appropriate Number of Parking Spaces Required within the Affordable Housing Project.....	139
5.3. Supporting Measures.....	141
5.3.1. The Level of Impact of Barriers in Affordable Housing Development.....	141
5.3.2. Supporting Measures	144
1) Financial Subsidization on demand side.....	147
A. Housing Loans	147
B. Housing Grant.....	149
C. Daily Expense Subsidization	150
2) Funding and Financing Model.....	151
A. Housing Fund.....	151
B. Public-Private Partnerships	152
C. Tax Incentive.....	154

3) Urban Planning Mechanism	155
A. Inclusionary Zoning	155
B. Regulation Control	157
C. Capacity Building or Floor Area Ratio (FAR) Bonus:	158
E. Planned Unit Development or PUD	159
F. Reducing Parking Requirement	160
4) Land Management Mechanism	162
A. Public Land:	162
B. Public land leasing	163
C. <i>Right Conversion Method Readjustment</i>	164
D. Land Tax Readjustment	165
Chapter 6: Conclusion and Recommendation	166
6.1. Definition	166
6.1.1. Defining Critical Factors in Terms of Range of Target Income for Affordable Housing	166
6.1.2. Defining Critical Factors in Terms of Housing Contract (Renting or Buying)	170
6.1.3. Defining Critical Factors in Terms of Price for Affordable Housing	174
6.1.4. Defining Critical Factors in Terms of Provider for Affordable Housing	177
6.2. Conclusion on Critical Criteria of Affordable Housing	180
6.2.1 Defining Critical Criteria in Terms of Aged and household type for Affordable Housing	180
6.2.2. Defining Critical Criteria in Terms of size for Affordable Housing	183

6.2.3. Defining Critical Criteria in Terms of Appropriate Location for Affordable Housing	186
6.2.4 Defining Critical Criteria in Terms of Housing Type for Affordable Housing	189
6.2.5. Defining Critical Criteria in Terms of Facilities within Affordable Housing Project	193
6.2.6 Defining Critical Criteria in Terms of Parking within Affordable Housing Project	197
6.3. The Relationship between Appropriate Definition, Critical Criteria, and Supporting Measures	200
6.3.2. Target Group	201
6.3.3. Type and Size of Affordable Housing	201
6.3.4. Provider and Affordable Housing Authority	203
REFERENCES	2
VITA	12

LIST OF TABLES

	Page
Table 1: The conclusion on definition of affordable housing in selected countries	40
Table 2: The conclusion of Critical Criteria in selected countries	55
Table 3: Summary of the international implementation of Affordable Housing measure	60
Table 4: Variables of Definition Components.....	74
Table 5: Variables of Critical Criteria Components.....	77
Table 6: The results of Targeting Specific Income Groups for Affordable Housing	106
Table 7: Housing Contract model of Affordable Housing.....	110
Table 8: The Appropriate Price for affordable housing	115
Table 9: Determining Optimal Loan Lengths for Affordable Housing	117
Table 10: Providers in Affordable Housing.....	118
Table 11: The results of the Significance of Household Types in Affordable Housing Development	123
Table 12: The results of Appropriate Building Type for an Affordable Housing Project	124
Table 13: The results of level of importance of facilities within affordable housing	128
Table 14: The results of Appropriate Size of Affordable Housing	130
Table 15: The results of Appropriate location for Affordable Housing	133
Table 16: The results of Determining the Optimal Proximity of Facilities Around Affordable Housing	135
Table 17: The results of Parking Requirement in Affordable Housing Project	139
Table 18: The results of the Level of Impact of Barriers in Affordable Housing Development	141

Table 19: The results of Financial Subsidization on Demand Side 147

Table 20: Funding and Financing Measures 151

Table 21: Urban Planning Measures..... 155



LIST OF FIGURES

	Page
Figure 1: The Structural methodologies of this research.....	67
Figure 2: Diagram of Conceptual Framework.....	69
Figure 3: Housing Affordability in Homeownership model	89
Figure 4: Housing Affordability in Rental model	91
Figure 5: The relationship of institutions and policy in Housing Development	95
Figure 6: The Optimal Proximity of Facilities Around Affordable Housing	134
Figure 7: The level of significance and the level of difficulty for implementation were determined based on the survey responses from the participants.....	145
Figure 8: The relationship between definition, critical criteria and supporting measures base on stakeholders' response.....	1

Chapter 1: Introduction

1. Introduction

Urban housing affordability has become a pressing global issue, with the rising housing prices contradicting the concept of affordability. To combat this challenge, the concept of "affordable housing" has emerged as a potential solution in urban areas. However, the development of affordable housing requires collaboration among various stakeholders, including the public, private, and nonprofit sectors. A crucial aspect of this collaboration is establishing a conceptual framework that aligns all parties towards a common goal. In Thailand, while the topic of affordable housing has been under discussion, there is a lack of consensus among stakeholders regarding its definition. Therefore, it is essential to reach a mutual agreement and establish a shared understanding of the key issues related to affordable housing policy in Bangkok. Effective communication of these matters to stakeholders is paramount for overcoming the challenges associated with affordable housing development in the city.

1.1. Problem Statement and Research Significance

In urban areas, not only low-income households but also middle-income households are experiencing housing costs (Techasiriprapa, 2021). This indicates that the range of household income and affordability for households with a middle income is declining. To tackle housing issues, many countries are implementing affordable housing policies. The implementation of the affordable housing concept as a framework must include a precise definition, critical criteria, and measures to encourage the development of affordable housing. However, Thailand currently lacks a clear on definition and the critical criteria to shape the affordable housing, which is discussed among the stakeholders in various ways and perspectives. As a result, the policy on affordable housing development is still unclear and unplanned. This research aims to

explore stakeholder perspectives regarding the development of affordable housing in Bangkok.

The aim of this study is to gain an understanding of the circumstances and limitations of affordable housing development from the perspective of stakeholders. Furthermore, analyzing the current housing situation and comparing it to international case studies will help to determine the best approach for developing affordable housing in Bangkok. Rapid urban expansion has led to a denser population in the city. People from other provinces and countries come to the city center in search of employment, as it serves as a major job hub. Therefore, the primary issues faced by primate cities like Bangkok are urban density and housing shortages. Providing adequate and affordable housing has been one of the most challenging aspects of urbanization (HabitatIII, 2016). According to the Demographia World Urban Areas report, the rapid rate of urbanization affects housing supply, which has always failed to meet demand (Demographia, 2015).

The high cost of housing and lack of access to financing account for about half of the housing shortage in urban area (Zhang, 2008). Housing affordability issues are partly caused by poverty and insufficient income to meet the rising market rates of housing. Not only low-income households are negatively affected by these problems, but also middle-class households who are unable to purchase housing at market rates. This phenomenon reflects the problem of housing affordability, which is primarily linked to the condition and situation of the domestic economy. It directly affects both the supply and demand sides of the housing market. On the demand side, housing affordability is a concern, while on the supply side, there is a shortage of developers who can provide affordable housing (Povotong, 2022).

On the supply side, the market fails to provide affordable housing that meets high-quality standards and is located in suitable areas relative to household incomes. This difficulty in accessing affordable housing is compounded by the rising costs of land

in several urban areas (HabitatIII, 2016). Furthermore, due to urbanization and economic development, land values are increasing because of the creation of space, services, and facilities on limited property. Therefore, it is necessary to consider how best to optimize revenues or benefits when developing projects. The housing policy report by UN Habitat stated that "Inadequate access to land and dysfunctional urban land markets continue to be major barriers to the provision of appropriate housing" (Habitat III, 2016). The cost of land typically represents between one-fourth and one-third of the cost of a housing unit. Many cities experience rapid land inflation due to a lack of land management tools and a scarcity of urban services (HabitatIII, 2015).

The declining affordability of housing is in contrast to the rising prices. This research focuses on the shortage of affordable housing in Bangkok, which is a major issue. The perspectives of stakeholders are critical in developing policies to produce affordable housing. Therefore, the 4Ps idea can be applied to the elements of affordable housing development. These four factors are necessary to provide products and guide the scope of the study.

The scope of the study will encompass stakeholders' perspectives on the three components of affordable housing development in Bangkok: definition, criteria, and supporting measures. The first "P" represents price, which is one of the most crucial aspects of affordable housing development. The definition often incorporates the price of affordable housing. The second and third "P" stand for product and place, respectively, and these criteria are used to determine the minimum standard of affordable housing, including its physical appearance and location. The last "P" stands for promotion, which is a supporting tool for activating both the supply and demand sides through various measures.

According to Habitat III (HabitatIII, 2016) every individual has a fundamental human right to housing, which guarantees access to a safe, secure, habitable, and

affordable home. The quality of housing in which people live highlights the inequality of social and financial opportunities. Decent housing is crucial for maintaining good health, receiving a proper education, and having a secure home, all of which enable workers to generate income and save money. This provides opportunities for a better life and a better future.

The government must play a crucial role in providing policies on housing actions that ensure basic welfare services and implement inclusive growth policies for disadvantaged households. This will enable them to benefit from economic expansion and reduce inequality through human capital, which has a positive impact on long-term economic growth. The framework of the housing policy must encompass both supply and demand elements to achieve the goal of reducing inequality in housing. Unfortunately, few governments have promoted affordable housing policies that balance the needs of households with market scalability. Furthermore, both developed and developing countries suffer from a lack of legal frameworks and incentives for affordable housing development (HabitatIII, 2016).

1.2. Purposes of the Study

The aim of this study is to explore the perspectives of three stakeholder groups in Bangkok on affordable housing development: the public sector, the private sector, and the academics and NGOs sector. The study has the following objectives:

1. To examine the conceptual framework, operational models, and tools utilized in the development of affordable housing in other countries.
2. To foster a shared understanding among policymakers.
3. To investigate the current situation, housing tools or measures in Bangkok, as well as barriers and restrictions to the future development of affordable housing.

This research is a descriptive study designed to uncover the current state of affordable housing in Bangkok by exploring the perspectives of those involved in its development. The goal of the study is to promote the market provision of affordable housing, beginning with the stakeholders involved in its provision and management in Bangkok, a city with a high demand for housing and attractive facilities. Their opinions will serve as the starting point for affordable housing development in Thai society. In particular, the sector responsible for providing and managing housing is increasingly turning to affordable housing development. The main research objectives of the study are:

1. To investigate the appropriate definitions and objectives of affordable housing in Bangkok through consultation with housing experts in Thailand.
2. To identify the critical criteria that shape the supply of affordable housing in the real estate market, including considerations such as price, location, and physical appearance.
3. To evaluate the extent of barriers that impact affordable housing development in Bangkok.
4. To evaluate the effectiveness and feasibility of supportive measures for advancing affordable housing policies in Bangkok, considering their level of impact and implementation challenges.

The perspectives of stakeholders regarding the objectives mentioned above will provide essential information and facts about affordable housing perspectives in Thai society. This will serve as a starting point to address societal issues, particularly between the public and private sectors. By knowing each other's views, both sectors can collaborate and develop together to create measures and policies. Stakeholders' perspectives will serve as a crucial mechanism to support the supply of affordable housing in Bangkok. Furthermore, affordable housing does not only provide a place to live but also serves as a crucial starting point to live and create opportunities.

1.3. Research Question

1. What are the suitable definitions and objectives of affordable housing in Bangkok?
2. What are the critical criteria or physical characteristic influencing the supply and demand of affordable housing in Bangkok?
3. What are the barriers and limitations associated with affordable housing in Bangkok?
4. What are the potential supportive measures to facilitate affordable housing developments in Bangkok?

1.4. Scope of the Study

The researchers used this information as a guide to develop a questionnaire survey to investigate the viewpoints of policymakers on affordable housing in Bangkok. The questionnaire will provide a conceptual framework for conducting in-depth interviews with key stakeholders, which will also be analyzed. Additionally, the researchers collected information from reports and studies related to Bangkok's current housing situation, housing policies, and housing measures, including any restrictions or barriers to developing affordable housing in Bangkok. The study interviewed a sample of stakeholders from various sectors. Therefore, the research mainly comprises an analysis of the perspectives of specific groups to determine their views on the development of affordable housing in Bangkok and its broader context.

The scope of this research is to explore the perspectives of stakeholders on affordable housing development in the Bangkok Metropolitan Area. The sample of stakeholders for this study will be chosen using "purposive sampling" or "judgment sampling," which involves selecting a sample based on the researchers' decisions. The selected group will consist of individuals who work in housing development and have

knowledge, expertise, and experience in the field. These stakeholders are influential in determining and creating affordable housing policies.

1. The first group consists of government agencies involved in housing development and policy planning, including the Bangkok Metropolitan Administration (BMA), the National Housing Authority (NHA), and the Community Organizations Development Institute (CODI).
2. The second group comprises private sector organizations involved in real estate development, such as Sansiri, Origin Property, Sena Development, and Noble Development, who develop housing projects in various categories within Bangkok.
3. The third group includes academics and professors at universities who are experts in housing and real estate development.
4. The fourth group is comprised of non-governmental organizations and civil society organizations working on housing rights who are not associated with the government.

These four groups represent only a portion of the stakeholders involved in housing development, as the study's time is limited. However, these selected groups are the main actors who have the potential to develop affordable housing in the city.

1.5. Research Methodology

1.5.1. Research Framework

This research will apply a mixed-method research approach, which combines elements of both quantitative and qualitative research in order to answer the research question. As stated of George, "Mixed methods can help to gain a more complete picture than a standalone quantitative or qualitative study" (George, 2022). There are several common mixed-methods designs, such as explanatory sequential design and

exploratory sequential design. For this research, an explanatory sequential design will be used, where quantitative data collection and analysis occur first, followed by qualitative data collection and analysis (Warfa, 2015).

The first step is to collect data on definitions, critical criteria, and supporting measures from international case studies to create a conceptual framework for designing surveys and formulating questions used in in-depth interviews. The sample for this research comprises participants who work in three sectors: public sector, private sector, and academia/NGOs. There are 16 participants in this study, divided into the following groups: the first group comprises six public sector employees from the National Housing Authority (NHA), Bangkok Metropolitan Authority (BMA), and Community Organizations Development Institute (CODI); the second group consists of five participants who work in the private sector; and the final group comprises five individuals who work in academia or non-governmental organizations.

The participants are requested to complete the questionnaire survey to gain a preliminary understanding of the research framework before the interview session. As a first step in understanding the perspectives of stakeholders, the results of the questionnaire survey will be analyzed as part of a preliminary investigation into the rationales behind decisions. The findings of the in-depth interviews and questionnaire survey will be collected and analyzed to determine the causes and factors of each issue and the basis for each participant's perspective. The outcomes of the participants will then be analyzed in conjunction with the historical and current housing situation in Bangkok.

1.5.2. Data Collection

The data gathering for this research involves two types of data: initial data and primary data. The initial data consists of secondary data from reports, publications, and

papers related to affordable housing development, which will provide a structure for designing questionnaire surveys and in-depth interview discussions. The primary data is derived from in-depth participant interviews and surveys. The data collection is categorized into four areas: 1) Information on definitions, critical criteria, and supporting measures from international case studies; 2) Data from in-depth interviews; 3) Data from questionnaire surveys; and 4) Information on the situation of residential development in Bangkok.

1. Conduct a thorough review of measures taken in international case studies.
2. Summarize the measures implemented by other countries to prepare comprehensive questionnaire surveys.
3. Select stakeholders from three different sectors, ensuring that the number of representatives from each agency/company is identified.
4. Administer the questionnaire surveys to the selected stakeholders.
5. Conduct in-depth interviews with the stakeholders to gain deeper insights and understanding.

1.5.3. Data Analysis

This research utilizes the narrative method of data analysis, which is one of the qualitative research methods used to understand the social situation through the perspective of each (Overcash, 2003). The results of the in-depth interviews and questionnaire surveys for each participant can be used to create narratives that illustrate the perspectives of participants on the development of affordable housing in Bangkok. Even though participants answered the same set of questions, the questions can be perceived differently or the participants can have different ideas depending on their experience, role, knowledge, and perception of the issue (Duque, 2005). The narrative method can be classified into four groups. This research employs thematic analysis, or analysis based on the essence or core of the storyline, to determine the framework for

writing the study narrative. The narrative method does not establish any conclusions or facts regarding the veracity of the interview-obtained information. Rather, the focus is on the words or statements chosen by the interviewer and their significance or meaning. After analyzing each individual, the report analyzes the similarities and differences among stakeholders within the same sector and the broader context within each sector to determine whether there are similar or different perspectives on each issue.

1.6. Benefits of the Study

Affordable housing policies are key to increasing revenue and elevating the financial status of low-income and middle-income households, enabling them to benefit from inclusive growth. Furthermore, such policies can reduce social problems, including public health issues, crime, and homelessness. The aim of this research is to highlight the perspectives of significant stakeholders and their opinions on definitions, criteria, and measures for developing housing policies that support affordable housing.

The purpose of this research is to identify and gather stakeholders' definitions and criteria for the provision of affordable housing in Bangkok, with the aim of developing policies and measures. This study serves as a starting point for creating appropriate policies and measures that align with the Thai context to provide affordable housing. The policies and measures will define the role of each organization in implementing them.

Chapter 2: Literature Review

2.1. The importance of stakeholder perspective on Public Policy

2.1.1. Definitions of Stakeholders on Public Policy

Although scholars may have different ideas about stakeholders, most of them are based on the opinions of the main concerned stakeholders. These stakeholders are the individuals or groups most affected by a particular issue or problem. Carroll defined the term stakeholder as "any person or group that can affect or be affected by actions, decisions, policies or public interest goals". Similarly, Clarkson defines stakeholders as "individuals or interest groups who have both positive and negative interests as a result of public activities or policies" (Buchholz & Rosenthal, 2004)

The concept of stakeholders comes from representative theory, which refers to those who act to fulfill the interests of others rather than their own. In the context of public policy initiatives, the opinions and perspectives of diverse stakeholders with different interests are essential in designing policies to address problems. Freeman's (1984) stakeholder theory emphasizes the importance of stakeholder needs in public policy. In the public policy context, Freeman defines a stakeholder as any person or group who is positively or negatively affected by public policy actions (Badiora, 2020).

The United Nations defines "multi-stakeholder partnerships" as voluntary cooperative relationships between governmental and non-governmental parties. All partners agree to work together to achieve common objectives or perform specific functions, and to share risks, responsibilities, resources, and benefits (Dahiya & Okitasari, 2018). From a public policy perspective, a partnership is defined as a voluntary cooperation agreement among public, private, and/or civil society organizations through a structured participatory process. The process involves non-

hierarchical decision-making aimed at solving public policy problems (Bunnag, 2022). The term "multi-sector partnership" is included in SDG 17.16, which aims to enhance global cooperation partnerships for sustainable development. It involves collaborating with partners from various sectors to mobilize and share knowledge and expertise, to support the achievement of the Sustainable Development Goals in all countries, especially developing ones (Goals).

The concept of stakeholder participation in the public policy process serves as a means of achieving a balance between individual interests and the collective good, addressing the common needs and goals of society such as urban development and social services. Hence, stakeholder participation is an effective method to make decisions regarding the allocation of resources to resolve social issues (Buchholz, 1977, pp. 12–16). Buchholz contends that the decisions made by public policy stakeholders are not non-market decisions; rather, they express their views on what is best for themselves and society as a whole. Public policy serves not only as a tool in the political process but also as a tool in social processes for making decisions related to cultural, environmental, and technological issues that arise in society (Buchholz & Rosenthal, 2004).

The process of participation can be interpreted in various ways and at different levels, depending on the context of its implementation, as well as the political context and the power of stakeholder participation (Lawrence, 2006). This can include changes or enhancements to the process. Rather than dismissing these diverse opinions, it is essential to understand the differences in interpretations and relevant approaches, as well as the different contexts in which they arise. This can be used as a perspective analysis guideline for optimal policy formulation (Lawrence, 2006).

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However, levels of participation vary contextually and depend on the policy-level and desired outcomes, affecting the legitimacy of different levels of participation. As a result, Davidson (1998) proposed a "wheel of participation" as an alternate metaphor that highlights the credibility of varying levels of involvement (Rowe & Frewer, 2000; Tippett et al., 2007). They focus on processes rather than measuring levels of engagement. They identify different types of public participation based on the direction of communication between the parties involved. From this perspective, disseminating information to passive recipients constitutes "communication," collecting information from participants is "consultation," while "engagement" is conceptualized as two-way communication between participants and organizers to exchange views and negotiate for mutual agreement (Rowe & Frewer, 2000).

2.1.2. The importance of stakeholder perspective on Public Policy

Stakeholder engagement helps clarify the policy framework and problem-solving issues (Tyagi, 2018). Stakeholder engagement is an important component in ensuring thorough oversight of policies throughout the system (Bijlsma et al., 2011). Furthermore, stakeholder engagement in public policy-making increases the efficiency of participatory decision-making, contributes to social costs through dialogue building, and integrates perspectives from stakeholders across different sectors of society. Stakeholders who are involved in issues or have specific expertise can exchange views with each other to help align and implement policies in the same direction and avoid a scattered approach (Mathur, 2008). Policies and decisions must reflect coherence, interdependence, and collaboration to achieve common objectives among stakeholders. Additionally, they should promote collaboration between groups and various agencies

involved in identifying goals and finding solutions to problems together (Hutahaeaan, 2017). The benefit of stakeholder participation is to promote stakeholder inclusion in national policy-making (Reed, 2008). The engagement process should lead to higher-quality decision-making, as it is based on more data and can help prevent negative consequences resulting from policy implementation. Creating a common point of agreement among multiple sectors and understanding each other's perspectives through a participatory process can facilitate better collaboration among all parties involved (Stringer, 2006). The concept of stakeholders not only helps to define the scope of the policy but also expands the policy issues as widely as possible, helping to reduce future impacts. Therefore, stakeholders should have the opportunity to formulate policies that affect them (Freeman & Evan, 1990).

2.1.3. Complementary Resources of Different Sectors in Public Policy Process

Addressing public policy problems is too complex for a single sector or agency to rely solely on its capabilities or knowledge, as highlighted in the Sustainable Development Goals for sustainable development. It demands cooperation among stakeholders to exchange viewpoints and harness expertise and knowledge in support of achieving the Sustainable Development Goals. As per the Addis Ababa Action Agenda, mobilizing resources is an effective approach to sharing the knowledge and capabilities of each stakeholder sector in order to generate new solutions that create benefits for both individual and collective interests. Multi-stakeholder partnerships, also known as public-private partnerships, enable collaboration across sectors to jointly develop and implement specific activities. This approach can be more efficient than relying solely on a single agency or sector, and is of interest to both relevant stakeholders and affected parties. Moreover, multi-stakeholder partnerships entail collaboration among organizations from diverse social sectors, enabling risk-sharing and combining resources and strengths to foster innovative, sustainable development. This approach facilitates the creation and maximization of value for individual partners

and partnerships, with each sector bringing its unique approaches and goals to the table. Such cooperation leads to mutually beneficial agreements that align with the public interest, allowing all parties to benefit (PEP, 2016). Partnerships2030 states that partnerships from diverse sectors must have four characteristics as follows: (Dahiya & Okitasari, 2018).

1. Partners must come from at least three different sectors: the government, civil society, the private sector, and academia.
2. All partners, regardless of sector, must be equally involved in the implementation of the work, from consultation to decision-making.
3. All partner participation should be systematic, with a reasonable level of institutionalization and autonomy, and it should continue in the long run, not just ad hoc consultations or short, periodic discussions.
4. It should aim to solve complex social challenges such as the climate change crisis, poverty, migration, etc.

For effective participation in the public policy-making process, Partnership2030 mandates that each sector plays a role in the participation process, as outlined below:

1) Government /parliamentarians

Government agencies are primarily responsible for establishing the framework for policy development, ensuring compliance with applicable laws and regulations, and amending legislation or requirements to support policy development, such as tax policy. Moreover, the government plays a crucial role in providing land and infrastructure to support development.

2) Business/ Private sector

The private sector, or business sector, possesses marketing expertise, commercialization capabilities, customer understanding, and technical knowledge, as

well as access to advanced technologies that surpass those of the government sector. Therefore, the private sector plays a critical role in improving the quality of products and services.

3) Academic/ NGOs and civil society

Civil society and non-profit organizations are committed to the common good and are well-positioned to provide technical knowledge and expertise. Such expertise is often contributed by professionals in academic and practical fields. Furthermore, civil society organizations work directly with communities and represent their interests. Thus, they can provide comprehensive information on the community and a nuanced understanding of the issue at hand. The emphasis of this sector is on supporting legitimacy and social responsibility, while prioritizing the interests of the people they represent.

5) International agencies/ UN

International civil society can play a pivotal role in supporting technical expertise and knowledge, while also serving as a central participant in global networks that contribute to legitimacy.

2.2. Definition of Affordable Housing

1) Definition of Affordable Housing in UK

The term "affordable housing" in England lacks a definitive statutory definition and is used ambiguously to describe housing that is considered affordable based on various factors such as housing costs, income levels, and other considerations. This lack of consensus has led to suggestions of abandoning the concept altogether in addressing housing needs. In 2002, the Chartered Institute of Housing called for precise

definitions of affordable housing to achieve specific outcomes. The Office of the Deputy Prime Minister defined affordable housing as subsidized housing that caters to those unable to afford secure and decent housing in the open market. Historically, affordable housing was often used interchangeably with social housing, which involved government-subsidized housing provided by local authorities or housing associations at rents below market rates. However, there is no specific maximum percentage of income defined for housing costs within the definitions of affordable housing (Wilson, 2022).

Affordable housing in England includes social rented and intermediate housing, which is provided to eligible households that are unable to find suitable housing in the market. The affordability of such housing is determined based on local incomes and house prices. Affordable housing should be made available at a cost that is affordable for eligible households, and provisions should be in place to ensure its availability for future eligible households or for the recycling of subsidies for alternative affordable housing. Social rented housing refers to housing owned and managed by local authorities and registered social landlords (RSLs), with rent levels determined by national guidelines. Other rented housing arrangements that align with these guidelines may also be included. Intermediate affordable housing includes housing with prices or rents above those of social rent but below market rates, while still meeting the criteria mentioned above. This can include shared equity schemes like HomeBuy, low-cost homes for sale, and properties available for intermediate rent (London, 2006)

2) Definition of Affordable Housing in The United States

Affordable housing in the United States refers to housing that allows a household to meet their basic needs, such as food, transportation, and healthcare, while still being able to afford the cost of housing. The affordability of housing is determined based on a household's income. According to federal guidelines, housing is considered affordable if it accounts for no more than 30 percent of a household's income. The need for affordable housing is universal and extends to individuals across the income spectrum,

including high earners, hourly wage workers, and those experiencing homelessness. While the specific rent or home price deemed affordable may vary among households, the shared requirement for accessible housing is essential for all (HUD, 2017).

3) Definition of Affordable Housing in Denmark

Affordable housing pertains to rental housing made available to individuals in low to medium-income groups or with specific needs through government agencies or non-profit organizations. A fundamental purpose of social housing is to offer affordable accommodation to individuals with limited financial resources. Denmark's Affordable housing system is widely recognized as exemplary within the country. While the Affordable housing associations are formally classified as private organizations, they are subject to government and municipal regulations and oversight due to their receipt of economic subsidies. Neither the social housing associations nor the independent housing sectors operate for profit (Weebly, 2014).

4) Definition of Affordable Housing in Canada

The Canada Mortgage and Housing Corporation (CMHC) has identified three fundamental aspects of housing: adequacy, suitability, and affordability. Adequacy pertains to the physical condition of the dwelling, ensuring that it does not require significant repairs according to its occupants. Suitability refers to the dwelling's capacity to accommodate the size and composition of a specific household, including an adequate number of bedrooms. Affordability relates to the relationship between housing costs and household income, ensuring that the cost of housing does not exceed 30 percent of the household income before taxes, as mandated by Canada's affordable housing policy (CMHC).

From the Canadians' perspective, RE/MAX Canada conducted a survey to understand Canadians' perception of "housing affordability." The findings revealed that

38 percent of respondents defined affordable housing as a home that is both financially feasible and fulfills their basic needs, including desirable features such as proximity to schools. In Canada, housing is deemed affordable if it costs less than 30 percent of a household's pre-tax income. It is important to note that many individuals mistakenly associate "affordable housing" solely with government-subsidized rental housing. However, the term encompasses a wide range of housing options provided by the private, public, and non-profit sectors. This includes rental, ownership, co-operative ownership, as well as temporary and permanent housing (CMHC, 2018).

5) Definition of Affordable Housing in Singapore



Affordable housing in Singapore is a government-provided housing option that offers lower prices compared to private housing. The primary objective is to promote homeownership, with approximately 80% of Singaporeans residing in state-provided homes commonly referred to as HDB Housing. HDB Housing is administered by a government organization known as the Housing Development Board (HDB), which operates under the supervision of the Ministry of National Development in Singapore. The HDB operates on a non-profit basis, prioritizing the welfare and housing needs of the public. In addition to being affordable, HDB Housing must meet stringent quality and environmental standards. It aims to enhance the overall quality of life for Singaporeans by creating vibrant communities and ensuring continuous maintenance of the housing estates (HDB).

After reviewing the various definitions of affordable housing in different countries, it becomes apparent that there are variations in how it is defined. These variations can be observed in terms of the following aspects:

1. Target income group for affordable housing.
2. The housing model, whether it is based on homeownership or renting.
3. The pricing criteria for determining affordability.

4. The entities responsible for providing affordable housing and the role of housing authorities.

Each country has its own specific details and considerations depending on the context. In this section, we will examine the cases of selected countries that have achieved success in affordable housing development: Japan, Singapore, the United Kingdom, the United States, Korea, Denmark, and Canada. However, it is important to note that the definitions and approaches to affordable housing vary among these countries. The specific details for each country are outlined below.

2.2.1. Target income group for affordable housing.

Affordable housing aims to accommodate not just low-income individuals but also middle-income individuals. In Singapore, the eligibility criteria for affordable housing are well-defined, targeting two distinct income ranges. Low-income households, earning less than SGD 1,500 per month, are eligible for affordable housing leases. On the other hand, the 99-year lease or purchasing model is available for middle-income individuals. Those with higher incomes have the financial capacity to afford privately developed properties (HDB).

Similarly, in England, there is a clear classification of the target audience for affordable housing, encompassing three categories: Social Housing, Intermediate Affordable Housing, and Key Worker Housing (Wilson, 2022). In Denmark, an inclusive approach is adopted towards affordable housing, ensuring accessibility for all as a fundamental measure. It is not exclusively restricted to individuals with low incomes (Weebly, 2014). The United States and Canada prioritize the provision of affordable housing options for both low- and middle-income individuals (CMHC, HUD, 2017 #45). However, in South Korea, affordable housing primarily focuses on catering to low-income individuals (LH).

2.2.2. The housing model, whether it is based on homeownership or renting.

Affordable housing models vary internationally, comprising both purchasing and rental options, each with distinct contexts and conditions. However, the prevalent model is often rental housing, primarily facilitated by government agencies. This is attributed to the multitude of requirements associated with developing affordable housing at a reduced cost. Notably, land costs significantly impact development expenses, often representing the largest and most expensive component. Government agencies typically receive state funding or financial support to undertake affordable housing projects. Consequently, when developing on public land, ownership of the land itself is not possible, as it is not treated as private property. Therefore, the rental model becomes the primary approach rather than a homeownership model.

However, in Singapore, affordable housing development is carried out by the government agency, HDB, which offers both rental and homeownership options. In the case of homeownership, it does not entail purchasing the land itself, but rather acquiring housing rights for a 99-year period. These rights can be bought and sold, allowing for flexibility and the ability to change residences, while still providing security and guarantees for individuals, particularly in terms of accommodating future changes in household size. Similarly, in Japan, affordable housing developed by Urban Renaissance or UR encompasses both purchasing and rental phases.

In contrast, Korea and Denmark primarily rely on rental housing models. In Korea, the government takes charge of development, while Denmark involves private non-profit housing associations with government assistance and land allocation (Weebly, 2014, LH, #48)

Canada predominantly offers rental housing options, with involvement from various stakeholders such as governments, community organizations, non-profits, and the private sector working collaboratively to provide affordable housing solutions (CMHC, 2018).

2.2.3. The pricing criteria for determining affordability.

Internationally, affordable housing prices are typically set to not exceed 30% of the target household income, although this criterion is clearly defined in some countries while being based on a percentage of the target income. In countries with clear guidelines, such as the United States, Canada and Denmark, it is explicitly stated that affordable housing prices should not surpass 30% of the household income (CMHC, 2018; UK, 2022). In Singapore, Japan, and the United Kingdom, affordable housing prices are lower than market prices (HDB, , Committee, 2021 #44). In Japan, Korea, and Singapore, the prices of affordable housing vary based on factors such as location and size. However, they still remain below the market prices provided by the private sector. Particularly in Singapore, the price of housing is determined not only by location and size but also by the income level of the buyer or renter. The government provides financial assistance to low-income households to ensure they can afford a lower price. In the United States, even if the affordable housing price exceeds 30% of the income, the intention is not to intervene in market prices. Instead, the United States utilizes housing voucher programs that enable individuals to access privately-owned housing for purchase or rental, with their contribution limited to 30% of their income (HUD, 2017).

2.2.4. The entities responsible for providing affordable housing and the role of housing authorities.

In the realm of affordable housing development, every country has both similarities and differences in terms of the entities involved. However, a common thread

among them is the significant support provided by the government. This support can take various forms, including financial assistance, legal frameworks, urban planning initiatives, and tax incentives. These measures aim to facilitate the effective development of affordable housing across different sectors.

In Singapore, the main agency responsible for providing affordable housing is the Housing Development Board (HDB). HDB develops housing projects at various price levels to cater to different affordability levels. Similarly, in Japan, the Urban Renaissance Agency (UR) operates as a specialized government agency derived from the National Housing Authority. UR manages housing and land for the middle class, implementing policies through various projects in collaboration with the government, local authorities, and the private sector. In South Korea, the Korea Land and Housing Corporation (LH) is a state-owned enterprise that plays a significant role in housing development and management.

Countries that embrace the involvement of non-state sectors in providing affordable housing options include the United Kingdom, the United States, Denmark, and Canada. In the United States, the Department of Housing and Urban Development (HUD) serves as the central agency responsible for ensuring equal and non-discriminatory access to housing (through National Authorities), with funding provided by the federal government. Additionally, programs such as Homelands support the construction of financially manageable homes, promoting affordability without interfering in the housing market (HUD, 2017; UK, 2022; Weebly, 2014). This involves adding new homes and renovating existing ones to make them more affordable. In the United Kingdom, private registered providers and local authorities are also authorized to offer affordable housing solutions.

In Denmark, the primary developers of affordable housing are private non-profit housing associations, supported by federal assistance. In Canada, the Canada

Mortgage and Housing Corporation (CMHC) functions as the national housing agency, open to collaborating with various entities to provide affordable housing options (CMHC, 2018). Governments, community organizations, non-profit organizations, and the private sector work together in a collective effort to ensure the availability of affordable housing.

By examining the definitions of affordable housing in each country, it becomes apparent that there are both commonalities and differences in the various components of these definitions. Table 1, provided below, highlights the specific details of these definitions in each country. This comprehensive overview enables us to understand how affordable housing is implemented across different nations. Furthermore, these definitions serve as a foundation for exploring the form and physical characteristics of affordable housing, which will be discussed in the subsequent section, providing a holistic understanding of the topic.

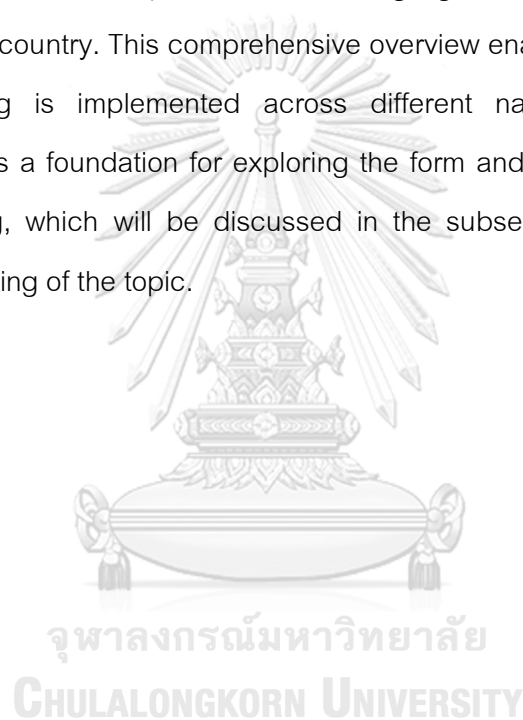


Table 1: The conclusion on definition of affordable housing in selected countries

	Japan	Singapore	UK	US	Korea	Denmark
1.1. Targeting Specific Income Groups for Affordable Housing	Low-income Household Middle-income Household	Low-income Household (below 1,500 SGD) Middle-income Household - below 9,000 SGD	Low-income Household Middle-income Household	Low-income Household Middle-income Household	Low-income Household Middle-income Household	Low-income Household Middle-income Household Available to everyone
1.2. The role of affordable housing should follow either a homeownership model or a renting model	Rental (Short-Medium and Long-term)	Rental for low-income household Buying for middle income household (99-year lease)	Homeownership, Rental (Short-Medium and Long-term)	Homeownership, Rental (Short-Medium and Long-term)	Rental (Short-Medium and Long-term)	Rental (Short-Medium and Long-term)
1.3. The appropriate price for Affordable Housing + Determining Optimal Loan Lengths for Affordable Housing	The residential price of UR is approximately 50,000 yen (around 12.5% of the median income).	Depend on Household Income (Less than 20% of Household Income)	25% of Household Income	25% of Household Income	Depend on Location and size of housing	Less than 30% of household income
1.4. The Optimal Level of State Intervention in Affordable Housing Development (Provider)	The Urban Renaissance Agency (UR) is an agency developed from the National Housing Corporation (JHC). Its main responsibility is managing residential properties and land for middle-income individuals.	HDB (Housing Development Board) is responsible for providing affordable housing options by developing housing at various price levels based on purchasing ability.	private registered providers local authorities	HUD (Department of Housing and Urban Development) is responsible for ensuring equal access to housing for all citizens without discrimination (National Authorities).	JH Korea Land and Housing Corporation is a state-owned enterprise and the land and housing authority of Korea. Its main responsibility is to provide housing and oversee land utilization.	private non-profit housing associations

	Japan	Singapore	UK	US	Korea	Denmark
1.4.1. Supporter	<p>The Ministry of Land, Infrastructure, Transport, and Tourism is responsible for the National Authorities. The Japan Housing Finance Agency (JHF) is tasked with securing funding for housing construction.</p>	<p>1. The Ministry of National Development (MND) is responsible for land use planning, urban development, heritage preservation, providing quality housing options, and offering a variety of price levels based on purchasing ability (taking into account market trends and overall development) (National Authorities).</p> <p>2. Town Council oversees HDB buildings and the surrounding environment (local Authorities).</p> <p>3. Community Development Council (CDC) takes care of community-level matters and the well-being of the residents (local Authorities).</p>	<p>1. FHA: Federal Housing Administration operates under the Ministry of Housing and Urban Development. Its role is to provide suitable housing options for individuals with low incomes.</p> <p>2. Homelands is responsible for pooling funds to construct affordable housing that is affordable for buyers. It intervenes in the housing market, adding new homes and improving existing residences to make them more accessible (local Authorities).</p> <p>3. Section 106 - Grant Funding</p> <p>4. GLA conducts surveys and analyzes data related to housing development.</p>	<p>PHAs: Local Public Housing Authorities are responsible for setting local housing policies to provide affordable housing options for low-income individuals.</p>	<p>MOLIT: Ministry of Land, Infrastructure, and Transport's primary responsibility is to coordinate and establish national-level policies and regulations related to land development.</p>	<p>Municipalities Support Construction Cost Subsidy</p> <p>The budget of each non-profit housing association is annually controlled by the city council, and a board comprising elected Affordable Housing tenants governs the non-profit housing associations.</p>

2.3. Critical Criteria

The Importance of the Quality of Housing

The quality of housing is incredibly important for several reasons, as it can impact various aspects of an individual's life, including their health, well-being, and overall quality of life. In developing countries, there has been a consistent emphasis on ensuring that citizens and residents have unrestricted access to high-quality housing environments through successive housing policies (Babalola et al., 2020). This is due to the fact that various studies in the literature have demonstrated that the quality of housing environment has a significant impact on the well-being of residents, their standard of living, productivity, and environmental sustainability (Aliu & Adebayo, 2010; Coley et al., 2013; Gou et al., 2013). Therefore, poor-quality housing presents a significant risk to the health of its residents. In addition to impacting physical well-being, substandard housing quality can also affect mental health (Bankole, 2016; Habib et al., 2009). It is also recognized that in society, housing is the most crucial factor that influences the overall quality of life among residents, particularly those with low incomes (Ibem & Aduwo, 2013). Furthermore, housing plays a significant role in determining the social status of individuals and households. Thus, homeownership is relevant in indicating social status (Gou et al., 2018). From a socio-cultural standpoint, housing is an indicator of social status, reinforcing societal norms and expressing a way of life. In the economy, housing is also considered a reliable and stable investment with the potential for high returns. Low-quality housing can decrease the value of a property, whereas well-maintained and high-quality housing can enhance its value (Turunen et al., 2010).

The concept of housing quality is discussed in various articles and reports, and it has different definitions. According to UN-HABITAT, housing quality involves appropriate privacy, structural stability of the house, visual comfort, comprehensive utilities, and access to public facilities. It also encompasses safety around the residence

and the availability of nearby facilities, such as markets, commercial centers, educational, and recreational facilities (Habitat, 2006). Furthermore, (Bankole, 2016) observed in a study that housing quality is characterized by the standards and conditions of the living environment, which contribute to a person's comfort and satisfaction. Research has also indicated a correlation between the quality of homes identified by the UN and housing satisfaction. According to UN-HABITAT (2006), housing quality refers to the physical condition of residential buildings, facilities, and public services, which are essential in promoting good living conditions both within the residence and its surrounding environment (Habitat, 2006). On the other hand, Streimikiene (2014) explains that housing quality is a standard of measurement that demonstrates the extent to which people are safe and have access to essential social amenities and services that promote a good quality of life, including good health and accessibility to work (Streimikiene, 2014). Moreover, according to Statistics New Zealand (2015), housing quality encompasses the standards of adequacy of the residential environment, taking into account the quality of both internal and external structures, as well as the broader environment and community within the neighborhood (Zealand, 2015).

The quality of housing is indicative of the social and financial opportunities available to individuals. This has been made evident during the COVID-19 pandemic, which has highlighted the issue of inequality, particularly in the slums of large cities where social distancing is difficult. Thus, implementing an affordable housing policy can be a key factor in promoting inclusive growth, enhancing the status of low-income households, and mitigating social and public health problems (Thangpetchr, 2021). Therefore, it is essential to consider the quality of housing in addition to the quantity, to address the housing shortage effectively. Based on reviews, articles, and other research, there are several categories of quality indicators for affordable housing. These indicators relate to the concept of housing quality and include the following:

2.3.1. Aged group and Household Types in Affordable Housing

Majority of countries that applies affordable housing concept have divided the type of housing depends on the aged and household type. In Singapore have specific criteria based on income levels and the rental or purchase status of the housing. The main focus is on low-income households with a maximum monthly income of SGD 1,500. These households are further divided into subgroups (HDB).

1. The family scheme, which requires the applicant to be a Singapore Citizen (SC) aged 21 or older. The family nucleus must consist of specific combinations, such as the applicant and their parents if single, or the applicant and their spouse if married. Similar eligibility criteria apply to other family circumstances, including being orphaned, engaged, or widowed/divorced with children under their care. These requirements aim to ensure that affordable housing is accessible to those who meet the defined criteria in Singapore (HDB).

2. The Joint Single scheme, designed to facilitate shared living arrangements, has a minimum duration of 35 years. Eligibility for this scheme is determined through a case-by-case evaluation conducted by the Housing Development Board (HDB) and is contingent upon meeting specific age criteria and sharing living space. The following conditions must be met to qualify: 1) Both the applicant and proposed co-applicants must hold Singapore Citizenship (SC). 2) Both the applicant and proposed co-applicants must fall into one of the following categories: a. Single and aged at least 35 years. b. Divorced or legally separated and aged at least 35 years. c. Widowed or orphaned and aged at least 21 years (HDB).

Tenants have the option to select the desired location when renting a property. However, it is important to note that the available properties are distributed across different areas. Detailed information about the housing stock is provided on the main

website, allowing tenants to make their selection accordingly. The target purchasing model is designed to accommodate middle-income groups with household incomes of 9,000 SGD or less. The specific conditions and financial assistance, including support from the state through CPF, will be explained in greater detail. Among the available assistance programs is the Citizen Top-Up Grant, which provides additional support. Singapore Citizens (SC) or Singapore Permanent Residents (SPR) can apply for a Citizen Top-Up Grant of \$10,000 towards the purchase of their residential property (HDB).

In the United Kingdom, there are three main types of affordable housing. Firstly, social housing refers to housing owned by Registered Social Landlords (RSLs), which are independent non-profit housing organizations approved and funded by the Housing Corporation. This housing is rented out to tenants and is considered affordable as the rents do not exceed the target rents set by the government for local authority and housing association tenants. The allocation of social housing is based on addressing housing needs. Individuals who meet the criteria, which may vary across different areas, can apply to be added to the waiting list. However, the demand for social housing often exceeds the supply, resulting in lengthy waiting times for applicants. The Greater London Authority (GLA) recommends a high-income limit of £16,400 for eligibility in social housing.

Secondly, intermediate housing refers to housing options available for purchase or rent at prices below the market rates. It provides an alternative for individuals who cannot afford to buy a home outright. One option is shared ownership, where applicants can gradually increase their ownership over time by purchasing a portion of the property. They can decide on the percentage they can afford to buy, ranging from a minimum of 25% to a maximum of 75% of the total price, and acquire that share from a housing association. The GLA offers guidance on accessing intermediate housing and suggests that households with incomes between £16,400 and £49,000 should be

eligible. This income range is determined based on income house-price ratios, considering the affordability of housing in relation to household incomes.

Thirdly, key worker housing is specifically designated for certain groups of frontline public sector workers, although there is no fixed definition. In most cases, it consists of intermediate housing (although some key workers may qualify for social housing) allocated to professions such as nurses, teachers, social workers, and police officers, among others, to ensure their retention in the area where they work. A government-funded program called Key Worker Living provides interest-free loans to assist these workers in getting onto the property ladder. Shared ownership schemes are often prioritized for key workers (Milcheva et al., 2022).

2.3.2. Type of building in Affordable Housing Development

The design and layout of affordable housing developments have the potential to significantly impact the quality of living conditions for both residents and those in the surrounding area. Therefore, it is a critical design consideration for developers to ensure that the building layout is appropriate for the location and intended use within the city, taking into account the social, environmental, economic, and physical context. The height and density of a building are directly related to the basic infrastructure requirements, especially in multi-unit projects or areas with high population density. Adequate and suitable infrastructure, such as roads, public transportation, waste management systems, etc., is necessary to support the living conditions. To achieve the desired standard, the building should be strategically designed to harmonize with the scale of the households and land use in the surrounding areas (Davison et al., 2012). Residential amenity is significantly affected by the dwelling's layout, which should be responsive to the local context by orienting the primary living spaces towards the main outlook and aspect, allowing for cross ventilation. In cases where there is limited floor area, it is crucial that the spatial arrangement of units is efficient, functional, and

adaptable to different activities and changing needs and circumstances (Housing, 2002).

Most of the housing options in Singapore and South Korea are in the form of high-rise condominiums. This is primarily due to the limited land availability within cities, necessitating the development of vertical structures (Archdaily, 2015; HDB). In contrast, other countries, such as Denmark and Japan, where affordable housing is constructed farther away from urban centers, tend to feature low-rise buildings (APTS, 2017; Weebly, 2014). The United States and the United Kingdom offer a diverse range of affordable housing options, as the development of such housing is open to various sectors. With assistance and support from the central government, there are numerous forms of affordable housing available, including low-rise condominiums, townhouses, and other types of dwellings (Committee, 2021; Staff, 2022).

2.3.3. Additional Facilities within the Affordable Housing Project

Convenience in daily living and community safety from crime and accidents are closely related to the classification of housing in society and the ability of each household to afford it. Building safety and facilities require capital, and higher housing affordability makes it possible to provide a safer and more comfortable environment (Gabriel et al., 2005). The proper management of housing elements is also a crucial factor in standardizing housing for quality and efficiency. This involves considering factors such as population density, energy consumption, and waste management systems in each community (Stone, 2006).

In affordable housing projects across different countries, there is typically provision for green spaces and small gardens, serving as recreational and gathering areas for residents. However, additional facilities can vary based on the unique concepts embraced by each country. For instance, Singapore places emphasis on

vibrant neighborhoods, aiming to enhance the quality of life within the community. To achieve this, fitness facilities and sports courts are incorporated between buildings, encouraging residents to exercise and foster connections with their neighbors. Furthermore, hawker food courts are situated beneath the buildings, offering affordable food options to the local population. Singapore's design philosophy encompasses providing residential areas with comprehensive amenities, convenient transportation, and affordable pricing, enabling easy access to the city. Affordable housing is not limited to urban areas but can also be distributed outside the city. These housing developments feature a wide range of facilities suitable for comfortable living and offer convenient access to the city center (HDB).

Each housing unit is equipped with a kitchen, and the room sizes vary to accommodate different household sizes. However, Singapore places significant emphasis on housing affordability, ensuring that all individuals have access to quality housing. Additionally, Singapore prioritizes creating an environment that fosters a good quality of life and supports affordable housing options.

2.3.4. Size of affordable housing

The NSW Government's Residential Flat Design Code outlines the minimum gross floor area standards for different types of dwellings, such as a one-bedroom apartment requiring a minimum of 50m², a two-bedroom apartment requiring a minimum of 70m², and a three-bedroom apartment requiring a minimum of 95m² (Housing, 2002). In addition, the State Environmental Planning Policy (Affordable Rental Housing) establishes a minimum standard of 35m² gross floor area for studio apartments and bedsits.

The size of an apartment is primarily determined based on the type of household, including single individuals, couples, or families, and is further classified

according to the number of bedrooms. In Japan, the apartment sizes are typically categorized as follows: (APTS, 2017)

- A. 25-38m² (269-409ft²) for a single person
- B. 38-50m² (409-538ft²) for couples (2 people)
- C. 50-70m² (538-753ft²) for a family of 3
- D. 70+m² (753+ft²) for a family of 3 or more.

In Singapore, apartment sizes are categorized based on the number of bedrooms they offer. The classifications are as follows: (HDB)

- A. 1-Room apartments: These consist of a room, kitchen, and WC (bathroom).
- B. 2-Room apartments: These include a bedroom, kitchen, living area, and WC.
- C. 3-Room Improved apartments: These are approximately 33 square meters in size and feature two bedrooms, two WCs, a kitchen, and a living area.

Similar to South Korea, there is no strict standardization for room sizes in affordable housing. In Korea, the minimum unit sizes range from 23 m² to 45 m², making them the smallest among the mentioned countries. Conversely, in the UK and Denmark, the focus is primarily on the minimum size requirement for bedrooms, as the room layout typically revolves around shared spaces such as dining, living, and kitchen areas (Archdaily, 2015). The United Kingdom specifies a minimum bedroom size of 6 square meters, while Denmark requires a minimum of 9 square meters (Committee, 2021; Frearson, 2018).

2.3.5. Location of Affordable Housing

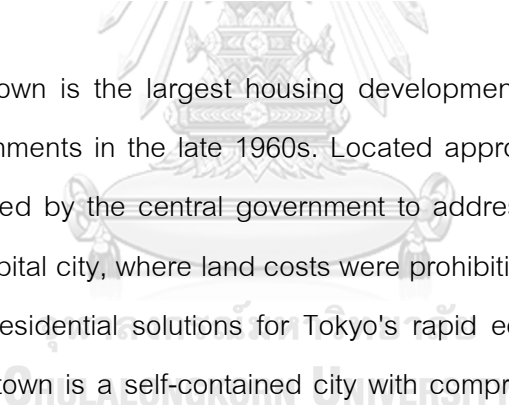
The role of Affordable Housing is discussed, in addition to being a residential space, it should also be a place that provides residents with opportunities for positive

social connection and socio-economic interaction. Housing in terms of socio-economic dimensions is discussed in various articles. Berry (2003) stated that social and economic connectivity is a crucial aspect that affordable housing must possess. This entails locating such housing in areas that offer access to employment opportunities, public services, and social networks. Achieving this goal is one of the primary objectives of increasing the supply of affordable housing, which is targeted at serving low- to middle-income tenants. In urban areas, access to quality housing that is situated in an appropriate location assumes paramount importance (Berry, 2003).

According to Maher's description, the concentration of employment opportunities and public services is crucial for the well-being of residents. In situations where inhabitants do not have convenient access to jobs and services, or where travel costs and time exceed those who live close to their workplaces, it can result in a state of "locational disadvantage" that translates to higher living costs. This predicament persists despite the low cost of housing and the attendant social and economic benefits (Esruq-Labin et al., 2014). Moreover, Maher also states that this is a difficulty that households have to face. Accessing resources can facilitate improvement in well-being and status. The main problem is space, with certain areas showing clear inequalities over time as cities grow. In other words, if individuals with poor socioeconomic status are concentrated in areas with low socioeconomic status, they are less likely to move up and out of the cycle of poverty (Ryan & Whelan, 2010).

Similarly, Burton (2000) emphasized the significance of having access to public transportation as a crucial component of the Affordable Housing program. This access allows residents who do not own cars to reach vital employment and public service locations, such as hospitals. Additionally, it helps to decrease car usage and energy consumption, thereby promoting sustainability at individual, societal, and environmental levels. Availability of inclusive and accessible public transportation can contribute to reducing travel costs, a considerable expense associated with urban living, and

addressing social inequalities that arise from a lack of driving ability (Burton, 2000). Housing situated in areas with high job growth and employment rates can provide residents with enhanced job opportunities and aid in breaking the cycle of poverty. According to Visetpricha, (2021) a community survey conducted in Bangkok found that most households are self-employed, for example, selling food to order, driving motorcycles, and providing ironing services. Living in the city can increase earning potential, and thus, residing in a good location is a factor that can improve the earning potential of household members (Visetpricha, 2021). This enables households to earn more and attain a better social status (Thangpetchr, 2021). Most affordable housing locations are located both in and around the main city. The demand for housing is high, but all countries face high urban land values that make it impossible to develop affordable housing within the city. It was built in a residential area near Tokyo called Tama Newtown.



Tama Newtown is the largest housing development in Japan, established by metropolitan governments in the late 1960s. Located approximately 20-30 km west of Tokyo, it was created by the central government to address congestion and housing shortages in the capital city, where land costs were prohibitively high. The development aimed to provide residential solutions for Tokyo's rapid economic and demographic growth. Tama Newtown is a self-contained city with comprehensive infrastructure and facilities, particularly transportation connections to Tokyo. Various types of housing, including villas, apartments, and detached houses, were constructed to cater to diverse needs. As part of Tama Newtown's masterplan, Urban Renaissance (UR) is responsible for nearly 50% of the projects, encompassing over 1,400 hectares. UR has introduced affordable housing options called Danshi, consisting of apartments or condominiums suitable for households of 1-2 people and students. These units are equipped with basic furniture and essential facilities (UR)

Tama Newtown has faced challenges during its transformation. In the 1990s, following the burst of the economic bubble, land prices declined, and the government sought to redevelop Tokyo, attracting the population back to the city. Consequently, housing prices in Tama Newtown decreased. However, the town's initial planning did not prioritize long-term sustainability, and the hilly landscape poses difficulties for the elderly population. Currently, Tama Newtown is aging, experiencing declining suburbs, population loss, vacant buildings, landscape degradation, and erosion of urban life. The living conditions in these housing estates are unsuitable for elderly residents, leading to phenomena like kodokushi, where unnoticed deaths occur within apartments (Knoroz, 2020).

Recognizing these challenges, UR has acknowledged that housing and its functionalities are not responsive to the younger generation and have not adequately considered the aging society. In an effort to improve functionality and modernize living spaces, UR has partnered with MUJI to redefine these areas and provide them with a renewed purpose. Presently, Tama Newtown consists of around 9,000 households and a population of approximately 220,000 people (UR).

Similar to Singapore's efforts to alleviate congestion in the city center by developing new neighborhoods, other countries have also constructed residential areas around business cities. These developments not only provide housing but also include infrastructure and amenities suitable for a comfortable living environment. In line with Singapore's transition to an aging society, the country has made improvements to senior living facilities and healthcare centers within these areas (HDB).

Moreover, Singapore prioritizes enabling the elderly population to lead healthy and fulfilling lives by creating an environment that supports their physical and mental well-being. Through the implementation of universally accessible infrastructure, Singapore ensures that the elderly and individuals with disabilities can live in the city just

like any other citizen. This inclusive approach reflects Singapore's commitment to accommodating the needs of diverse populations while promoting sustainable urban development (HDB).

2.3.6. Car Parking within Affordable Housing Development

The availability of parking spaces in a housing project increases the agility of its residents and is considered a crucial component of housing quality, as it does not rely on public transportation. Pullen also noted that reducing the number of parking spaces in affordable housing projects can help decrease project costs and emissions. Additionally, having comprehensive public transportation and connectivity with affordable housing projects can lower household expenses. However, if the housing project is located in an area without public transport, it may increase the cost of living for residents and the need for parking. This can result in economic problems at the household level and environmental pollution (Pullen et al., 2010). The 'Review of Social Housing Car Parking Demand' provides insights into the use of cars among residents of affordable housing. The report indicates that the target audience for affordable housing mostly comprises low-income individuals, with only a minority owning private cars. Hence, the imposition of state-mandated parking limits may not be necessary. The number of parking spaces provided in affordable housing projects must be evaluated based on their accessibility to public transportation. In Queensland, for instance, the parking requirements for one-to-two-bedroom homes are typically reduced by approximately 25 percent if they are located within 400 meters of public transit. Nevertheless, it is crucial to consider other factors specific to each project context, such as whether there are disabled or elderly residents who require special parking arrangements. Therefore, each project should be assessed individually with different considerations (Consultants, 2009).

Many countries continue to provide parking spaces for affordable housing projects, regardless of the number of rooms they offer. However, in a regulated country

like Singapore, parking for condominium residents is typically subject to a monthly fee. Parking options include spaces located beneath the building, outdoor parking areas, and spots near Rail Transit stations. Due to the high cost, private car usage is discouraged. Public transportation, which is more cost-effective and efficient, is a preferable option in Singapore. Moreover, Singapore's urban layout and transportation network are well-planned and extensive. It offers convenient connectivity between residential and urban areas, making it easy for residents to travel using public transportation



Table 2: The conclusion of Critical Criteria in selected countries

	Japan	Singapore	UK	US	Korea	Denmark
2.1. The importance in each aged group in Affordable Housing Development	Young and adults Elderly people	Rental 1. family scheme at least 21 years old with conditions 2. Joint Single scheme at least 35 years old (Widowed or orphaned, and at least 21 years old) Buying 1. Couple and families 2. Single aged 35 above 3. senior aged 55 and above	Social Housing Intermediate affordable Housing Key worker	First-time buyers under the age of 40.	Young and adults Newlywed Elderly people	Low-income people and first timer Young Generation
2.2.. The Significance of Household Types in Affordable Housing Development						
2.3. Selecting the Appropriate Building Type for an Affordable Housing Project	Low-rise Building	High-rise Building	Single House Low-rise Building	Single House Low-rise Building High-rise Building	High-rise Building	Low-Rise Building
2.4..The provision of crucial facilities within an affordable housing project		Fitness and sport facilities Pocket Garden and Open space Playground Kitchen	Pocket garden common area (Living, dining room) Kitchen	Pocket garden common area (Living, dining room) Kitchen	Pocket garden Playground Kitchen	common area (Living, dining room) Kitchen Basic Furniture Pocket Garden and Open space
2.5. Determining the Appropriate Size of Affordable Housing		1-Room (Room, Kitchen and WC) 2-Room (Bedroom, Kitchen, Living and WC) 3. 3-Room Improved 33 sq.m. (2 Bedroom, 2 WC, kitchen and living)		1-5 Bedroom Majority (1st 2 Bedroom = 6,800 units 2nd 1 Bedroom = 7,600 units)		60-115 sq.m. per unit 3 Bedroom (each 9 sqm.) 40 sqm. Common area (living, Kitchen, dining)
2.6. The Appropriate location for Affordable Housing	Urban and Rural	Urban and Rural	Urban and Rural	Urban and Rural	Urban and Rural	Urban and Rural
2.7. The Appropriate Number of Parking Spaces Required within the Affordable Housing Project	Parking is available;	Monthly Parking Rentals	Available Parking Spaces Monthly Parking Rentals	Parking is available;	Parking is available;	Parking is available;

2.4. Measures

2.4.1. Financial Subsidization

1) Housing Loans

In Denmark, access to long-term housing loans for 30 to 40 years, at a minimum fixed interest rate of 3%, is provided to facilitate home ownership (Falk & Rudlin, 2018). Similar to the United Kingdom, the state provides a housing loan program called "Help to Buy: Equity Loan." The program aims to assist individuals who are purchasing a new home for the first time or those who already own one by providing the necessary funds with just a 5% deposit. The government provides a loan of up to 20% of the purchase price (40% in London), which is interest-free for the first five years (UK, 2023).

2) Housing grants

Housing grants refer to financial aid provided for the purchase or rental of a home. The Housing Fund in Singapore provides housing subsidies to all residents, and the state provides additional assistance, particularly to vulnerable groups such as students, the elderly, single parents, and financially struggling families (Falk & Rudlin, 2018). Similar to the United States, Denmark, and Germany, the state provides grants to bridge the gap between market-priced housing and tenant incomes, up to a maximum of 25 percent of their income (Carr, 2021; Falk & Rudlin, 2018).

2.4.2. Funding and Financing Model

1) Housing Fund

Housing funds are the main instruments for managing housing development in Denmark, the Netherlands, and Germany (Falk & Rudlin, 2018). The cooperative system serves as a financial institution for housing development, generating revenue by

creating affordable housing for rental and purchase purposes, and acts as a lending fund for housing acquisition. In the United States, regional governments establish Housing Funds that receive funds for affordable housing, obtained from property taxes, cash-in-lieu payments from developers upon rezoning, and contribution bonuses for amenity density (Wake and Deborah 2008, 49). Singapore employs a mandatory social security fund known as the Central Provident Fund (CPF), which collects 17% of employee salaries and an additional 3% of employer contributions, totaling 20%, into the fund. Singaporeans are eligible to withdraw funds from the CPF and also have the option to borrow additional funds at a low interest rate in order to purchase a home (Jeans, 2014).

2) Public Private Partnership

Public-Private Partnerships are a popular means of risk reduction in both the public and private sectors. The government of Vienna, Austria encourages private developers to construct housing projects on public land (Falk & Rudlin, 2018). Similar to the Netherlands and Denmark, Public-Private Partnership measures have been implemented in which land-owning local governments collaborate with private housing developers. This is due to the private sector's expertise and management skills in residential development, which are superior to those of the public sector (Falk & Rudlin, 2018), the Netherlands have launched a pilot project to familiarize the private sector with government involvement in Public-Private Partnership housing development projects (Falk & Rudlin, 2018).

3) Tax incentives

Tax incentives are a type of mechanism designed to encourage the private sector to provide affordable housing. Germany has implemented tax-deductible measures to incentivize the private sector's contribution to the development of affordable housing projects (Falk & Rudlin, 2018). Similar to the United States, some

states offer Low-Income Housing Tax Credits (LIHTC), as a state-level tax incentive for the construction of new low-income housing and/or rehabilitation of existing low-income housing (K. McFarland et al., 2019)

2.4.3. Urban Planning Incentives

1) Inclusionary Zoning

Inclusionary Zoning is a policy that seeks to address inequality through urban planning regulations in a specific area. It requires developers in that area to include a designated number of affordable housing units in their projects. Given the vast privately-owned development areas and availability of efficient public transportation, the United States is currently being seriously considered for adopting this policy. However, some states have already implemented Inclusionary Zoning as a means to address inequality in certain areas. To ensure that housing developments do not exclusively cater to middle- or high-income individuals and instead offer affordable options to mitigate inequality, developers must take into account the context of the area, ensure adequate coverage of the development, and identify potential beneficiaries. There are two main types of Inclusionary Zoning policies: mandatory and voluntary. Furthermore, Inclusionary Zoning policies must be accompanied by compensation for lost income, as any significant disadvantage to the private sector could deter development in the area, leading to negative market repercussions. Therefore, the implementation of these measures should take into account the proportion of affordable housing required to meet both market and community demands, typically ranging from 10 to 20 percent of the total number of residential units in the project {NMHC, #99}.

2) Capacity Building (FAR Bonus)

Capacity Building or FAR Bonus is a measure that grants developers the right to build more densely or use more space in exchange for including affordable housing

units, incentivizing the provision of affordable housing in housing development projects. In the United States, zoning provisions related to amenities and affordable housing are outlined in section 904 of the Local Government Act (Wake & Curran, 2008). One of the primary benefits of Capacity Building or FAR Bonus measure is that neither the municipality nor the state is obligated to invest additional funds in the development of affordable housing or contribute to the housing fund for this purpose.

3) Reduce Parking Requirement

Measures to reduce parking requirements for affordable housing developments, such as the Reduce Parking Requirement measure, have been implemented in various regions. In Seattle, for example, the Parking Requirement Reduction measure has been adopted in affordable housing development to allow for less on-site parking while still increasing the usable floor area, without necessitating an increase in building height. This is particularly beneficial as taller structures typically incur higher construction costs (NMHC).

2.4.4. Land Management

1) Public land

The utilization of public land is a common method employed by state and local governments for the development of affordable housing. In Vienna, Austria, for instance, the majority of land is owned by local authorities who possess the power to regulate and manage land use. The local government has established an agency responsible for managing the development of public land, which serves as the largest developer of affordable housing in Vienna. This agency is primarily funded through national taxes (Lawson & Ruonavaara, 2019).

2) Land Tax Readjustment

Land Tax Readjustment is a measure that aims to increase the building tax on vacant land and structures, encouraging private sector utilization of properties. In Denmark, land areas are subject to a higher level of taxation if they are not utilized (Falk & Rudlin, 2018). Similarly, in France, the federal government has set a goal for 20% of the area's housing to be rented to low-income individuals. If the local government fails to meet this goal, it is subject to pay an enormous fine (Lawson & Ruonavaara, 2019).

Table 3: Summary of the international implementation of Affordable Housing measure

Mechanism	Measure	Country							
		Singapore	Denmark	United State	United Kingdom	Netherlands	France	Ireland	Austria
Financial Subsidization	Housing Loans	/	/	/	/	/	/	/	
	Housing Grants	/	/	/	/	/	/	/	/
	Daily expenses subsidization			/		/	/		
Funding and Financing Model	Housing Fund	/	/	/	/	/		/	/
	Public Private Partnerships		/	/	/	/	/	/	/
	Tax Abatements			/	/	/	/	/	
Urban Planning Incentives	Inclusionary Zoning			/	/			/	/
	Regulation control relaxation	/		/		/			
	Capacity Building (FAR Bonus)			/	/				/
	Planned Unit Development	/	/	/	/	/	/		
	Parking Requirement			/					
Land Management	Public land	/	/	/	/	/	/	/	/
	Public land leasing		/		/	/	/	/	/
	Land Tax Readjustment		/	/					

Source: Summary of measures in international case studies

Table 3 summarizes the supportive measures implemented by various nations to facilitate the development of affordable housing. The data was extracted from a questionnaire survey that enquired about the level of implementation, impact, and success of these measures in the context of Bangkok. Based on case studies, it was found that various countries implement measures such as Housing Grants, which provide individuals with funds to purchase or rent housing, and housing loans that assist

them in obtaining housing. Notably, the majority of these measures aim to support the demand side, thus enabling individuals to access housing. The next set of measures utilized by other countries includes the Housing Fund, Public-Private Partnerships, and Public Land. These measures aim to promote the supply side to support the private sector developers in the real estate industry. Public land is often used in conjunction with Public-Private Partnerships (PPP) for joint development between the public and private sectors. However, land management and urban planning measures are not frequently utilized due to their reliance on political and urban development factors that vary from country to country.

2.5. Theoretical Framework

2.5.1. Qualitative research

Qualitative research refers to research that aims to explain natural phenomena or occurrences through induction without control, emphasizing naturalism or phenomenism. In this type of research, there is no primary variable, and the dependent variable may or may not have a pre-existing theory. Qualitative research primarily focuses on in-depth exploration through case studies, involving a small sample group. It delves into problems from an internal perspective, prioritizing clarity and limited generalizability to similar conditions.

The essence of qualitative research lies in attributing meaning and analyzing value. The methods employed may include observation, formal and informal interviews, as well as insider and outsider perspectives. It is commonly utilized in social sciences such as ethnography and anthropology, aiming to generate theories based on the researcher's perspective and understanding of the phenomenon or social situation.

The emphasis in qualitative research lies more on the process than the outcome, focusing on dynamic studies to explain phenomena. Conclusions are derived through

interpretation, as the researcher analyzes a specific set of empirical observations. The answers obtained may have multiple interpretations, and there is no definitive right or wrong answer. Hypotheses, if present, are often referred to as tentative hypotheses. This approach acknowledges that findings can vary among researchers or within different study contexts, as individual realities are encountered. One researcher may discover something that others may or may not find, leading to potential disagreements.

2.5.2. In-depth interview

In-depth interviews are an open-ended approach that aims to gain insights about various topics by engaging stakeholders through interviews. The primary objective of conducting in-depth interviews is to thoroughly explore the perspectives, experiences, emotions, and viewpoints of the respondents. In-depth interviews share more similarities with journalist interviews rather than survey interviews (Foundation, 2009). These qualitative research techniques involve conducting intensive individual interviews with a group of respondents, with the purpose of delving into stakeholders' perspectives regarding specific concepts or situations (Boyce & Neale, 2006).

The Process of in-depth interview

1. Plan

- 1.1. Identify the stakeholders to engage.
- 1.2. Gather the necessary information related to the interview.
- 1.3. Compile a list of stakeholders to be interviewed, either by identifying stakeholder groups or specific individuals within those groups, as appropriate.
- 1.4. Ensure that the research adheres to international and national ethical research standards, including obtaining approvals from ethics research committees.

2. Develop Instruments

2.1. Develop tools to support the interview process, such as interview questionnaires or interview guides, and prepare the necessary interview materials.

2.2. Prior to initiating an interview, if audio recording is to be conducted, obtain permission and ensure the interviewee's consent and privacy are respected.

3. Collect Data

3.1. Clearly explain the interview methodology and the sequence of steps before commencing the interview. Provide a comprehensive understanding of the interview's purpose and rationale for selecting stakeholders, including the anticipated duration of the interview. Prior to initiating the interview:

3.2. Obtain the interviewee's consent (in written or documented oral form) and inform them about the confidentiality of the information and the tools that will be employed during the interview for recording purposes, such as tape recorders or video cameras.

4. Analyze Data

4.1. Transcribe and/or review all collected data.

4.2. Analyze the entirety of the interview data.

5. Disseminate Findings

5.1. Report Writing: Design the presentation format and narrative for the report.

5.2. Solicit feedback from interviewees and program stakeholders.

5.3. Edit the report for clarity, accuracy, and coherence.

5.4. Disseminate the report to interviewees, project stakeholders, funders, and relevant communities as appropriate.

2.5.3. Narrative Method

The concept of the Narrative Method represents a qualitative research approach utilized to gain insights into the social world. The Narrative Method finds widespread application in the realm of social sciences and is employed across diverse fields, including history, anthropology, psychology, communication, law, medicine, and more. It is important to note that various branches within these fields may offer distinct definitions of the Narrative Method (Duque, 2005).

The narrative method encompasses the depiction of interconnected events, delineated within a specific temporal and spatial context, and holds significant cultural significance as a form of expression. Moreover, it serves as a conduit for portraying diverse stereotypes related to individual experiences, as well as facilitating introspective and psychological understanding of one's own life. Simultaneously, life narrative denotes a narrative account of personal life experiences. Every individual undergoes their unique life journey, with these experiences serving as crucial foundations for personal growth and education (Tooltham, 2020).

The Narrative Method is a qualitative research approach that utilizes individual stories to gain insights into an individual's life in the broader societal context. It is a social process intricately connected to the social environment, attributing significance to actions and emotions. The various perspectives encompassed within the narrative mirror the voices of other individuals within that specific society and culture, contributing to the cultural fabric through shared experiences.

Moreover, this approach entails the construction of discourse through storytelling. Attitudes, beliefs, and experiences are interconnected and structured through narrative plots, whether expressed through storytelling or in response to questions and opinions. This includes the narrator's personal perspective within the societal context, drawing upon their own experiences and knowledge. In essence, the Narrative Method involves the conveyance of a story, encompassing the narrator's opinions, perspectives, or attitudes, all intertwined with the societal backdrop (Squire, 2008).

Catherine Kohler Riessman has classified storytelling into four categories, and this research will employ "thematic analysis" as a framework for writing narratives. Thematic Analysis is an analytical approach that centers on examining content derived from words and written sources, as opposed to analyzing the steps or processes involved in generating and interpreting information. This type of analysis involves utilizing data from various sources, including secondary data from documents, field notes, and more.

The objective of this approach is to assist researchers in identifying common themes or patterns within each case study involving multiple storytellers. Oral and written interpretations play a crucial role in ascertaining the identity of individuals and groups under study. This particular form of narrative analysis is rooted in the perspective of the researcher rather than the theoretical framework itself. Grounded theory is employed to extract themes from the narratives, which are inherently embedded in the personal experiences of the storytellers.

In essence, the Narrative Method entails presenting research findings through storytelling. The study's outcomes are conveyed via in-depth interviews and opinion surveys, aiming to uncover the underlying truths behind ideas rather than seeking absolute facts or determining right from wrong. This approach explores the societal

perspectives on Affordable Housing, examining whether they align with or differ from the approaches adopted in foreign countries, while also analyzing the current housing situation.

In the concluding chapter, the researcher's viewpoint on the development of Affordable Housing in Bangkok is juxtaposed with the perspectives of the surveyed stakeholders. Additionally, recommendations are provided regarding how these perspectives can potentially be altered in that direction.

2.5.4. The Analytical Hierarchy Process (AHP)

The Analytical Hierarchy Process (AHP) is a decision analysis tool with multiple objectives, initially proposed by Thomas Saaty. Saaty (1987) has developed a valuable tool for managing multi-criteria elements in qualitative and quantitative decision-making contexts (Saaty, 1987). AHP facilitates decision-making by allowing for the evaluation and calculation of various options, thus enhancing judgment and deployment efficiency. Furthermore, it enables the identification of both compatible and conflicting decisions by utilizing multiple criteria for assessment (Lee, 2007). AHP is widely regarded as one of the most comprehensive decision-making systems due to its hierarchical approach to problem definition, incorporating quantitative and qualitative factors (Taherdoost, 2017).

The research methodology as shown on figure 1 can be divided into different sections in this study. Beginning with Chapter 1 , it involves identifying the research problem and exploring the challenges in this study. The main problem identified in this research is the lack of consensus and shared perspectives on affordable housing, which aims to address the issue of expensive housing, particularly in the major city of Bangkok, where housing prices continue to rise due to increasing costs of land, construction materials, and labor. Although the concept of affordable housing has been discussed for a long time, there is still a lack of understanding regarding the definition, product formats, or standards of affordable housing. However, there have been measures introduced by the Bangkok Metropolitan Administration (BMA) and the Board of Investment (BOI) that define affordable housing as residential units for individuals with low income. Nevertheless, looking at other countries that have implemented the concept of affordable housing, it is evident that it includes not only low-income individuals but also those with moderate income.

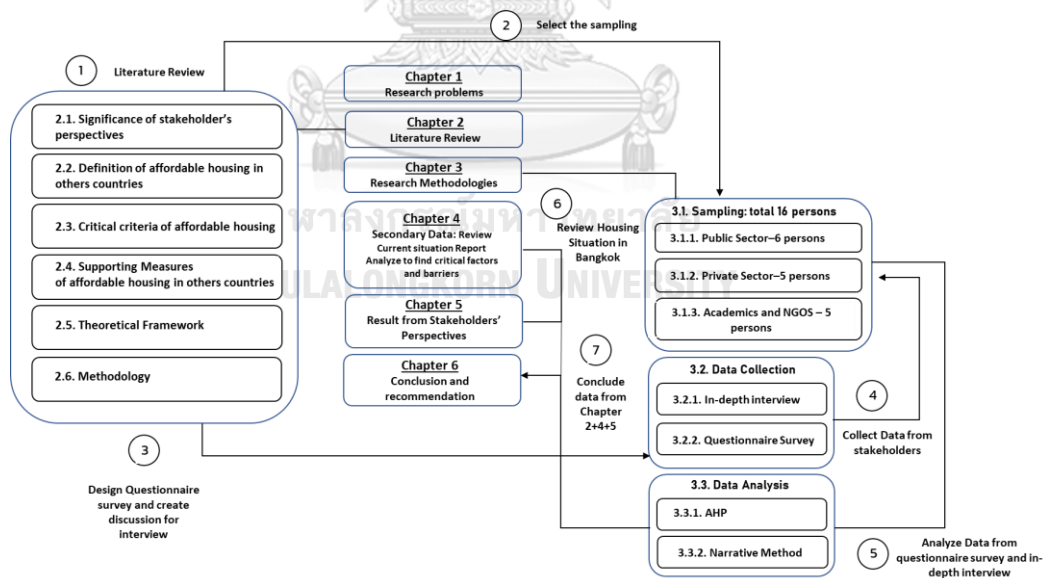


Figure 1: The Structural methodologies of this research

Moving on to Chapter 2 , it involves collecting case studies from various countries to gather information on definitions, critical criteria, and supporting measures. This information will be used as a framework for defining variables and designing

research tools for the subsequent data collection. Additionally, it is necessary to study the identification of stakeholders involved in formulating effective public policies and conduct a review of the theories used to design the research methodology, steps, and tools required for data analysis. The detailed methodology will be presented in Chapter 3 , after obtaining case studies from different countries and analyzing the housing situation in Bangkok in Chapter 4. The analysis in Chapter 4 will include an examination of the macroeconomic situation that impacts the housing market, as well as social and political factors. Then, a detailed analysis will be conducted on demand (housing affordability) and supply (developers) to understand the situation and identify constraints. Furthermore, Chapter 4 will analyze the measures and policies of each responsible organization. When comparing the findings from Chapter 4 with the results of surveys and in-depth interviews presented in Chapter 5, gaps will be identified based on the information gathered in Chapters 2 and 4 . These gaps will be analyzed to determine if any issues need to be addressed and will serve as the basis for developing policy recommendations in Chapter 6.

Chapter 3: Methodologies

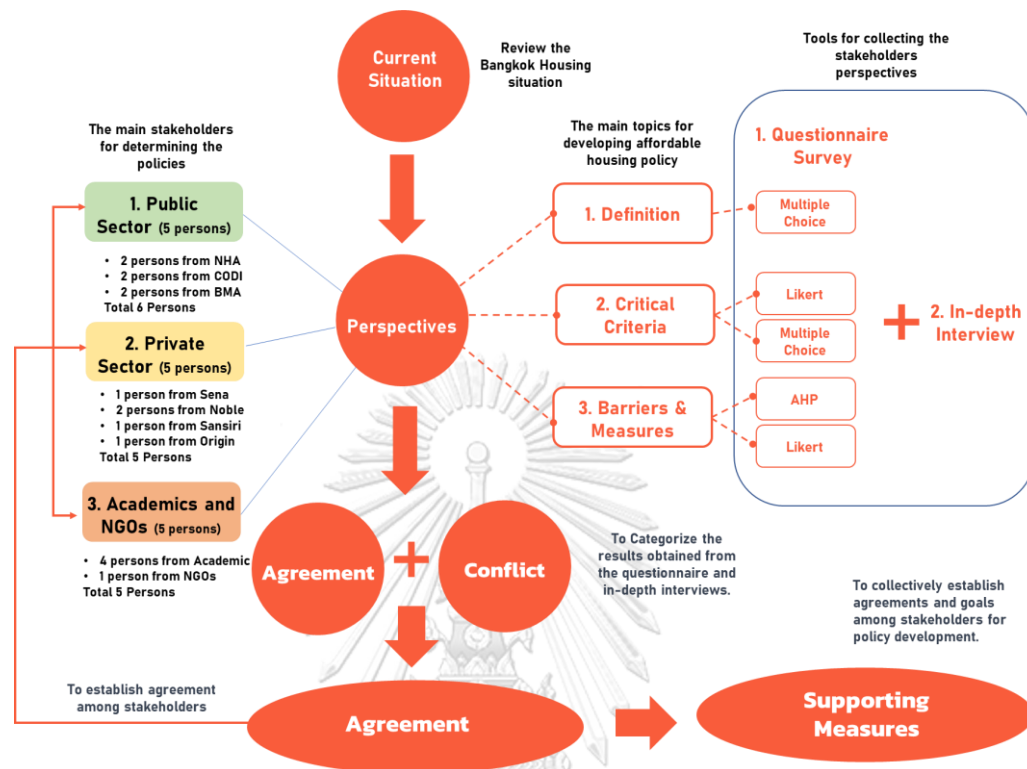


Figure 2: Diagram of Conceptual Framework

3.1. Conceptual Framework

In Chapter 3, we will discuss the methods and steps involved in conducting this research. The diagram below in Figure 2 explains the framework of this research, which serves as the main guiding principle for determining the methodology. The main focus of this research framework is the perspectives of stakeholders in various groups, namely the public sector, private sector, and academics and NGOs. These three groups are actively involved in the housing industry and policies related to housing. Further details will be provided in the following sections.

This framework begins with the identification of case studies from different countries where the concept of affordable housing has been successfully implemented.

This aims to learn about the definition, product standards, and strategies used to promote development and stimulate demand. Additionally, it involves studying the contextual factors in Bangkok related to affordable housing, including economic, social, and political aspects. This encompasses the existing policies and tools utilized to promote affordable housing development in Bangkok, as well as the limitations encountered. These findings will serve as a framework for defining variables and issues in the subsequent data collection process.

In the data collection process, the key focus of this research is the perspectives of stakeholders, who serve as representatives of each sector. This allows us to understand viewpoints on the development of affordable housing in three aspects: definition, critical criteria and barriers, and measures. Two types of tools, namely questionnaire surveys and in-depth interviews, are used. The questionnaire includes variables for each question and provides statistical data collection options. On the other hand, in-depth interviews delve deep into each variable's specific issues.

Next, the results from interviews and the quantitative data analysis of the surveys will be obtained. The preliminary analysis will focus on the overall scores derived from the survey opinions. Interviews will be categorized into common perspectives and contrast perspectives, which will be analyzed together to find common agreements. Strategies will be employed to align the opinions of all parties before using the agreed-upon points to shape policies and modify existing policies to align with affordable housing development.

This qualitative research aims to study the perspectives of stakeholders on the development of affordable housing in Bangkok, focusing on three specific topics: 1) defining affordable housing, 2) identifying critical criteria for assessing affordable housing, and 3) exploring supporting measures for affordable housing. The study will use questionnaire surveys and in-depth interviews, and can be divided into five steps.

1. The literature review will examine theories related to the study of stakeholders' perspectives on policy making in three key aspects of affordable housing: 1) defining affordable housing, 2) standardizing affordable housing, and 3) developing policies or measures to support affordable housing. Additionally, the review will analyze how content analysis and analytic hierarchy process (AHP) data are used to inform this research.
2. Collect data from the literature review to identify variables across all three topics. These variables will serve as a framework for designing survey and in-depth interview questions, and will also be used in the data analysis and synthesis process.
3. Select stakeholders from three sectors: the public sector, the private sector, the education sector, and NGOs, in order to conduct surveys and gather information about their perspectives.
4. Data collection will involve stakeholder surveys conducted through questionnaires and in-depth interviews, aimed at gaining a deeper understanding of the issues at hand. The data collection process will take place in two steps:
 - 4.1. Stakeholders will first complete a questionnaire designed to provide a framework for the research questions. Data from the survey will be analyzed to inform the development of in-depth interview questions.
 - 4.2. In-depth interviews will then be conducted with stakeholders, using the questionnaire answers as background points. These interviews will aim to provide additional information and insights on the topics under investigation.
5. The data collected from the surveys and interviews will be analyzed and synthesized using several methods:
 - 5.1. The survey data will be classified and processed to identify key themes and patterns.

- 5.2. The interview data will be transcribed and analyzed to identify important insights and perspectives.
- 5.3. The data will be grouped and analyzed using content analysis and the Analytic Hierarchy Process (AHP) to answer questions related to policy measures.
6. Summarize research results and make policy recommendations for the development of Affordable Housing in Bangkok.

3.2. Sampling in this study

The sample to be studied is representative of each sector involved in housing policymaking. The selection of samples in each sector is specific and considers the characteristics of the sample according to the research objectives. Specifically, the selected participants are those who work in the public, private, educational, and non-profit sectors and hold roles related to housing development or housing policy development, or are experts in housing theory within that sector.

The representative group used in this research consisted of 16 participants from four sectors, divided into three groups as follows:

1. **Public Sectors:** The government sector involved in housing policy development comprises three agencies, namely the National Housing Authority (NHA), Bangkok Metropolitan Administration (BMA), and Community Organization Development Institute (CODI), all of which play critical roles in housing delivery. These agencies are all part of the government, and while some may not be state-owned enterprises, they receive funding from the central government. As such, they are responsible for complying with state policies, including the 20-year housing strategy.

2. **Private Sectors:** The private sector involved in residential real estate development was selected based on specific criteria. The selection process was limited to companies that have housing developments at a price level specified by the Board of Investment (BOI) as Affordable Housing, i.e. with a price not exceeding 1.2 million baht.

Four private companies, namely Sansiri, Sena, Origin, and Noble, were selected as representatives. Five individuals from these companies were chosen based on their background in marketing and product development, with knowledge in both architecture and marketing to enable them to understand both product development and marketing strategies.

3. Academic and NGOs: Among the participants, there were a total of 5 representatives from the academic and NGO sectors. Specifically, four academics were interviewed, who were all experts in housing development policy from both the Department of Urban Planning and the Department of Housing. Additionally, one representative from an urban development agency specializing in housing and co-authoring housing policy research in Bangkok was interviewed from the NGO sector.

3.3. Data Collection

In this study, there are a total of 16 participants who have been divided into three groups. The first group is made up of six employees from the National Housing Authority (NHA), the Bangkok Metropolitan Authority (BMA), and the Community Organizations Development Institute (CODI), all of whom work in the public sector. The second group consists of five individuals who work in a private real estate company, while the third group comprises five people who work in academia or non-governmental organizations. The framework questions are based on case studies of other countries that have successfully implemented affordable housing as a means to solve urban housing problems. Table 2 represents the variables used in the questionnaire surveys, which are divided into three main parts as follows:

3.3.1. Definition

The variables used to provide the definition are divided into four parts. In exploring each variable option, the criteria are based on various relevant factors such as

income, housing types specified by the housing authorities in the 20-year housing development policy, and more. These variables can identify key factors in defining affordable housing, serving as a starting point for a common understanding of the target audience, price points, and supply sources. Definition is the process of determining the role of Affordable Housing and the key requirements that are appropriate for the context in Bangkok. In terms of definitions, it is divided into five variables, as shown in Table 2. There will be six questions regarding definitions.

Table 4: Variables of Definition Components

	Code	Main-Factors	Scale
Definition	D1	Housing Tenure	Nominal Scale
	D2	Target Group	Nominal Scale
	D3	Price of Affordable Housing	Nominal Scale
	D4	Length of Loans	Nominal Scale
	D5	Affordable Housing Providers	Nominal Scale

Source: Collection of variables from reports and articles created by the author.

Questionnaire Part1: Definition of Affordable Housing

1. What should be the ownership status in an Affordable Housing project? (Multiple choices can be selected)

- A. Ownership by buyers with property rights.
- B. Short-term lease agreement not exceeding 3 years.
- C. Medium-term lease agreement of 3 years or more.
- D. Long-term lease agreement not exceeding 30 years.

2. What income level should Affordable Housing projects serve?

*Based on household income estimates per month classified according to the criteria of the National Housing Authority (Bangkok Metropolitan and Suburban Areas) in 2022.

**Average household income (Bangkok Metropolitan and Suburban Areas) is 45,572 baht/month.

- A. Monthly income below 25,201 baht/household (Low-income group below Percentile 40).
- B. Monthly income between 25,201 and 35,700 baht/household (Low-income group between Percentile 41-60).
- C. Monthly income between 35,701 and 43,800 baht/household (Middle-income group between Percentile 61-70).
- D. Monthly income between 43,801 and 54,800 baht/household (Middle-income group between Percentile 71-80).
- E. Monthly income between 54,801 and 77,800 baht/household (High-income group between Percentile 81-90).
- F. Monthly income of 77,801 baht or more/household (High-income group above Percentile 91).

3. When determining the monthly rental price for Affordable Housing, what percentage of the target group's income should be considered?

- A. Less than 20%.
- B. 20%.
- C. 25%.
- D. 30%.
- E. More than 30%.
- F.

4. When determining the monthly installment price for Affordable Housing, what percentage of the target group's income should be considered?

- A. Less than 20%.
- B. 20%.
- C. 25%.
- D. 30%.
- E. More than 30%.

5. What should be the duration of the installment period for Affordable Housing?

- A. Less than 10 years.
- B. 10-20 years.
- C. 21-30 years.
- D. More than 30 years.

6. In your opinion, which organization should have a role in providing Affordable Housing in Bangkok?

- A. Central government and state enterprises responsible for housing, such as the National Housing Authority, Community Organization Development Institute, Ministry of Social Development and Human Security, etc.
- B. Local government organization (Bangkok Metropolitan Administration).
- C. Private sector developers of residential properties.
- D. Others.

3.3.2. Critical Criteria

The variables used to define the critical criteria are divided into seven parts. The key criteria are derived from the framework that other research has used to assess the satisfaction with the affordable housing model, or are variables used to evaluate the qualities or basic criteria that should be considered in affordable housing, such as the project location, distance to utilities and landmarks, accommodation size, building layout, and more. These variables can indicate the physical aspects of affordable housing in Bangkok and how it should be designed. There will be a total of 3 types and 8 variables that will be questions to obtain answers related to the characteristics, design, and location of affordable housing. This is important in using them as standards for affordable housing, in order to ensure a high quality of life for residents. The questions can be divided into the following:

Table 5: Variables of Critical Criteria Components

Main-Criteria		Code	Criteria	Scale
Critical Criteria	Household Characteristics	CC1	Age groups	Ratio Scale
		CC2	Household size	Ratio Scale
	Building Benchmark	CC3	Type of building	Nominal Scale
		CC4	Size of Housing, Unit size	Nominal Scale
		CC5	Presence of parking area	Ratio Scale
		CC6	Quality of housing	Ratio Scale
	Location	CC7.1	Distance from house to employment or working place	Interval Scale
		CC7.2	Distance from house to bus stop	Interval Scale
		CC7.3	Distance from house to rail transit station	Interval Scale
		CC7.4	Distance from house to nursery school or kindergarten	Interval Scale
		CC7.5	Distance from house to primary school and high school	Interval Scale
		CC7.6	Distance from house to health centers or hospital	Interval Scale
		CC7.7	Distance from house to recreational facilities e.g., Parks, green open spaces	Interval Scale
		CC7.8	Distance from house to religious places e.g., Temple, mosque, church etc.	Interval Scale
		CC7.9	Distance from house to fresh market	Interval Scale
		CC7.10	Distance from house to department store	Interval Scale
CC7.11		Distance from house to bank or financial services	Interval Scale	
CC7.12		Distance from house to Minor access road	Interval Scale	
CC7.13	Distance from house to Major access road	Interval Scale		
	CC8	Affordable housing location	Nominal Scale	

Source: Collection of variables from reports and articles created by the author.

Questionnaire Part2: Critical Criteria of Affordable Housing

1. Project Affordable Housing should prioritize which age group in terms of importance to the population in each group?

- A. Teenagers - Age less than 25 years
- B. Working-age adults - Age 26-40 years

- C. Middle-aged adults - Age 40-55 years
- D. Elderly - Age 56-70 years
- E. Senior citizens - Age above 70 years

Please answer the importance level using a Likert scale with options ranging from Very Important, Important, Neutral, Less Important, and Least Important.

2. Project Affordable Housing should prioritize which household type in terms of importance for each characteristic?

- A. Single-person household
- B. 2-person household
- C. 3-person household
- D. Household with more than 4 members

Please answer the importance level using a Likert scale with options ranging from Very Important, Important, Neutral, Less Important, and Least Important.

3. What characteristics should be present in a building suitable for Affordable Housing development?

- A. High-rise building with more than 8 floors
- B. High-rise building with 5-8 floors
- C. Townhouse with 2-3 floors
- D. Single-family house
- E. Commercial building

Please answer the importance level using a Likert scale with options ranging from Very Important, Important, Neutral, Less Important, and Least Important.

4. In a multi-story building Affordable Housing project, what should be the minimum size per unit?

- A. 20-30 square meters
- B. 30-50 square meters
- C. 51-80 square meters

D. More than 80 square meters

5. In a townhouse or commercial building Affordable Housing project, what should be the minimum size per unit?

- A. 45-80 square meters
- B. 81-150 square meters
- C. 151-300 square meters
- D. More than 300 square meters

6. Is parking necessary in an Affordable Housing project?

If parking is necessary, what should be the minimum parking percentage in the project?

- A. 100%
- B. 50%
- C. 40%-30%
- D. Less than 30%

7. What amenities should be provided in an Affordable Housing project?

- A. Interior decoration and furnished accommodation
- B. Kitchen for cooking
- C. Pleasant environment and views
- D. Gardens or common relaxation areas
- E. Fitness or exercise facilities
- F. Swimming pool
- G. Personal security system for the project

Please answer the necessity level using a Likert scale with options ranging from Most Necessary, Necessary, Neutral, Less Necessary, and Least Necessary.

8. What should be the maximum distance between Affordable Housing projects and various types of facilities?

- A. Workplace
- B. Bus stops
- C. Mass transit stations
- D. Kindergartens
- E. Primary and secondary schools
- F. Hospitals
- G. Parks or recreational areas
- H. Important religious sites
- I. Fresh markets
- J. Shopping malls
- K. Financial transaction centers
- L. Main roads
- M. Secondary roads

Please answer the distance level using a Likert scale with options ranging from 5 00 meters, 0.5-1 kilometer, 1.1-2 kilometers, 2.1-5 kilometers, and More than 5 kilometers.

9. In your opinion, where should Affordable Housing be located? (Multiple options can be selected)

- A. City center
- B. Urban and suburban areas
- C. Suburban areas
- D. Non-urban job hubs
- E. Other, please specify other suitable areas for Affordable Housing development in Bangkok.

3.3.2. Supporting Measures

In the supporting measures question, variables are divided into two parts: barriers to affordable housing development, and supportive measures for development. The supportive measures are further divided into four parts, assessed in terms of implementation difficulty and policy importance. The AHP method is used to determine the most important policy aspects. The four criteria are demand-side support, supply-side support, urban planning support, and land management support. The measures are divided into alternatives to analyze their implementation priority and level of difficulty.

3.3.3. Barriers and Supporting Measures

1) Barriers

The following limitations have varying levels of impact on the development of affordable housing. The respondents need to select the level of importance on a scale of 1 to 5, with 5 being the most important and 1 being the least important, for the following limitations:

- A. Land scarcity for affordable housing development and expensive land in urban areas.
- B. Lack of access to credit for affordable housing.
- C. Insufficient capital for affordable housing development.
- D. Lack of private sector motivation to participate in affordable housing development.
- E. Inadequate infrastructure and amenities, such as insufficient road expansion.
- F. Inappropriate building usage regulations for affordable housing, such as inadequate parking space requirements.
- G. Affordable housing is not popular among the general market.

2) Supporting Measure

Table 1: Variables of Supporting Measures Components

Measure Categories	Code	Measures	Scale	
Measures	Financial Subsidization	M1	Housing Loans	Ordinal Scale
		M2	Housing Grants	Ordinal Scale
		M3	Daily expenses subsidization	Ordinal Scale
	Funding and Financing Model	M4	Housing Fund	Ordinal Scale
		M5	Public Private Partnerships for Affordable Housing	Ordinal Scale
		M6	Tax Abatements	Ordinal Scale
	Urban Planning Incentives	M7	Inclusionary Zoning	Ordinal Scale
		M8	Regulation control relaxation	Ordinal Scale
		M9	Capacity Building (FAR Bonus)	Ordinal Scale
		M10	Planned Unit Development or PUD	Ordinal Scale
		M11	Parking Requirement	Ordinal Scale
	Land Management	M12	Public land	Ordinal Scale
		M13	Public land leasing	Ordinal Scale
		M14	Right Conversion Method	Ordinal Scale
		M15	Land Tax Readjustment	Ordinal Scale

In this section, the AHP (Analytic Hierarchy Process) research tool will be used to determine suitable policy options to be implemented for the development of Affordable Housing in Bangkok. The first step is to select criteria, which can be divided into 4 mechanisms that promote Affordable Housing development. The following questions aim to determine the importance of each mechanism and its effectiveness in developing Affordable Housing, whether it is more or less important. As shown in table 6.

The mechanisms that promote Affordable Housing development can be divided into 4 aspects:

- A. **Financial Subsidization Mechanism:** This involves providing subsidies or loans to support the purchase of housing and assisting with other expenses, ensuring that individuals have sufficient funds to afford housing.
- B. **Funding and Financing Model Mechanism:** This includes providing capital or establishing funds to be used for granting loans to developers who aim to develop Affordable Housing projects.
- C. **Urban Planning Support and Control Mechanism:** This entails using laws or incentives in urban planning to support or regulate developers in the development of Affordable Housing.
- D. **Land Allocation Mechanism:** This involves managing land allocation to support and promote effective management in the development of Affordable Housing.

Next, we will further select and evaluate each sub-criterion, divided into a total of 4 mechanisms. The details are as follows:

1. **Financial Subsidization Mechanism to Promote Housing Access.** Divided into three measures:

- A. **Housing Loans:** Supporting individuals' access to loans with low and fixed interest rates to purchase residential properties.
- B. **Housing Grants:** Providing financial support to individuals who cannot afford to purchase or rent housing at market prices.
- C. **Daily Expense Subsidization:** Assisting individuals with daily living expenses such as basic welfare, transportation, healthcare, and education to reduce monthly burdens and ensure sufficient funds for housing costs.

2. Mechanisms to support financing for the development of affordable housing can be divided into three measures:

- A. **Housing Fund:** This measure involves the establishment of funds by central government agencies, state enterprises, or local authorities responsible for housing development. These funds aim to support low and fixed-interest rate loans for affordable housing developers.
- B. **Public-Private Partnerships:** Public-Private Partnerships refer to collaborations between the government and the private sector in developing financially viable affordable housing. This partnership helps to reduce investment risks for the private sector.
- C. **Tax Incentives:** Tax incentive measures involve providing tax benefits to affordable housing developers. For example, granting corporate tax exemptions or other tax reductions to incentivize the development of affordable housing projects.

3. Urban Planning Mechanisms for Support and Control - Divided into 5 Measures, including:

- A. **Inclusionary Zoning:** Inclusionary Zoning involves the implementation of urban planning regulations in specific areas to require private developers to include affordable housing units within their projects for sale. This measure aims to reduce housing disparity and promote affordable housing options.
- B. **Regulations Control Relaxation:** This measure involves the relaxation of certain building controls or urban planning regulations to reduce project costs and facilitate private developers in constructing affordable housing. For example, this may include relaxing public space requirements when obtaining construction permits.
- C. **Capacity Building (FAR Bonus):** This measure grants additional privileges for the utilization of building space on specific land plots. It allows for the creation of

more building area in exchange for the provision of affordable housing. For instance, developers may receive a Floor Area Ratio (FAR) bonus.

- D. **Planned Unit Development (PUD):** Planned Unit Development is a measure that combines urban planning regulations and land allocation regulations to support large-scale developments. It allows developers to request changes in land use designations specified by the urban plan in exchange for the development of affordable housing.
- E. **Reduced Parking Space Requirements:** This measure involves the reduction of mandated parking space requirements stipulated by laws and regulations for private developers developing affordable housing projects. This helps optimize land use and reduce construction costs.

4. **Mechanisms for Land Acquisition for Affordable Housing can be divided into four measures:**

- A. **Public Land:** This measure involves the utilization of state-owned land for the development of affordable housing projects, with government agencies acting as the project developers.
- B. **Public Land Leasing:** This measure entails leasing state-owned land to private developers at affordable prices. It aims to reduce the development costs of affordable housing projects and allows the government to retain control over land use through lease agreements.
- C. **Right Conversion Method:** The Right Conversion Method is a measure for consolidating small land plots in urban areas. It involves converting the ownership rights of existing landowners into ownership rights of newly developed residential buildings. This helps reduce resistance from the public and promotes the consolidation of land for the development of high-density residential buildings.
- D. **Land Tax Adjustments:** This measure involves adjusting the tax rates for land and vacant or unused buildings to incentivize the utilization of land by the private

sector for the development of low-priced residential buildings. It includes increasing tax rates for land and unused properties to encourage their productive use and promote the development of affordable housing.

3.4. Data Analysis

This research utilizes the narrative method of data analysis, which is one of the qualitative research methods used to understand the social situation through the perspective of each (Overcash, 2003). The results of the in-depth interviews and questionnaire surveys for each participant can be used to create narratives that illustrate the perspectives of participants on the development of affordable housing in Bangkok. Even though participants answered the same set of questions, the questions can be perceived differently or the participants can have different ideas depending on their experience, role, knowledge, and perception of the issue (Duque, 2005). The narrative method can be classified into four groups. This research employs thematic analysis, or analysis based on the essence or core of the storyline, to determine the framework for writing the study narrative. The narrative method does not establish any conclusions or facts regarding the veracity of the interview-obtained information. Rather, the focus is on the words or statements chosen by the interviewer and their significance or meaning. After analyzing each individual, the report analyzes the similarities and differences among stakeholders within the same sector and the broader context within each sector to determine whether there are similar or different perspectives on each issue.

Chapter 4: Housing Situation in Bangkok

Chapter 2 presents a comprehensive review of literature and case studies from various countries, focusing on three aspects: the definition of affordable housing, critical criteria including physical appearance, and support measures implemented to promote affordable housing development. Chapter 3 provides an explanation of the research methodology employed, outlining the data collection and analysis methods utilized to gather perspectives from stakeholders. Thus, in Chapter 4, the housing context in Bangkok is thoroughly examined, considering the current economic, social, and political conditions that are relevant to housing. This analysis is divided into two sections: the demand side and the supply side. Furthermore, the chapter explores existing policies pertaining to affordable housing and examines the tools employed by the government to facilitate affordable housing development. Finally, the concluding section summarizes the research findings and offers a discussion on the researcher's perspective regarding the current situation. Insights derived from the case studies in Chapter 2 are also incorporated to envision the future form of affordable housing in Bangkok.

4.1. Housing Situation

4.1.1. Demand Side

General Situation

In the period of 2020-2021, amidst the COVID-19 pandemic, there was a decrease in spending and a decline in the number of home purchases. Consequently, the private sector of real estate developers faced intense competition. Housing prices were lowered in order to encourage more individuals to engage in housing acquisition. Following the recovery from the COVID-19 era, the situation began to improve and trading resumed in the housing market. As a result, the housing inventory decreased

and the private sector refrained from reducing housing prices, thus indicating a potential increase in the future.

In 2022, as the economy made a gradual recovery from the impacts of COVID-19, people returned to their normal routines. The condominium market, which experienced negative transfers in 2021, saw a significant rebound in 2022, with an increase of approximately 10-15%. Despite the overall improvement, it should be noted that the majority of condominium buyers belonged to the middle-lower income groups, some of whom were burdened with high levels of household debt. Given the post-COVID economic situation, it will take time for households to restore their financial well-being. The Real Estate Information Center (REIC) anticipates a gradual improvement in the situation throughout 2023, although the economic recovery is not yet complete and inflation remains a factor. It is worth noting that household debt has reached 90% of the GDP, but there are positive signs of recovery in employment and income conditions (REIC, 2022, 2023).

Expenses incurred for housing costs in Bangkok

Based on the Household Income Projection for the period of 2019-2037 and utilizing economic indicators such as the national economic growth rate (GDP = 2.4) and expected economic stability from inflation (0.7), data was derived from the Household Economic and Social Situation Survey 2019 conducted by the National Statistical Office, as well as the Thai Economic Projection from the Study of Housing Demand Projection in Thailand 2017-2037 conducted by Thammasat University (Denpaiboon, 2017).

According to the aforementioned sources, it was determined that the average income of Bangkok residents in 2022, specifically within middle-income households, amounted to 41,324 baht. In relation to the NHA's definition of middle-income households, which are capable of affording affordable housing from the private sector,

such as condominiums or townhouses, it was specified that such households should possess a monthly income ranging from 36,701 to 45,300 baht, allowing them to allocate approximately 11,000 baht towards housing expenses (Cheejaroen, 2022; Pinsai, 2018).

Based on the survey of housing prices in the market, it can be divided into two types: houses for sale for ownership and houses for rent. The important variables considered are location and proximity to rail transit stations, along with the ability to pay, which is determined by two variables. The first variable is income, divided into income groups categorized by the NHA (National Housing Authority) as low-income, moderate-income, and high-income. The second variable is the proportion of income spent on housing expenses, categorized as 20%, 25%, and 30%. By considering these factors, we can understand which income groups and housing affordability levels can access the housing market. The details are as follows: The first group is the homeownership model. This group incurs expenses in the form of monthly installments, which include both the cost of the house and the interest on the loan. The calculations are based on the borrowing capacity determined by commercial banks according to the salary, the housing prices that can be afforded based on the income level, and the ability to make monthly payments.

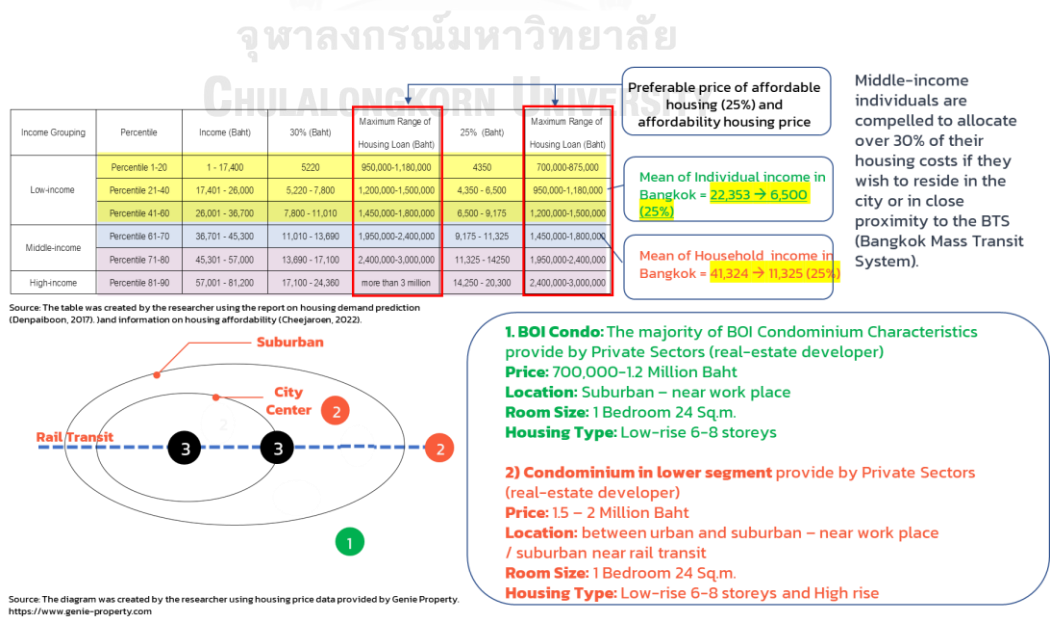
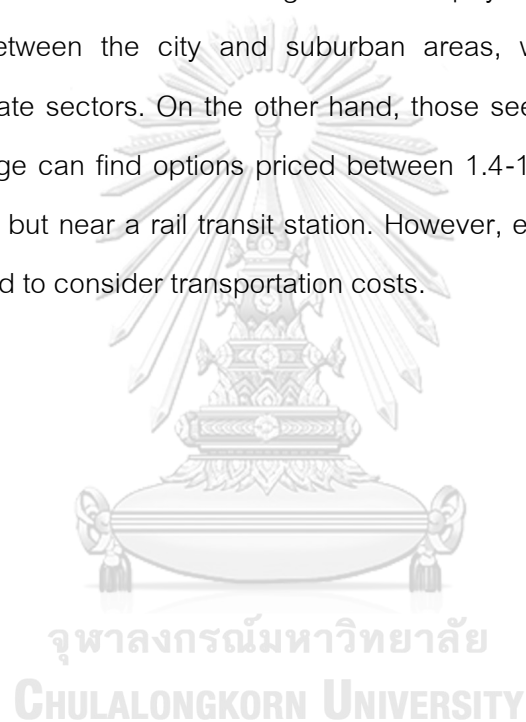


Figure 3: Housing Affordability in Homeownership model

In figure 3, the diagram illustrates the relationship between housing prices and the affordability of housing payments for household in each group. The housing market in Bangkok can be divided into two models: homeownership and rental. When analyzing the homeownership model, three key factors come into play: income levels, housing prices, and housing loan ranges based on affordability. Research indicates that lower-middle income households in the 61-70 percentile range are required to allocate more than 30% of their income towards housing installment payments in order to purchase a house situated between the city and suburban areas, with access to rail transit developed by private sectors. On the other hand, those seeking affordable housing in the 25% price range can find options priced between 1.4-1.85 million baht, located in the suburban area but near a rail transit station. However, even with the lower housing price, they still need to consider transportation costs.



In figure 4, the diagram illustrates the relationship between rental housing prices and the affordability of rental housing payments for household in each group. The second group is the rental model group. In this group, individuals will have to pay monthly rent, which is determined based on their income level and the proportion of housing expenses as a percentage. This will determine their ability to rent housing in different locations and whether they have convenient access to rail transit. You can refer to the diagram for more details.

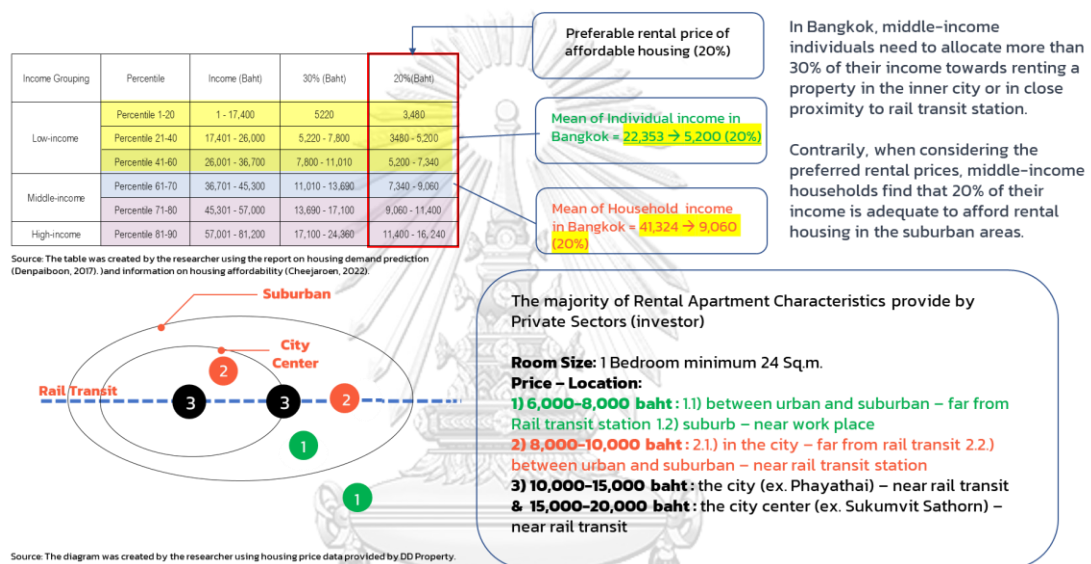


Figure 4: Housing Affordability in Rental model

In Bangkok, rental apartments with one bedroom can be classified into three price ranges. Similar to the homeownership model, the cost and location of these rental properties exhibit a consistent trend. Even individuals with middle-income levels are required to allocate more than 30% of their earnings towards renting a property located in the inner city or in close proximity to a train station. However, for affordable housing, it is recommended that rental fees should ideally amount to around 20% of the household income. As a result, lower-middle-income households can choose to rent apartments either in the suburbs near rail transit or within the city, although the latter option may be farther from a train station.

However, Thammasat University's study on housing demand projection in Thailand for the period of 2017-2037 suggests that affordability pertains to both housing purchase and rent. Based on a sample conducted in Bangkok, it was observed that the most affordable group in terms of rental payments fell within the range of 3,001 to 5,000 baht per month (29.45%), followed by those capable of affording 5,001 to 8,000 baht per month (22.67%), and individuals with the means to purchase housing priced between 1 and 2 million baht (29.39%). Approximately 20.27% fell into this category (Denpaiboon, 2017).

On one hand, it is important to consider that there is an unaccounted latent population in Bangkok when analyzing the average household income. As per the Ministry of Labour's data from 2021, the current minimum daily wage in Bangkok stands at 331 baht, while the starting salary for a bachelor's degree holder typically begins at 15,000 baht (Techasiriprapa, 2021). Additionally, inflation rates are increasing annually. Consequently, the average base salary for the majority of the population in the Bangkok area currently amounts to approximately 22,353 baht per month. These figures are based on the information provided by "Numbeo," an open database that regularly updates the cost of living in major cities worldwide (Numbeo, 2023; Phanunan, 2021).

When comparing the minimum income level and average monthly income of individuals in Bangkok with the cost of living required for daily expenses, such as housing, food, transportation, and utilities, it is evident that residents in Bangkok have limited funds left each month for other expenditures or savings. This is primarily due to the high cost of living in the city. Specifically, the average rental price for a dormitory or apartment in Bangkok ranges from approximately 5,000 to 6,000 baht per month, or potentially higher, excluding water and electricity expenses. Rental rates can vary based on factors such as location, room size, and available amenities. Lower rates are typically associated with accommodations situated in less accessible areas or far from main roads, which may lack amenities like shared bathrooms, elevators, or proximity to

the city center. For condominiums, rents can start at around 10,000 baht or higher, excluding water and electricity costs (Numbeo, 2023; Phanunan, 2021). It is important to note that opting for lower-priced options often necessitates compromising on the quality of the room and enduring longer commuting distances. In summary, the high cost of living in Bangkok, particularly in terms of housing expenses, leaves individuals with limited disposable income, making it challenging to allocate funds for additional expenses or savings (Phanunan, 2021).

According to a report by iPrice Group in 2021, which compared housing rents in six countries including Malaysia, Philippines, Singapore, Indonesia, Vietnam, and Thailand, it was found that housing rents in Bangkok ranked as the third highest. Specifically, housing rents in Bangkok accounted for approximately 48% of the average salary. In comparison, housing rents in Singapore accounted for around 39% of the average salary (Salakul, 2021; TPSO, 2023).

4.1.2. Supply Side

Overall, there was a significant decline in housing launches prior to the COVID-19 pandemic. Real estate developers shifted their focus towards investing in low-rise housing projects on the outskirts of cities, rather than developing condominiums within urban areas. However, as the recovery period from the pandemic unfolds, the dynamics of the real estate market are expected to change.

As a result, the overall real estate market is anticipated to become less competitive in 2022. This shift can be attributed to a decrease in the number of available properties, thereby reducing the need for private sectors to lower prices as an incentive for potential buyers (Niyom, 2023).

In the upcoming years, it is anticipated that housing prices will increase starting from 2022. This escalation can be attributed to a rise of approximately 3-5% in land prices, construction material costs, and construction labor expenses. Consequently, housing expenses will be notably high, particularly for urban projects. Moreover, the overall economic recovery of the country has not reached its full potential. This poses challenges for individuals belonging to the middle and lower-middle classes, as they grapple with the impact of expensive goods on their cost of living (BOT, 2021).

Developers face significant challenges in dealing with the high costs associated with housing, including expenses related to land, labor, and building materials. However, they cannot simply transfer these costs to consumers due to the limited purchasing power of potential buyers. Furthermore, developers encounter various obstacles and threats in their operations, including, stricter lending practices imposed by financial institutions, which make it more challenging for consumers to secure housing loans.

Overall, these factors contribute to the complex environment developers face, as they must navigate cost constraints, limited consumer purchasing power, tighter lending regulations, and potential income uncertainties resulting from tax laws. Conversely, a positive factor in the real estate market is the low interest rate, which alleviates the financial burden on consumers when it comes to housing payments.

4.2. Related Policies

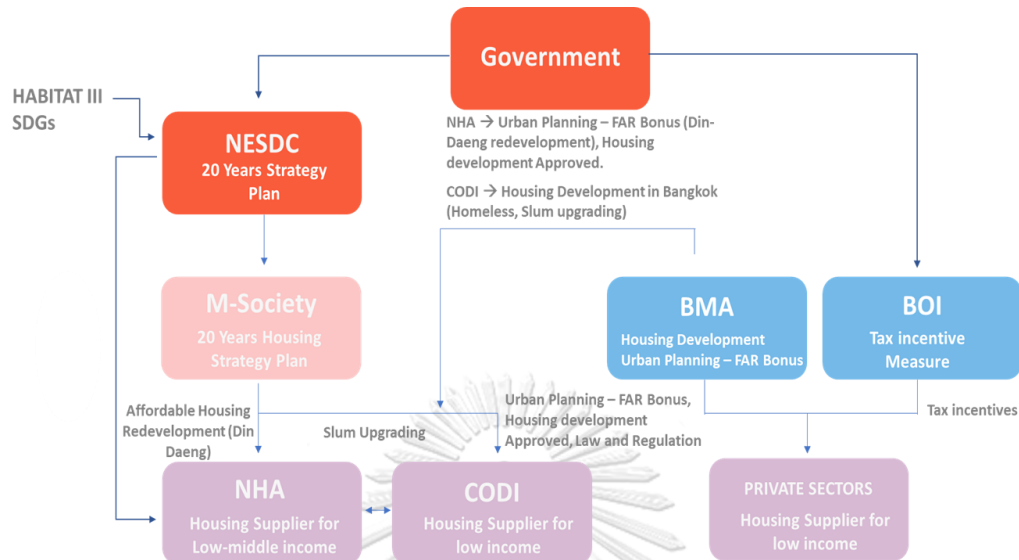


Figure 5: The relationship of institutions and policy in Housing Development

This diagram on figure 5 illustrates the roles and relationships of various stakeholders involved in shaping housing policy in Bangkok. Each sector has a distinct role in housing policy implementation. The National Housing Authority (NHA) and Community Organizations Development Institute (CODI) act as providers of low-income housing, in alignment with the 20-year housing strategies plan overseen by the Ministry of Social Development and Human Security. The pricing of NHA housing units is regulated by the State Housing Authority. The Bangkok Metropolitan Administration (BMA) acts as a policy supporter by offering incentives through urban regulations to encourage developers to construct affordable housing. The Board of Investment (BOI) of Thailand plays a critical role in supporting the development of affordable housing by providing tax incentives to private sector entities that offer affordable housing options in Bangkok with prices below 1.2 million baht. Lastly, there are support measures for affordable housing, such as low-interest housing loans provided by public banks, aimed at assisting low-income families in purchasing their first homes.

4.2.1. Global Level

1) Habitat III

Habitat III, commonly referred to as the United Nations Conference on Housing and Sustainable Urban Development, was held in Quito, Ecuador, in 2016. The primary objective of the conference was to tackle diverse facets of urban development and promote sustainable housing, with a specific focus on affordable housing. The conference's adoption of the New Urban Agenda highlighted the crucial role of ensuring universal access to suitable, affordable, and adequate housing, particularly for vulnerable and marginalized communities.

The New Urban Agenda, originally comprised a 23-page document that laid the foundation for urban planning policies worldwide. The underlying principle of this agenda is the belief that "All individuals should have equal rights and opportunities." According to the report, one of the primary challenges posed by urbanization is the provision of affordable housing. Even in developed countries like the United States, it is reported that over 20% of the population spends more than 50% of their income on housing expenses. Moreover, the financial crisis and the state of the global economy significantly impact housing prices, population income, and exacerbate housing shortages, particularly in urban areas (HabitatIII, 2016).

2) Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) represent a global endeavor towards shared development. These goals aim to foster inclusive, transformative, and integrated development, with the overarching objective of eradicating poverty and reducing inequality while ensuring that no one is left behind. Moreover, the SDGs emphasize the importance of sustainable resource management, environmental protection, and the active participation of all sectors. While the SDGs are universal in

nature, their implementation necessitates contextual adaptation in each country. The policy drive behind the SDGs should initiate at the grassroots level and progressively ascend to the policy level, employing a bottom-up approach. This approach underscores the significance of decentralizing power to local authorities, enabling them to assume a pivotal role in leading the implementation efforts (Habitat).

Furthermore, the SDGs can serve as a valuable tool for fostering development cooperation through negotiation. Moreover, preventing inequality is another crucial approach. Regarding housing development, the relevant goals are #SDG11: "Make cities and human settlements inclusive, safe, resilient, and sustainable." This objective is further elaborated in the following sub-targets:

- 11.1: Ensure access to adequate, safe, affordable housing and basic services, as well as slum upliftment, by 2030.
- 11.3: Enhance inclusive and sustainable urbanization and capacity for participatory, integrated, and sustainable human settlements in all countries by 2030.

In addition to addressing housing issues explicitly, as outlined in the aforementioned targets, it is important to consider the broader perspective. Stable housing is intricately linked to the foundation of the entire economy. It necessitates a society that ensures a high quality of life, encompassing aspects such as good health and well-being (SDG3), quality education (SDG4), and a robust and inclusive economy (SDG8).

4.2.2. Country Level

1) The Thai Constitution

In the existing constitution, the role of the state in relation to the right to housing is not clearly specified. The recognition of the right to housing was initially established in the 1960 Constitution. Subsequently, in 2007, the right to housing was guaranteed under Chapter 3, Section 55 of Rights and Freedoms. This section explicitly states that "An individual who is homeless and lacks adequate income for subsistence shall be entitled to receive appropriate assistance from the state." Unfortunately, this constitution was nullified following a military coup executed by the National Council for Peace and Order (NCPO) in 2014.

In the current constitution, the 2017 Constitution, the provision concerning the right to housing has been relocated to Section 6, State Policy, specifically Section 71. Article 71 stipulates that the state bears the responsibility to enhance the institution of the family, which constitutes a crucial foundation of society. This entails ensuring adequate housing for individuals and fostering health promotion initiatives aimed at maintaining the well-being and mental resilience of the population. Notably, this provision does not specify any particular group, emphasizing the general welfare of all individuals (Visetpricha, 2019).

2) The 20-Year National Strategy

The 20-Year National Strategy, prepared by The National Economic and Social Development Plan, embodies a vision of "Stability, Prosperity, and Sustainability." This vision places a significant emphasis on security in all its dimensions, as security encompasses safety at both the national and community levels. The strategy underscores the importance of fostering robust communities, nurturing close-knit

families, and promoting income generation. These objectives align with the development framework outlined in Strategy 4, which focuses on Creating Opportunities, Equality, and Social Justice. Strategy 4 encompasses various facets aimed at establishing equal opportunities and social equity, including the pursuit of stability and the reduction of socio-economic inequalities (MSDHS, 2017).

3) The 10-Year Housing Development Strategic Plan (2016 – 2025)

The primary objective of this plan is to promote housing security and enhance living standards by ensuring the availability of standardized housing in communities with suitable environments. The provision of public utilities, essential amenities, and basic government services for low-income groups without existing housing ownership includes the following initiatives:

1. Implementation of a comprehensive low-income housing development plan by the National Housing Authority, encompassing a total of 1,707,437 units.
2. Implementation of an urban and rural low-income housing development plan by the Institute of Community Organization Development (Public Organization), amounting to a total of 1,044,510 units.
3. Implementation of land support initiatives by the Department of Social Development and Welfare, covering a total area of 960 rai.

These endeavors aim to address the housing needs of low-income individuals and ensure they have access to secure and suitable housing options (NHA, 2022).

4) The 20-Year Housing Strategy

Within the framework of housing development policies and strategies, both at the international and national levels, there are several key areas of focus that align with the same direction. These include:

1. Reducing poverty and inequality through slum improvement initiatives.
2. Ensuring access to adequate and diverse housing options.
3. Providing sustainable, safe, and affordable transportation options while considering the needs of vulnerable groups.
4. Strengthening urban development and capacity for inclusive and sustainable human settlement planning and administration.
5. Promoting economic, social, and environmental connectivity within urban areas.
6. Establishing a robust financial system to support housing development efforts.
7. Facilitating participatory processes to engage stakeholders and ensure their involvement in decision-making.

These policy and strategic elements collectively aim to enhance housing conditions, promote equitable access, and foster sustainable urban development (MSDHS, 2017; Visetpricha, 2019).

4.3. Existing Policies

1) Urban Planning Policies: Bangkok Master Plan (2013) - FAR Bonus

In the 2013 edition of the Bangkok Master Plan, specific measures have been introduced to encourage property developers to support projects that benefit the public. These measures include conditions regarding the types of permissible uses in order to qualify for the right to increase the ratio of total building area to land area, known as the FAR Bonus. These conditions may involve providing open spaces for public use or parks, incorporating water catchment areas within land plots, and developing below-market housing for low-income or existing residents.

These conditions are intended to incentivize not only the private sector, but also the government, to contribute towards improving the quality of life for individuals

residing in the city, particularly those with low incomes. The handbook accompanying the implementation of the Bangkok Master Plan 2013 provides a comprehensive explanation of the meaning and guidelines for compliance with these incentive policies, facilitating mutual understanding among stakeholders involved in implementing these measures.

- **Residential land use:** Residential land use pertains to housing that encompasses various types of residential structures. In the event that a landowner or business operator offers or constructs housing at a price below the prevailing market rates for the purpose of accommodating low-income residents or existing residents within a specific project, certain restrictions apply. Specifically, the ratio of total building area to land area must not exceed 20%. Moreover, the increase in total building area per unit of land area designated for low-income residents should not exceed four times.
- **Housing for Low-income Households and Existing Households:** Housing designated for low-income residents or existing residents within the project area refers to housing units whose sale price is at least 20% lower than the average sale price per square meter per floor of the project. These housing units must meet the same construction and decoration standards as the entire development. Regarding housing for existing residents in the project area, it should be developed within the project area itself or within a maximum radius of 5 kilometers from the boundary line of the project's land. This distance is measured from the boundary line of the project's land to the existing residential community area.
- **Low-income people:** Low-income people are defined as those whose average monthly income falls below the average household income in the Bangkok metropolitan area. This threshold is set by the Office of the National Economic

and Social Development Board and is determined to be no less than 20 percent of the average income level.

- **Affordable housing:** Affordable housing refers to housing units that are priced below the market rate. Specifically, this refers to housing with a price that is at least 20% lower than the average sale price per square meter of the project.
- In conclusion, the incentive measures and conditions for qualifying for the FAR Bonus can be categorized into two cases for project implementation:
 1. Housing projects that provide affordable housing units for low-income individuals within the same project area, with prices lower than the market rate.
 2. Housing initiatives that cater to existing residents outside the project area, located within a 5-kilometer radius from the original land plot.

For applications seeking the ratio of total building area to additional land area (FAR Bonus), the building permit must be submitted using the designated form titled "Application for the Ratio of Total Building Area to Additional Land Area (FAR Bonus)." This form should explicitly indicate the precise location of the housing designated for low-income residents or existing residents within the project area on the construction permit application.

2) Tax Incentive (BOI Condo)

Investment promotion measures in the residential business sector include housing initiatives that have received investment support from the Thailand Board of Investment (BOI). Companies engaging in these projects and meeting the specified conditions set by the BOI will be eligible for a three-year corporate income tax exemption benefit.

This benefit is granted to developers undertaking housing projects targeting low- or middle-income individuals, in accordance with the guidelines and requirements established by the BOI. By facilitating the establishment of housing businesses targeting low-income individuals, the government aims to support their access to quality housing options. This policy initiative seeks to enhance the availability of housing in various locations, promote favorable community environments, and ensure affordability levels that are reasonable for low-income individuals.

In light of this, the BOI Board has made the decision to promote "low-income housing enterprises" by offering tax exemption benefits exclusively for corporate income. This incentive, spanning a period of three years, aims to encourage entrepreneurs to engage in the construction of high-quality housing units that cater to the needs of low-income individuals.

As an illustration, condominium units must have a minimum usable area of 24 square meters per unit. For row houses or detached houses, the requirement is a minimum usable area of 70 square meters per unit. The selling price per unit should not exceed 1.2 million baht, inclusive of the cost of land, if the project is located in Bangkok and its vicinity. In other provinces, the selling price should not exceed 1 million baht, including the cost of land (BOI, 2021).

Furthermore, it is essential for the project to obtain approval from the Government Housing Bank before applying for promotion. Setting a price ceiling for BOI-approved condominiums serves the purpose of reducing the selling price below the prevailing market rates. By offering more affordable prices, these condominiums become more appealing to a wider customer base, resulting in faster sales and reduced inventory holding periods. While the price ceiling may limit potential profit margins, developers view this approach as low-risk, considering the benefits of exemption from corporate income tax. Consequently, numerous developers, including well-established

companies like Origin Development and Sena Development, as well as smaller developers, have ventured into the BOI-approved condominium construction business.

4.4. Discussion

It is worth noting that the existing measures to support affordable housing development in Bangkok predominantly emphasize the homeownership model, while there is a notable absence of measures to support the rental model. The only available measure to encourage private sector participation in affordable housing development is the provision of tax incentives by the Board of Investment (BOI). However, it is important to mention that the BOI condos offered in suburban areas near workplaces are often located far from rail transit stations due to the high land costs associated with such locations.

1. The Target Group for Affordable Housing: The target group for affordable housing should encompass lower-middle-income households, taking into consideration the affordability of housing prices and rental rates.
2. Location of Affordable Housing: The ideal location for affordable housing should take into account affordability in terms of both housing prices and daily expenses. One viable option is to consider areas situated between the city and suburbs, in close proximity to workplaces, or near public transportation, particularly bus routes.
3. Price of Affordable Housing: The affordability criteria for housing should strive for installment payments of approximately 25% of income and rental rates around 20% of income.

4. Bridging the Price Gap between Affordability and the Market: The maximum price for affordable housing should not exceed 1.8 million baht, and rental prices should not exceed 9,000 baht per month. This highlights the disparity between affordability and market prices, necessitating government support through measures such as housing loans and rental grants.
5. Emphasizing Rental Options over Ownership: Particularly in urban areas, there should be a focus on urban housing redevelopment to enhance the availability of rental housing through public-private partnership (PPP) initiatives.



Chapter 5: Data Collection and Data Analysis

5.1. Definition of Affordable Housing

5.1.1. Targeting Specific Income Groups for Affordable Housing

Table 6: The results of Targeting Specific Income Groups for Affordable Housing

Questionnaire			Public Sector		Academic Sector		Private Sector		Total	
			6 Persons	%	5 Persons	%	5 Persons	%	16 Persons	%
Definition	Target Group	Under Percentile 40	1	17%	2	40%	2	40%	5	31%
		Percentile 41-60	4	67%	3	60%	3	60%	10	63%
		Percentile 61-70	1	17%	0	0%	0	0%	1	6%

Source: Survey Data Collection by Researcher

Common Perspectives

An analysis of stakeholders' survey results regarding the target household groups for Affordable Housing, as presented in Table 6, reveals that a majority of respondents, accounting for 63%, believe that Affordable Housing should be aimed at households within the 41-60 percentile income range. This perspective aligns with the definition provided by the National Housing Authority (NHA), which includes households earning between 26,001-36,700 baht per month. These households have the financial capacity to own low-cost housing provided by the government, such as NHA or CODI. However, acquiring housing in the lowest segment from the private sector remains challenging for them.

Moreover, 31% of respondents expressed the view that affordable housing should be targeted at individuals with incomes below the 40th percentile, corresponding to household incomes below 14,400 baht per month. A respondent from NGO stated

that, "When discussing affordable housing, it becomes challenging to define 'affordability' as it varies based on each income group. However, in terms of suitability, affordable housing is seen as a means to bridge the gap for individuals in the 40th percentile. The ideal price range for such housing is around 700,000 to 1 million baht. Currently, such prices are not feasible within the city and require people to look to the suburbs or distant areas for options."

Contrasting Perspectives

Regarding the differing views on this issue, it is noteworthy that only a minority of 6% from government agencies believe that middle-income individuals in the 61-70 percentile range should be considered. The rationale behind this perspective is that middle-income individuals lack adequate measures or tools to support their housing needs. Housing definitions typically classify the 61-70 percentile group as middle-income households capable of owning affordable private housing, such as condominiums or economical townhouses.

A government representative stated that Affordable Housing in Thailand entails the development of products that are affordable for the population and ensuring their affordability. However, there is currently a lack of clear data regarding the payment capacity at different household levels. The available information only provides average income and minimum cost of living figures, without detailed categorization of needs, payment capacity, and household expenses within each income group. Consequently, the true needs and actual payment capacity of various income groups remain unknown.

"Affordable housing should not solely be determined by house prices. Even if the house is inexpensive, if it is located in the suburbs, individuals have to bear additional expenses for transportation and other necessities, making it unaffordable.

Therefore, housing costs should not exceed 25% of a person's income, allowing them to have disposable income for other expenses and savings."

The respondent from CODI expresses that "*In other countries, the term "Affordable Housing" refers to housing that is cost-effective and is used as a substitute for the term "Low-income housing." This distinction is made because the European Union classifies them separately, and it is not synonymous with "Housing for all." For instance, in the United States, the concept of affordable housing involves government data on the target group, including their income level, housing needs, and the price range they can afford. The government provides tools such as rental assistance vouchers to help reduce household housing expenses, without directly interfering with the housing market. Individuals can use these vouchers to rent privately-owned housing.*

However, in our country, we do not have such measures or tools in place. The primary emphasis is on promoting homeownership through various means, such as providing loans and offering tax incentives, to encourage individuals to become homeowners. In Thailand, Affordable Housing development focuses on creating housing products that people can afford. However, there is a lack of clear data regarding the payment capacity at each household level. The available information only provides average income and minimum cost of living figures without detailed categorization of needs, payment capacity, and household expenses within each income group. As a result, the true needs and actual payment capacity of different income groups remain unknown".

Additional Perspectives

Furthermore, the respondents from academic and NGO sectors emphasize the importance of considering additional groups beyond income percentiles. For instance,

assistance should be extended to new graduates or individuals who have recently entered the workforce within this demographic.

The respondent from CODI expresses that *"Affordable Housing should be available in various forms in the market to accommodate diverse target groups, as people belong to different groups and have diverse needs in terms of household types. These groups may include singles, married couples, single-parent families, or expanding families, among others. This diversity also applies to the new generation, particularly those who have recently entered the workforce and may experience frequent relocations. They may seek urban residences that are conveniently located near job opportunities but may not necessarily aspire to become homeowners"*.

However, the respondent from academic sector stated that *"Affordable housing should be based on the affordability of individual households, taking into account their specific income segments. Using a single median price to determine the affordability of housing would exclude those in lower income segments. Therefore, it is crucial to consider the income levels of different groups and provide affordable housing options that align with their financial capacity."*

In addition, academics also expressed their views on the concept of affordable housing, stating that *"Affordability is not solely determined by price, but also by the quality of the housing. Even if the price is affordable, if the quality is poor, substandard, or overcrowded, it does not meet the criteria of affordability. Therefore, it is essential to consider the physical aspects of affordable housing, ensuring that it meets the standards for a suitable living environment, including appropriate facilities. These three elements - price, physical standards, and facilities - should be carefully considered in the development of affordable housing projects. For instance, the location of these projects should be in proximity to work place to reduce commuting time."*

5.1.2. The role of affordable housing should follow either a homeownership model or a renting model

Table 7: Housing Contract model of Affordable Housing

Questionnaire			Public Sector		Academic Sector		Private Sector		Total	
			6 Persons	%	5 Persons	%	5 Persons	%	16 Persons	%
Definition	Housing Contract (Choose more than one)	Short-term Rental	0	0%	5	100%	2	40%	7	44%
		Mid-term Rental	1	17%	5	100%	0	0%	6	38%
		Long-term Rental	4	67%	5	100%	0	0%	9	56%
		Home Ownership/ Buying	4	67%	4	80%	5	100%	13	81%

Source: Survey Data Collection by Researcher

Common Perspectives

An analysis of stakeholders' perspectives on the ownership status of Affordable Housing revealed that a majority of respondents, approximately 81%, agreed that Affordable Housing should be acquired through ownership rather than rental, as shown in Table 7. In terms of the rental model, the majority of respondents, approximately 56%, agree that long-term rentals are more suitable for developing affordable housing in Bangkok compared to short-term (44%) and medium-term (38%) rentals. Respondents from the public and academic sectors predominantly selected for rental models, while a minority of respondents from the private sector preferred short-term rental options. This preference among private sector respondents can be attributed to their inclination towards homeownership. It is interesting to note that all respondents from the academic and NGO sectors agree with rentals in all terms.

Contrasting Perspectives

Many academics express a preference for both rental and homeownership models, while some academics advocate for rental throughout all the rental duration levels. *Their argument is that “ The Renting is less burdensome than buying a house. Homeownership entails long-term commitments, especially when financial stability is lacking or when individuals are starting their careers or establishing their positions. Moreover, the absence of family stability, with the possibility of family size fluctuating in the future, adds to the challenges associated with homeownership. In most cases, Affordable Housing units are relatively small, typically featuring one bedroom and suitable for 1-2 occupants. This size limitation is due to budget constraints and the need for affordability, with prices set below market rates. Consequently, developers strive to minimize costs by reducing the size of the units and locating them in suburban areas. Given these factors, Affordable Housing is not well-suited for long-term homeownership, as it may not accommodate future family expansions”.*

Many respondents from the academic and NGO sectors argue that emphasis should be placed on rental options, particularly in city centers where job opportunities are abundant. This is especially important for short-term and medium-term rentals. Additionally, experts suggest that there should be no rush to burden households with homeownership responsibilities when they are not ready. Renting provides a more flexible and manageable approach for both low-income and middle-income households. Therefore, Affordable Housing should primarily serve as temporary accommodation for families who have not yet attained financial stability or for households in the early stages of forming a family.

A respondent from the NGO expressed the viewpoint that *“Affordable housing in urban areas should provide a diverse range of options to accommodate various target groups and household compositions, including singles, married couples, single-family homes, and extended families. They emphasized the significance of offering*

opportunities for social mobility, job stability, and financial security to individuals in low-income groups. The respondent also highlighted that a short-term period of 2-5 years may not be sufficient for individuals to enhance their social status. Therefore, it is crucial for affordable housing to offer multiple options in the market, such as short-term, medium-term, and long-term rentals, as well as homeownership, to meet the needs of different groups. This is particularly important for the new generation of workers who are still in the process of establishing their careers, relocating to urban areas, and seeking housing near their workplaces. They may prefer a short-term lease of 2-3 years instead of committing to long-term homeownership”.

Similar to the respondent from the academic sector, another respondent highlighted that *“Affordable housing should not solely focus on ownership models but should also incorporate rental models. They emphasized the importance of affordable housing being available for both ownership and rental purposes. However, specific considerations need to be addressed regarding the rental system, such as prohibiting capital gain from renting out these properties”.* The respondent from the academic also stressed that *“the need for flexibility in lease periods, as long-term rentals can provide tenants with the opportunity to improve their social status. However, measures should be in place to prevent exploitation through inflated rental prices. Managing rentals effectively is crucial, but in principle, there should be no limitation on the duration of rental agreements. As long as tenants do not engage in opportunistic practices, capital gain through renting can be considered acceptable”.*

Another comment of respondent from Academic sector has commented on the rental model, stating that *“The primary issue lies in the management and screening of tenants, as it pertains to equality. They highlight the concern that some individuals, who may already possess wealth, withhold the release of lease agreements and continue to lease the property at inflated prices, thus profiting from this privilege. The vulnerability of management becomes apparent when addressing contract renewals, which can create more significant problems than the initial lease period. It is crucial to*

make the rental period more flexible. For instance, the contract should allow for changes in the place of residence while accommodating potential changes in the size of the family over time. Additionally, thorough inspection measures should be in place when renewing contracts. Without such measures, individuals may end up permanently residing in the property without any intention of moving or expanding their living arrangements”.

Contrasting Perspectives

On the other hand, the public sector does not prefer short-term rentals and shows less focus on medium-term rentals. They primarily emphasize both long-term rentals (30 years) and home ownership models. Moreover, all respondents from the private sector agree that they are not interested in medium-term and long-term rentals. Approximately 44% of them agree with short-term rentals and all of them agree with home ownership model.

This contradicts the viewpoint of the private sector, stating that “Affordable Housing should primarily focus on homeownership. They argue that affordable housing, akin to a first home, is suitable for individuals who currently rent accommodations near their workplace. By transitioning from paying rent to making installment payments, these individuals can build their own assets. Furthermore, the private sector expressed concerns about the complexities associated with the rental sector. They believe that developing rental properties entails long-term burdens and is more intricate to manage compared to sales. In the current market, there are investors who specialize in purchasing homes for rental purposes, indicating the viability of this business model. Therefore, the private sector still lacks the inclination to actively pursue the rental market segment”.

Similar to the respondent from private sector provided insights into their strategy for expanding the Affordable Housing market segment, stating that *“The strategy*

involves assessing the current housing demand and identifying target groups with potential for project development. The analysis revealed a high demand for housing among individuals working in out-of-town jobs. However, most of these individuals tend to rent housing near their workplaces. Recognizing this gap in the market, the company developed a new segment within the affordable housing project to cater to this specific group. The objective is to enable them to transition from monthly rental payments to owning their own property. Based on surveys, it was found that this target group has the capacity to request loans from commercial banks, with loan amounts ranging from approximately 1-1.5 million baht or lower. The affordable housing project is designed to meet their needs, offering locations in suburban areas that are conveniently close to their workplaces. The target customers for this segment include working individuals and newly married couples. Joint loans are considered as an option to accommodate the needs of this group, as they may not yet have established full-time careers. The survey findings highlight the significance of lending options for this particular group. After conducting post-sales interviews with customers in this segment, it was found that they take pride in owning their own residence. By redirecting their monthly rental payments towards mortgage installments, they are able to build equity and have the satisfaction of owning a property”.

This aligns with the viewpoint of CODI and BMA, which emphasize that affordable housing should provide a temporary housing solution, enabling households to save money and improve their social status with the eventual goal of purchasing housing at market prices. The housing authority recognizes the importance of both homeownership and rental options, which are determined based on income groups.

Additional Perspectives

The rental model should be emphasized in Bangkok's housing landscape, allowing households to save money and enhance their social status, with the ultimate

aim of purchasing housing at market prices. The duration of the rental term should be based on the location and household characteristics.

5.1.3. The appropriate price for Affordable Housing

Table 8: The Appropriate Price for affordable housing

Questionnaire				Public Sector		Academic Sector		Private Sector		Total	
				6 Persons	%	5 Persons	%	5 Persons	%	16 Persons	%
Definition	Price of Housing Expense	Rental Expense	Less than 20%	3	50%	1	20%	1	20%	5	31%
			20%	2	33%	2	40%	3	60%	7	44%
			25%	1	17%	1	20%	1	20%	3	19%
			30%	0	0%	1	20%	0	0%	1	6%
		More than 30%	0	0%	0	0%	1	20%	1	6%	
	Installment	Less than 20%	1	17%	2	40%	1	20%	4	25%	
		20%	3	50%	1	20%	0	0%	4	25%	
		25%	2	33%	1	20%	2	40%	5	31%	
		30%	0	0%	1	20%	1	20%	2	13%	
		More than 30%	0	0%	0	0%	1	20%	1	6%	

Source: Survey Data Collection by Researcher

Common Perspectives

Analyzing the survey results of stakeholders regarding the pricing aspect of Affordable Housing, as shown in Table 8. It was found that over 31% of respondents agreed that housing installments should not exceed 25% of the monthly household income. Additionally, more than 41% of respondents concurred that housing rent should not exceed 20% of the household income per month, which is approximately 5,000 baht per month. An important point of consensus derived from in-depth interviews with respondents is that both the public and private sectors agree that rental costs should be lower than housing installments.

Contrasting Perspectives

While scholars hold various opinions on this matter, there are two main perspectives. One side argues that housing costs should be equal and set as a standard, ensuring that the cost does not exceed a certain threshold, which may vary depending on the project's location. On the other hand, some respondents from the academic sector believe that housing installments should be lower than rental expenses. This viewpoint arises from the understanding that installments are a long-term commitment compared to leases, which are typically shorter in duration. Renting properties in the market tends to be more expensive than purchasing them because renting has become a profitable business opportunity for many investors.

Academics have commented that affordable housing can be developed by the private sector, but it should be priced based on the income of the target audience. The target group for affordable housing falls within the 41-60 percentile range, where the housing cost should not exceed 30% of their income. However, affordable housing provided by the private sector needs to be priced below the market rate. Therefore, the government should implement measures to support the private sector in delivering housing for this target group. For instance, if the private sector sets the price at 100%, but the affordable price for this group is 80%, the government should provide 20% assistance, without requiring the government to invest the entire 80%. Another academic views Affordable Housing as a housing option for individuals with low incomes. Unlike Public Housing, which is managed by government agencies, Affordable Housing can be owned by anyone. The key concept is that residents should pay no more than 20% of their income towards housing costs. This is a concept that the scholar believes should be implemented in Thailand.

Additional Perspectives

Public and Private sector: they agree that rental costs should be lower than housing installments. Academic and some private sector: they believe that housing installments should be lower than rental expenses as a usual in the market for business. Similar to the viewpoint of government respondents, Affordable Housing should not only consider the cost of the houses themselves. Even if the housing is inexpensive, if it is located in the suburbs, individuals may incur additional expenses for transportation and other costs, making it less affordable overall. Therefore, the cost of housing should not exceed 25% of individuals' income. This allows for sufficient funds to be available for other expenses and savings.

5.1.4. Determining Optimal Loan Lengths for Affordable Housing

Table 9: Determining Optimal Loan Lengths for Affordable Housing

Questionnaire			Public Sector		Academic Sector		Private Sector		Total	
			6 Persons	%	5 Persons	%	5 Persons	%	16 Persons	%
Definition	Length of Loans	10-20 years	1	17%	0	0%	1	20%	2	13%
		21-30 years	4	67%	5	100%	3	60%	12	75%
		More than 30 years	1	17%	0	0%	1	20%	2	13%

Source: Survey Data Collection by Researcher

Common Perspectives

Following the analysis of the pricing and affordability of affordable housing, another crucial aspect to consider is the duration of mortgage payments, as shown in Table 9. Regarding the survey on installment periods, approximately 75% of the respondents agreed that the payment duration should extend beyond 30 years. This is because a home is a significant asset that requires a substantial period to repay the

loan, with 21-30 years being the next preferred option. However, it is worth noting that borrowers over the age of 30 may face challenges related to interest rates and their age.

Contrasting Perspectives

On the other hand, some respondents believe that the optimal repayment period is equally distributed between 10-20 years and more than 30 years. One of the respondents, from the Community Organizations Development Institute (CODI), holds a different perspective, suggesting that the mortgage installment period should range from 10 to 20 years. Their rationale is that this timeframe provides individuals with sufficient time to establish themselves and achieve financial stability. It is worth mentioning that the CODI model incorporates a repayment period of 20 years, followed by an additional 10 years to accumulate savings for future property purchases or to transition to a more stable living environment.

5.1.5. Providers in Affordable Housing Development

Table 10: Providers in Affordable Housing.

Questionnaire			Public Sector		Academic Sector		Private Sector		Total	
			Persons	%	Persons	%	Persons	%	Persons	%
Definition	Providers	Government	6	100%	5	100%	5	100%	16	100%
		Local Government	6	100%	5	100%	0	0%	11	69%
		Private Sector	6	100%	5	100%	5	100%	16	100%

Source: Survey Data Collection by Researcher

Common Perspectives

In the survey about providers of affordable housing development in Bangkok, which can be seen in Table 10, the results show that all respondents believe that both the government and private sector should be the developers. However, 69% of

respondents specifically chose the local government (BMA). Among those who did not choose BMA, all of them selected the private sector, while some also selected a portion of the government. The prevailing consensus among various stakeholders, including the public sector, private sector, and local government, is that the central state should play a role in implementing financial measures and regulations that promote the development of affordable housing in the market. In addition, experts have argued that the increasing number of participants in this market segment, including developers, has heightened competition and improved the quality of affordable housing, even within constrained budgets. This is particularly notable in government housing projects. Furthermore, different agencies may adopt diverse development models based on their respective mandates and capacities.

Contrasting Perspectives

However, there is a difference of opinion regarding the role of the National Housing Authority (NHA). The National Economic and Social Development Council (NESDC) suggests that the NHA's focus should be on providing housing at prices below the market rate. Furthermore, the NESDC emphasizes that the NHA should not directly compete with the private sector in the same housing market segment. The NHA, on the other hand, believes that its role is to provide affordable housing, highlighting the advantages it possesses over the private sector, such as lower land costs and government support. Nonetheless, the government can still encourage the private sector to participate in affordable housing development. Instead of directly competing, the state should provide necessary funding, measures, and regulations to promote and incentivize private sector involvement, thus reducing their risk exposure. Overall, the disagreement lies in the specific role and approach of the NHA in the provision of affordable housing, with the NESDC advocating for its focus on below-market pricing and non-competition with the private sector, while the NHA emphasizes its unique advantages and the government's role in supporting private sector development.

Another set of opinions suggests that the state does not necessarily need to be directly involved in supplying affordable housing but can instead assist and promote development in other ways. The Bangkok Metropolitan Administration (BMA) asserts that it lacks the authority and obligation to directly oversee this area as it falls outside its mandate. Furthermore, the BMA acknowledges its limitations in terms of manpower and expertise to independently provide and develop affordable housing but can play a role in promoting its development. Similar sentiments are expressed by the Community Organizations Development Institute (CODI), which acknowledges its inability to supply affordable housing but can offer assistance or collaboration, particularly through community networks. The private sector shares a similar perspective regarding the role of the BMA, aligning with both the BMA and CODI in understanding that the BMA's role does not involve direct provision of affordable housing. Therefore, it is recognized that the primary role of the BMA is not to directly provide affordable housing but rather to facilitate and support its development through various means.

5.2. Critical Criteria of Affordable Housing

In the Affordable Housing Critical Criteria Questionnaire Survey, most of the questions ask respondents to rate the importance of each option using the Likert method. The Likert scale allows respondents to indicate the sequence of importance for each option. The total scores are then used to calculate the mean, which is analyzed to determine the majority of answers. Based on the mean scores, the following interpretations are made:

1. An average score of 4.50 to 5.00 indicates that the measure is "very difficult" to implement.
2. An average score of 3.50 to 4.49 indicates that the measure is "difficult" to implement.
3. An average score of 2.50 to 3.49 indicates that the measure is "neutral" to implement.
4. An average score of 1.50 to 2.49 indicates that the measure is "easy" to implement.
5. An average score of 1.00 to 1.49 indicates that the measure is "very easy" to implement.

5.2.1. The importance in each aged group in Affordable Housing Development

Table 2: The importance in each aged group in Affordable Housing Development

Questionnaire			Sectors			Total		
			Public Sector (6 Persons)	Academic Sector (5 Persons)	Private Sector (5 Persons)	Mean	Variance	Result
Critical Criteria	Aged	Less than 25 years old	Important	Very Important	Important	3.52	1.60	Important
		25-40 years old	Very Important	Very Important	Very Important	4.70	0.36	Very Important
		41-55 years old	Very Important	Important	Neutral	3.94	1.00	Important
		56-70 years old	Important	Important	Less important	3.29	1.16	Neutral
		More than 71 years old	Important	Important	Less important	3.06	1.80	Neutral

Source: Survey Data Collection by Researcher

Common Perspectives

According to the survey data presented in Table 8, the age group that should receive the highest level of affordable housing support is the 25-40 years old group, followed by individuals under 25 years old and those between 41-55 years old. The age groups of 56-70 years old and individuals over 71 years old are considered moderately important in terms of affordable housing support.

The analysis of the stakeholder questionnaire on the appropriate age group to receive housing assistance revealed a divided opinion, with two distinct groups. The first group contends that young individuals in 25-40 years old as the working age bracket should receive significant support due to their limited financial security. Furthermore, for the elderly population, it is suggested that housing policies should encompass retirement management financing, similar to the implementation of the retirement fund in Singapore, which addresses housing concerns for senior citizens.

Contrasting Perspectives

In contrast, the second group disagrees with the notion that providing housing assistance to young people is of utmost importance. They argue that young individuals possess the drive and potential to seek employment, which provides them with various opportunities to generate income and enhance their financial standing. Consequently, this group believes that other age groups may warrant more attention and assistance in terms of housing support. The respondent representing NGOs expressed the opinion that priority should be given to the elderly when determining which age group should be assisted first. It was noted that individuals from Perak often face financial constraints and struggle to maintain a stable income necessary for housing payments.

5.2.2. The Significance of Household Types in Affordable Housing Development

Table 11: The results of the Significance of Household Types in Affordable Housing Development

Questionnaire			Sectors			Total		
			Public Sector (6 Persons)	Academic Sector (5 Persons)	Private Sector (5 Persons)	Mean	Variance	Result
Critical Criteria	Household Characteristic	Single Household	Neutral	Important	Important	3.77	0.87	Important
		Couple (2 persons)	Important	Important	Very Important	4.14	0.52	Important
		2 Generations (3-4 persons)	Very Important	Important	Very Important	4.34	0.65	Important
		3 Generations (More than 4 persons)	Very Important	Very Important	Less important	3.94	1.47	Important

Source: Survey Data Collection by Researcher

The analysis of survey results from stakeholders provides insights into the relationship between the number of individuals per household and the size of housing as shown in Table 11. The survey indicates that all parties emphasized the importance of considering household size to a similar extent. In-depth interviews further confirmed a unanimous consensus among all parties that the size of a dwelling should be proportional to the number of occupants. Consequently, there is a widespread agreement that housing options should offer a diverse range of types and sizes to accommodate different household compositions.

Contrasting Perspectives

From an academic standpoint, there is a tendency to advocate for smaller rooms in order to minimize housing costs. However, in reality, there are instances where more than four individuals or multiple generations share the same living space. This lack of

adequate space can give rise to privacy concerns for parents and may be disadvantageous to children. Furthermore, the perspective offered by CODI emphasizes the critical importance of living space dimensions. It suggests that housing size should be determined by taking into account the number of occupants, with a recommended allocation of 10 square meters per person, in order to ensure that housing standards align with quality-of-life expectations.

5.2.3. Selecting the Appropriate Building Type for an Affordable Housing Project

Table 12: The results of Appropriate Building Type for an Affordable Housing Project

Questionnaire			Sectors			Total		
			Public Sector (6 Persons)	Academic Sector (5 Persons)	Private Sector (5 Persons)	Mean	Variance	Result
Critical Criteria	Housing Type	Low-rise Building (6-8 storeys)	Very Important	Important	Less important	3.73	1.27	Important
		High-rise Building	Very Important	Important	Very Important	4.36	0.25	Very Important
		Town House	Neutral	Important	Important	3.71	0.90	Important
		Single House	unimportant	unimportant	unimportant	2.07	1.13	Less Important
		Residential and Commercial Building	unimportant	unimportant	Neutral	2.66	1.45	Neutral

Source: Survey Data Collection by Researcher

Common Perspectives

Based on the survey results, the majority opinion suggests that Affordable Housing should be primarily developed in the form of high-rise buildings, followed by

low-rise structures and townhouses, while the least preferred option is the development of Affordable Housing in single houses, as indicated in table 12.

Upon analyzing the survey findings from stakeholders concerning suitable types of structures for affordable housing, a consensus has been reached among all parties. It has been agreed that affordable housing should not be limited to single houses, but instead prioritize functionality over privacy. Single houses, characterized by low-rise constructions that emphasize individual living spaces, require substantial land areas. Consequently, this is closely tied to land prices, which constitute a significant portion of housing costs.

Contrasting Perspectives

On the other hand, a majority of respondents from the private sector advocate for low-rise buildings as the preferred option for affordable housing. Low-rise developments typically occupy smaller land parcels, making it easier to obtain building permits compared to high-rise projects. Additionally, smaller-scale developments have the advantage of quicker sales and higher project efficiency compared to high-rise housing developments. However, the National Housing Authority (NHA) and the Bangkok Metropolitan Administration (BMA) suggest that developments should exceed eight stories, particularly for housing in the city center. This is due to the high cost of land in central areas, necessitating the efficient utilization of available space.

In summary, the stakeholders' consensus is that affordable housing should prioritize functional building designs over individual houses, with a preference for low-rise structures that can be efficiently developed on smaller land parcels. However, the NHA and BMA highlight the need for taller buildings in city centers to maximize land utilization. The respondent from the private sector shared their opinion on the type of buildings that are typically associated with affordable housing, emphasizing that such projects often involve small-scale developments with low-rise buildings. These buildings usually do not exceed 8 floors, primarily due to the limited size of the land plots

available. Developing low-rise buildings is more feasible in terms of land acquisition, requiring less capital compared to high-rise projects.

In order to maintain a cost price lower than one million or 1 million, the company must make efforts to reduce expenses by implementing various budget-saving measures. For instance, internal resources can be utilized for design purposes, eliminating the need to hire external designers, architects, or engineers. By reusing room designs and similar project designs, expenses associated with design costs can be minimized. However, it is crucial to strike a balance between cost reduction and meeting the specific needs of the target customer group. While striving for cost efficiency, the designs should still be functional and tailored to suit the requirements and preferences of the intended occupants.

Similar to another respondent from private sector, stating that “ In terms of investment, low-rise buildings offer lower initial costs and potentially better return rates compared to high-rise projects in the normal segment of the housing market. While the profit margin may not be as high as that of high-rise developments, low-rise buildings have their advantages. One advantage is the relatively faster process of obtaining construction permits. Construction can be carried out on smaller plots of land, typically accommodating fewer than 100 units. This enables quicker completion and sale of the units compared to larger projects, allowing investors to allocate their resources to other ventures.

However, it's important to note that the location of such developments may not be in the city center due to the high cost of land, which is a significant expense in the housing market. Nonetheless, the company endeavors to identify areas near workplaces, such as apartment complexes, to cater to the needs of individuals living in dormitories. This serves as an alternative housing solution for those who wish to have their own homes but cannot afford it. The objective is to develop a product that aligns

with their budgetary constraints while meeting their housing requirements. Therefore, the company must explore avenues to create affordable housing options that are accessible to individuals within this income group. By doing so, they can provide an opportunity for people to own their first primary residence at a price they can afford”.

5.2.4. The provision of crucial facilities within an affordable housing project

Common Perspectives

Based on the analysis of stakeholders' survey results regarding the required facilities in Affordable Housing projects, it can be observed that safety is unanimously considered the most critical aspect among the basic facilities that should be provided. Following safety, the kitchen and communal relaxation area of the project are regarded as important by all parties involved. On the other hand, the importance of basic furniture, interior design, and scenic views is viewed neutrally across the board. The facilities considered least important in affordable housing projects are the fitness area and swimming pool.

The survey results indicate a prevailing consensus among stakeholders from both the private and public sectors regarding the provision of facilities within affordable housing projects as shown in Table 13. The majority opinion suggests that these facilities should prioritize functionality within individual units, focusing on aspects such as kitchen space and essential furniture, rather than allocating resources to common areas like gardens, fitness centers, or swimming pools. The private sector argues that an excessive number of common areas or amenities would result in increased annual maintenance fees.

Table 13: The results of level of importance of facilities within affordable housing

Questionnaire		Sectors			Total			
		Public Sector (6 Persons)	Academic Sector (5 Persons)	Private Sector (5 Persons)	Mean	Variance	Result	
Critical Criteria	Facility (within housing project)	Basic Furniture	Neutral	Less important	Neutral	2.47	0.66	Neutral
		Kitchen	Very Important	Important	Very Important	4.31	0.50	Important
		Good Environment and Nice View	Neutral	Neutral	Neutral	3.07	0.33	Neutral
		Pocket Park or Recreation Area	Very Important	Important	Neutral	3.79	1.10	Important
		Fitness or sport facility	unimportant	Neutral	Less important	2.42	1.05	Less Important
		Swimming Pool	unimportant	unimportant	unimportant	1.40	0.52	unimportant
		Security	Very Important	Important	Very Important	3.69	1.16	Very Important

Source: Survey Data Collection by Researcher

Similar to the respondents from the private sector who prioritize necessary facilities, their focus is primarily on meeting the requirements for accommodation and ensuring safety. They emphasize that *“Based on the market analysis of the affordable housing segment, the respondent highlights that the target group prioritizes the functionality of the rooms over common areas or additional facilities such as gardens, fitness centers, or swimming pools. This is because the residents perceive the value of their investment in the room itself, as they primarily use it to cater to their lifestyle. Due to their work schedules and preferences, they tend to spend their leisure time relaxing in their own rooms rather than utilizing common areas. As a result, affordable housing projects focus more on providing essential facilities rather than additional amenities. For this target group, the primary purpose of a house is to provide a place for rest. However, it is important to provide basic furniture and ready-to-move rooms.*

particularly for households that have relocated from rural areas in search of employment opportunities in the city”.

Another respondent from the private sector also agrees with the provision of basic facilities in affordable housing, highlighting that additional facilities may lead to increased expenses for the residents in the long term. They emphasized that *“The provision of facilities will vary depending on the size of the project. In the case of very small projects, having a swimming pool may not be suitable or cost-effective, as it would impose a long-term burden on the residents. However, for larger projects with a substantial number of residents, a swimming pool can be considered. Green spaces or pocket parks, on the other hand, should prioritize creating a conducive environment and serving functional purposes rather than focusing solely on aesthetics. The underlying concept of affordable housing is to ensure affordability and livability. It aims to create sustainable housing options that are financially accessible to residents”.*

Similar to the National Housing Authority (NHA), it is believed that facilities should be utilized sparingly and designed with long-term benefits for the residents in mind. The Housing Authority has made remarks on the physical aspects of building planning, emphasizing the need to minimize energy consumption. This includes considerations such as analyzing the direction of sunlight and wind patterns and taking into account the overall quality of life for residents. The objective is to promote energy efficiency while ensuring that necessary facilities, such as exercise gardens and common areas, are provided within the project.

Contrasting Perspectives

On the contrary, certain respondents from the public sector and some individuals from the private sector emphasize the importance of housing facilities and common areas, advocating against their elimination. They argue that housing affordability should not only be limited to price but should also consider the quality of life

it provides. Additionally, the private sector acknowledges that the presence of facilities and common areas acts as an additional factor influencing housing purchase decisions. Thus, well-equipped housing facilities can motivate residents to spend less time confined to their rooms and instead engage in physical exercise and recreational activities within the city.

5.2.5. Determining the Appropriate Size of Affordable Housing

Table 14: The results of Appropriate Size of Affordable Housing

Questionnaire				Public Sector		Academic Sector		Private Sector		Total	
				6 Persons	%	5 Persons	%	5 Persons	%	16 Persons	%
Critical Criteria	Size of Housing	Condominium	20-30 sq.m.	4	67%	2	40%	1	20%	7	44%
			31-50 sq.m.	2	33%	3	60%	4	80%	9	56%
		House or Townhouse	45-80 sq.m.	4	67%	3	60%	1	20%	8	56%
			81-150 sq.m.	1	17%	2	40%	4	80%	7	44%

Source: Survey Data Collection by Researcher

Common Perspectives

Analysis of stakeholders' survey results regarding perspectives on the size of housing suitable for the Affordable Housing project reveals interesting findings as shown in Table 14. The majority, comprising approximately 56% of all respondents, believe that the size of rooms in condominiums or apartments should range between 31-50 square meters, while 44% feel that 20-30 square meters would suffice. Additionally, respondents were asked about the appropriate size for single houses or townhouses. The majority opinion was divided between 45-80 square meters (56%) and 81-150

square meters (44%). While there appears to be an equal distribution of opinions on size, in-depth interviews provided valuable insights into the role of Affordable Housing and its relation to household size.

Many parties agree that affordable housing should be available in a variety of sizes and styles. Most affordable housing units are constrained by their price, as they need to be priced lower than the market rate. However, a majority of respondents from the private sector believe that affordable housing serves as a first home for individuals who have recently entered the workforce or are starting a family. They consider it to be most suitable for 1-2 people. The respondent from the private sector emphasizes that *“The size of affordable housing typically ranges from approximately 24 to 30 square meters and consists of a single bedroom, making it suitable for 1 to 2 individuals. It is considered an ideal size for those who are starting a family or prioritizing stability in their lives, as it is often seen as an initial investment or asset”.*

Contrasting Perspectives

On the contrary, both academics and representatives from the public sector argue that the size of dwellings should not be solely determined by price considerations. They emphasize that many affordable housing projects in the market compromise the size and construction quality in order to reduce costs. However, this approach can negatively impact both the quality of the housing units and the overall quality of life for the residents in the long run. It is important to consider that although such housing may be affordable, it is often located far from the city center and job opportunities, resulting in additional transportation expenses for the residents.

Academics concur that when addressing affordable housing, the focus should extend beyond price considerations to encompass the overall quality of life for residents. This entails assessing both the physical quality of the housing units and the overall well-being of the individuals residing in them. One respondent from the

academic sector expressed that *“When considering the size of affordable housing properties, it is important to determine a minimum size that ensures quality living conditions. This assessment should take into account the actual cost prices prevailing in the market. From the perspective of the private sector, which seeks to obtain profits, it is essential to strike a reasonable balance. This is because the price of land directly influences the size and cost of housing units. Affordability should not solely revolve around price; quality is equally crucial. Even if the price is affordable, if the quality of the housing is poor, cramped, or substandard, it cannot be considered truly affordable. The overall quality of living conditions must be taken into consideration to ensure that affordable housing provides a decent standard of living for its residents”.*

Similar to the opinion expressed by respondents from CODI, who represent the public sector, it is suggested that the determination of housing standards should not be solely based on a fixed minimum requirement. Instead, factors such as household size should be taken into consideration. For instance, a guideline of 10-15 square meters per person could be established, with a maximum room size of 24 square meters. This approach allows for flexibility while ensuring that adequate living space is provided for each individual.

Many housing policies in Thailand primarily focus on addressing housing issues in terms of quantity while overlooking the aspect of quality of life. Even the National Housing Authority (NHA) tends to develop small rooms with a standardized layout, without considering the varying household sizes. As a result, it is imperative for Affordable Housing initiatives to be diversified to cater to different household sizes. Establishing a centralized agency with set standards for determining the size of accommodations, measured in square meters per person, is crucial. This approach will help ensure that appropriate living standards are met for each individual.

There is an opinion from an academic regarding the issue of small-sized affordable housing, which can exacerbate family problems such as domestic violence

and sexual issues in children. The academic asserts that *“Affordable rooms often have limited space, which can give rise to social problems. In households where 4-5 family members share small rooms, it becomes challenging to establish privacy and boundaries. This situation becomes particularly concerning in households with both children and parents, as the lack of separate spaces may expose children to inappropriate behavior from adults, leading to imitation and potentially contributing to social issues such as violence and sexual misconduct”*.

5.2.6. The Appropriate location for Affordable Housing

Table 15: The results of Appropriate location for Affordable Housing

Questionnaire			Public Sector		Academic Sector		Private Sector		Total	
			6 Persons	%	5 Persons	%	5 Persons	%	16 Persons	%
Critical Criteria	Location	City Center	3	50%	5	100%	1	20%	9	56%
		Between Urban and Suburban	6	100%	5	100%	4	80%	15	94%
		Suburban	2	33%	3	60%	2	40%	7	44%
		Work place in Suburban area	2	33%	4	80%	3	60%	9	56%

Source: Survey Data Collection by Researcher

Common Perspectives

Table 15 presents the findings of a survey regarding the preferred location of affordable housing within the city. Respondents were asked several questions, and the results indicate that a significant majority of 94% agreed that affordable housing should be situated between the city center and the suburbs. Of the respondents, 56%

expressed the belief that affordable housing should be located in the city center, with the workplace being situated in the suburbs. It is worth noting that at least 44% of individuals reside in the suburbs, and many among them provided reasons for not preferring to live in the suburbs due to being part of low-income groups. Their concerns primarily revolve around the increased transportation costs associated with commuting to work in the city, which serves as a major employment hub.

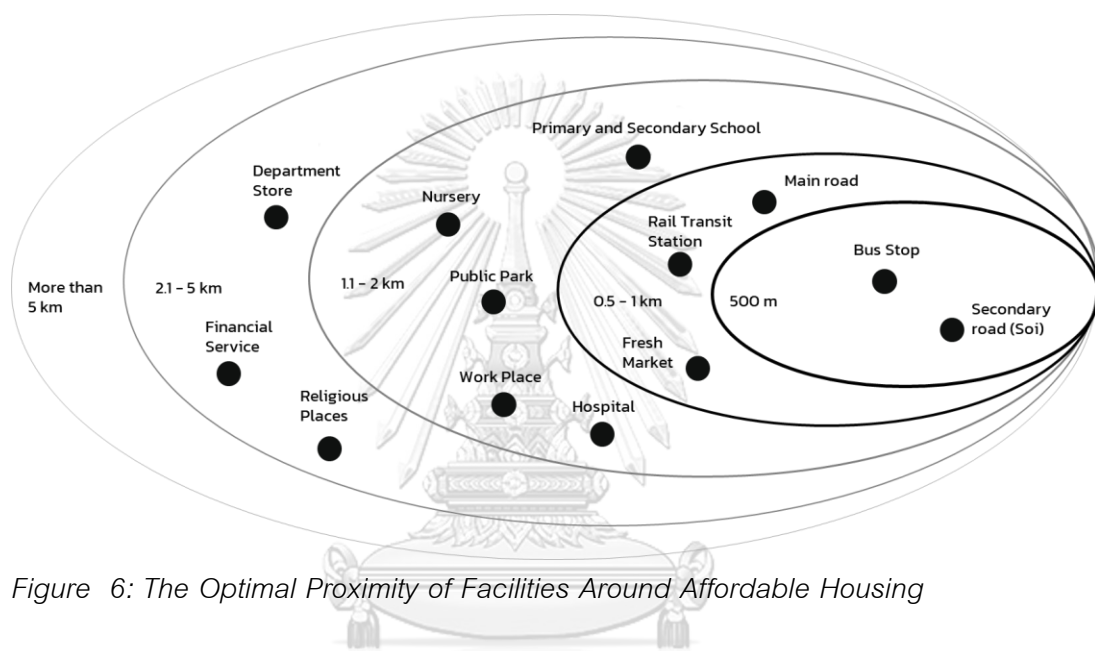


Figure 6: The Optimal Proximity of Facilities Around Affordable Housing

The conclusions drawn from all respondents regarding the appropriate distance between locations and affordable housing, as depicted in Table 16, are summarized in Figure 3. This diagram illustrates the optimal distance between locations in proximity to affordable housing. Within a 500-meter radius of affordable housing, which is considered walkable, it is universally agreed that there should be secondary roads and bus stops. In the next distance range of 0.5-1 kilometer, which can be covered on foot, by motorbike taxi, or in a small shared car, the presence of important facilities for daily life is emphasized. These include BTS stations and main streets. Moving on to the distance range of 1.1-2 kilometers, which necessitates a small bus or motorbike taxi ride lasting no more than 5-15 minutes, the key facilities within this range are primary schools, job sources, hospitals, and parks. Further out, at distances of 2.1-5 kilometers,

which require at least a 15-minute car journey, occasional facilities such as shopping malls, banks, and religious places are considered important.

Table 16: The results of Determining the Optimal Proximity of Facilities Around Affordable Housing

	Public Sector			Academic Sector			Private Sector			Total		
	Result	6 Persons	%	Result	5 Persons	%	Result	5 Persons	%	Result	16 Persons	%
Work Place	2.1 - 5 km	3	50%	1.1 - 2 km	3	60%	1.1 - 2 km	3	60%	1.1 - 2 km	7	44%
Bus Stop	0.5 - 1 km	3	50%	500 m	4	80%	500 m	4	80%	500 m	10	63%
Train Station	2.1 - 5 km	3	50%	0.5 - 1 km	3	60%	0.5 - 1 km	3	60%	0.5 - 1 km	6	38%
Children Center	1.1 - 2 km	3	50%	1.1 - 2 km	3	60%	1.1 - 2 km	4	80%	1.1 - 2 km	10	63%
Primary and Secondary School	1.1 - 2 km	4	67%	1.1 - 2 km	3	60%	1.1 - 2 km	3	60%	1.1 - 2 km	10	63%
Hospital	More than 5 km	3	50%	1.1 - 2 km	3	60%	1.1 - 2 km	3	60%	1.1 - 2 km	7	44%
Public Park	2.1 - 5 km	3	50%	1.1 - 2 km	3	60%	1.1 - 2 km	4	80%	1.1 - 2 km	8	50%
Religious Places	2.1 - 5 km	4	67%	More than 5 km	3	60%	2.1 - 5 km	3	60%	2.1 - 5 km	7	44%
Fresh Market	1.1 - 2 km	4	67%	0.5 - 1 km	3	60%	0.5 - 1 km	4	80%	0.5 - 1 km	7	44%
Department Store	2.1 - 5 km	4	67%	2.1 - 5 km	3	60%	2.1 - 5 km	4	80%	2.1 - 5 km	11	69%
Financial Service	2.1 - 5 km	6	100%	1.1 - 2 km	3	60%	2.1 - 5 km	3	60%	2.1 - 5 km	10	63%
Main road	0.5 - 1 km	4	67%	0.5 - 1 km	5	100%	0.5 - 1 km	3	60%	0.5 - 1 km	12	75%
Secondary road	500 m	3	50%	500 m	5	100%	500 m	3	60%	500 m	10	63%

Source: Survey Data Collection by Researcher

Contrasting Perspectives

However, it should be noted that the requirement for comprehensive facilities or proximity to specific amenities has an impact on the price of land, which is a significant cost in the development of affordable housing. The survey conducted among stakeholders regarding the preferred locations for affordable housing projects revealed that the majority of respondents concur that these projects should be situated in close proximity to workplaces and offer convenient access to public transportation. Similarly, the findings from the in-depth interviews revealed that a fundamental transportation system within walking distance is considered a basic requirement. Having an extensive transportation network enhances mobility and ease of travel. However, it is not essential for all amenities to be located within such a close radius.

However, there are differing viewpoints from academics who question the necessity of affordable housing being located near the workplace. They argue that the demand for affordable housing primarily hinges on price, making it unnecessary to establish projects in immediate proximity to job sources. One respondent from the academic expressed that *“Determining the ideal distance between affordable housing and workplaces presents a challenging question. Personally, I believe it is impossible to generalize a definitive answer, as the issue revolves around housing and job locations, which I perceive as distinct entities.”*

Undoubtedly, housing should be in close proximity to workplaces. However, constructing housing near job sites often poses difficulties. Thus, providing a conclusive response to this question proves challenging. In my view, building affordable housing anywhere can attract individuals to reside independently. In such a scenario, as long as the location is not excessively distant, someone will inevitably occupy the space. The market mechanism will naturally regulate prices, alleviating concerns regarding proximity to work. The pricing dynamics will determine who resides there.

Nonetheless, all parties concur that affordable housing ought to be situated near public transportation, with a specific emphasis on bus routes. Hence, in terms of housing economics and the job market, I do not believe that the state should enforce any mandates. Instead, market forces should prevail. Assuming housing is constructed near job sites, it is not always necessary for the resident to work in close proximity. They may choose to reside there due to affordability and commute longer distances to work elsewhere. Planning has not yet accounted for such factors. Consequently, it is imperative for the state to provide comprehensive infrastructure and transportation options, enabling individuals to access employment opportunities regardless of the location of affordable housing. If the cost is affordable, people will choose to live independently”.

Opinions within the private sector regarding transportation for affordable housing projects are divided into two distinct groups. The first group contends that the proximity of affordable housing locations to BTS or MRT stations is unnecessary. This perspective stems from the high cost of MRT and BTS fares, as the primary target market comprises suburban workers who do not rely on rail transit for their daily commute. Additionally, the land prices near BTS stations, even in suburban areas, are exorbitant. Given that the target group does not utilize BTS or MRT as their primary mode of transportation, project locations need not be near a station. Instead, it is preferable for these projects to be situated close to workplaces, with access to essential amenities and community facilities, thereby reducing daily expenses.

One respondent from the private sector expressed that *“Affordable housing refers to housing units priced below one million baht. The target demographic for this type of housing comprises workers with incomes falling within the 41-60 percentile range. While their incomes may not be high, they possess a certain level of job security and either work near the housing location or require suburban housing for commuting to the city. Consequently, proximity to BTS stations is not a selection criterion for our company. Instead, the emphasis lies on ensuring the livability of the*

surrounding environment. This entails avoiding distant or unsafe locations and opting for areas with existing communities, dormitories, and amenities such as markets or food sources that residents can easily access on foot.

Conversely, the second group within the private sector targets various demographics, particularly individuals of working age or younger generations. They prefer acquiring projects situated in close proximity to rail transit stations, even if these stations are located in suburban areas. This preference stems from their desire for a convenient commute to their workplaces”.

On the other hand, another respondent from the private sector expressed their viewpoint that

“ However, when compared to prices in some cheaper areas, the company's projects are relatively more expensive. This can be attributed to the prime locations and superior quality of the projects, which result in a higher price per square meter compared to other developments. Nonetheless, most prices are determined based on factors such as location, amenities, and target audience. The type of project, whether it be a condominium, office space, or residential house, also influences the pricing.

The focus of this particular project segment is on young professionals who are embarking on their careers and seeking their "first condo" as a place of residence. The target customer group is the new generation with a specific lifestyle. Although the location is not within the city center, it is conveniently situated near the sky train line that encircles the city. This allows for easy commuting to work or accessing the city during holidays.

The facilities provided include a communal garden for relaxation, a fitness center, and a swimming pool. The company believes that a home is a significant asset, and the targeted customer group is willing to pay a slightly higher price to ensure comfort, both within their living spaces and in the common areas. Despite not being located adjacent to the train station, the project is still within walking distance, further enhancing its appeal”.

5.2.7. The Appropriate Number of Parking Spaces Required within the Affordable Housing Project

Common Perspectives

The analysis of survey results from stakeholders regarding parking perspectives in affordable housing projects involved questions regarding the necessity of parking spaces and the appropriate number of such spaces in these projects as shown in Table 17. Overall, all parties expressed the view that parking is still necessary for affordable housing. Regarding the suitable number of parking spaces in affordable housing projects, the majority opinion (56%) agreed that the number of parking spaces should be less than 30%.

Table 17: The results of Parking Requirement in Affordable Housing Project

Questionnaire			Public Sector		Academic Sector		Private Sector		Total	
			Persons	%	Persons	%	Persons	%	Persons	%
Critical Criteria	Necessity	Necessity	3	50%	3	60%	5	100%	11	69%
		Unnecessarily	3	50%	2	40%	0	0%	5	31%
	Number of Parking Requirement	Less Than 30%	3	50%	3	60%	3	60%	9	56%
		30%-40%	2	33%	1	20%	1	20%	5	31%
		50%	1	17%	0	0%	1	20%	2	13%
		100%	0	0%	1	20%	0	0%	1	6%

Source: Survey Data Collection by Researcher

The private sector acknowledges the necessity of parking, whereas the government holds the perspective that parking is not required. The private sector

argues that parking serves as one of the selling points of the project and plays a significant role in buyers' decision-making process. Conversely, the government contends that in the Affordable Housing program, the target demographic consists of low-income individuals who predominantly rely on public transportation or motorcycles for commuting, rather than owning cars themselves.

Academics are equally of the opinion that parking is not essential, suggesting that it should be an optional choice for tenants in this type of project. They argue that allowing flexibility in parking provisions can help reduce the building's footprint, creating space for more housing. Additionally, building control regulations should be adaptable to accommodate this approach. Instead of imposing a fixed limit on parking requirements, it should be considered on a project-by-project basis. However, all parties are in agreement that legal criteria should be flexible to allow for adjustments based on the usage or needs of the residents. If tenants wish to have a parking space, it may be accompanied by an increase in rent.

Contrasting Perspectives



On the other hand, another respondent from academic expressed their viewpoint that "The provision of parking in the Affordable Housing project is not deemed essential but rather an option that can be considered. If individuals desire parking facilities, they may need to arrange for funding, and building control regulations should be flexible to accommodate such projects. Currently, building control laws mandate the inclusion of parking spaces. Therefore, lifting these regulations in this context could potentially serve as an incentive for the private sector, enabling the addition of sellable land or space".

5.3. Supporting Measures

5.3.1. The Level of Impact of Barriers in Affordable Housing Development

Table 18: The results of the Level of Impact of Barriers in Affordable Housing Development

Questionnaire		Sectors			Total		
		Public Sector (6 Persons)	Academic Sector (5 Persons)	Private Sector (5 Persons)	Mean	Variance	Result
Barriers	Lack of land to develop and Increasing of Land Price	Very Important	Very Important	Very Important	4.73	0.33	Very Important
	Shortage of access to mortgage loans	Very Important	Important	Important	4.00	0.80	Important
	Lack of financial support for affordable housing development	Very Important	Important	Neutral	3.70	1.13	Important
	Lack of incentive for the private sector to develop affordable housing.	Very Important	Very Important	Very Important	4.56	0.40	Very Important
	Insufficient infrastructure and facilities to develop Affordable Housing	Important	Neutral	Neutral	3.42	0.53	Neutral
	Inflexible of Building regulations for Affordable Housing development, such as parking requirement	Important	Important	Important	3.66	0.90	Important
	Public Awareness in affordable housing	Neutral	Neutral	Neutral	3.00	0.80	Neutral

Source: Survey Data Collection by Researcher

In the survey analysis of stakeholders' perspectives on barriers to affordable housing development, a consensus has been reached regarding the two most significant barriers, as explained in Table 18. According to the respondents, there are two barriers that are considered "very important" in the development of affordable housing in Bangkok. The first barrier is the lack of available land for development and

the increasing prices of land, with a mean score of 4.73. This aligns with the findings from in-depth interviews, where respondents from both the public and private sectors concur that there is limited availability of land suitable for development, especially in the city center and areas near mass transit lines such as the BTS or MRT. The respondent from NHA stated that *"The NHA faces a significant challenge due to the depletion of available land owned by NHA. Furthermore, the limited financial resources pose an additional hurdle in acquiring new land, primarily due to the exorbitant costs associated with land purchases, particularly in urban areas and near the rail transit stations"*. The second barrier is the lack of incentive for the private sector to engage in affordable housing development, as indicated by a mean score of 4.56. This issue revolves around the absence of measures that encourage private sector involvement in this domain. Even within the private sector, it is widely believed that only large corporations with substantial financial stability can undertake affordable housing projects in this market. As a result, small and medium-sized businesses, which constitute a significant portion of the private sector, are reluctant to enter the affordable housing market due to its narrower profit margins compared to the usual or luxury segments. Furthermore, the increased risk of loan rejections from banks negatively impacts the financial security of the demand side, further dissuading private sector participation.



Furthermore, all parties have identified three critical barriers that are considered **"important."** The first barrier is the shortage of access to mortgage loans on the demand side. Respondents unanimously agree that limited access to credit sources poses a significant challenge for target groups such as low-income individuals, those with uncertain income stability, or those lacking financial stability. Academics advocate for the establishment of a microfinance system specifically designed to provide loans tailored for low-income individuals, informal workers, and freelancers, thereby supporting housing development. The second barrier is the insufficient availability of funds for development. While the public sector and certain academics view the lack of

funds as a major obstacle, in-depth interviews with respondents from the private sector indicate that they do not consider it the primary hindrance to affordable housing development. Finally, the inflexibility of requirements and laws intended to support affordable housing development. The respondents from the private sector have expressed their opinion regarding the inflexibility of building regulations for affordable housing development, particularly in relation to parking requirements. They argue that *"In terms of legal considerations, a notable challenge emerges in the realm of permit applications. The extensive processing time frequently leads to missed opportunities, as customers are keen to move in without shouldering the financial burden of both rent and mortgage payments. Therefore, there is a strong desire for the project to be completed expeditiously to fulfill their requirements"*.

The final two barriers on which respondents expressed a "Neutral" stance regarding their significance in developing affordable housing are insufficient infrastructure and facilities for affordable housing development, and public awareness of affordable housing. Despite the view expressed by housing authorities regarding the shortage of infrastructure in certain projects, particularly in the suburbs, the National Housing Authority (NHA) possesses substantial land availability in those areas. Consequently, the NHA finds itself compelled to undertake self-development, a venture that incurs significant costs, as some Bangkok Metropolitan Administrations (BMAs) lack infrastructure development initiatives. From the perspective of the Bangkok Metropolitan Administration (BMA), it is preferable for the project to be developed within the city before expanding to other areas. This approach is based on the availability of existing infrastructure and facilities within the city, which should be utilized before extending development to the suburbs. Considering the high costs associated with procuring new infrastructure and the incomplete development of urban land, particularly state-owned land, the National Housing Authority (NHA) believes that negotiations for the utilization of public land are a viable option.

5.3.2. Supporting Measures

The analysis of survey results from stakeholders regarding the perspective on measures to promote affordable housing reveals two main aspects: the ease or difficulty of implementing the measures, and the outcomes resulting from their implementation. To evaluate the impact and significance of these measures, an Analytic Hierarchy Process (AHP) method will be employed to determine the most effective measures for the development of affordable housing in Bangkok. The criteria will be divided into four main areas, with a predominant focus on the demand side, followed by supply and urban planning.

Notably, land allocation is considered the least important aspect, as both academics and the private sector prioritize the demand mechanism when it comes to affordable housing development. Affordability, housing needs, and housing patterns take precedence, with the private sector emphasizing the importance of assisting individuals in affording housing as a top priority.

In contrast, the government places greater importance on the supply mechanism. The government's perspective centers around the notion that efforts should be made to ensure an adequate supply of affordable housing to meet the demand as much as possible. They believe that assistance on the demand side, land allocation mechanisms, and urban planning mechanisms are already the responsibilities of the state. Therefore, it is deemed crucial to promote the supply mechanism to meet the demand for affordable housing within the city. In conclusion, the survey results highlight the differing viewpoints among stakeholders, with emphasis on the demand and supply mechanisms as key drivers for affordable housing promotion.

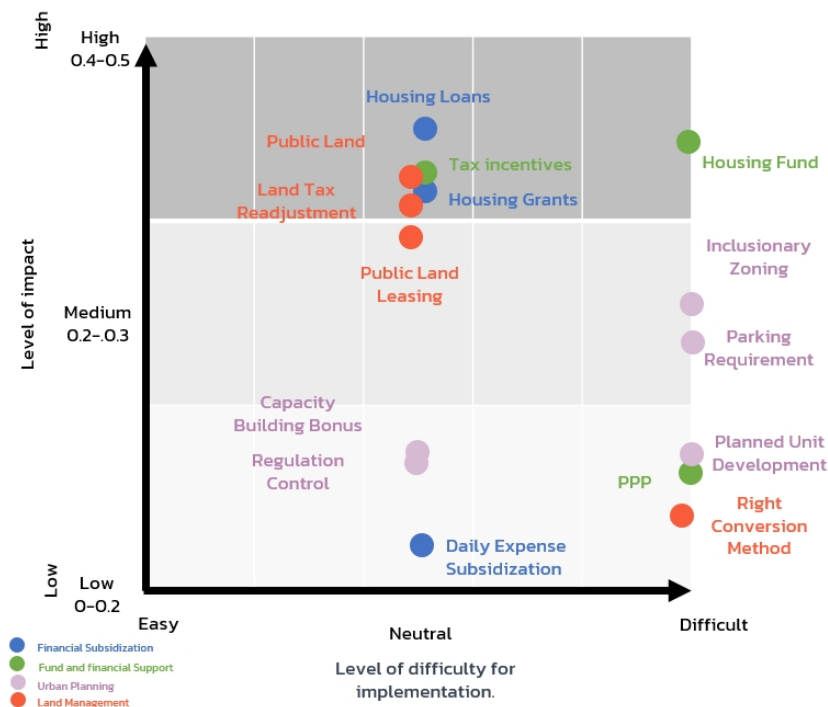


Figure 7: The level of significance and the level of difficulty for implementation were determined based on the survey responses from the participants.

In Figure 7, the total sum of the level of impact of the measures and the level of implementation difficulties is presented. These are divided into three main sets according to the level of impact. Within each group, there are two subgroups that specify the difficulties in implementation. These difficulties, when explored in depth, identify the problems and obstacles in each measure. If these limitations can be addressed or if strategies can be developed to overcome them, it will enable the measures to have an impact on the development of affordable housing in Bangkok. There are 3 group, the details are as follow:

1. High impact

- Neutral implementation: Housing Loans, Housing Grants, Tax incentives, Public Land , and Land Tax Readjustment
- Difficult implementation: Housing Fund

2. Neutral impact

- Neutral implementation: Public Land Leasing
- Difficult implementation: Inclusionary Zoning and Parking Requirement

3. Low impact

- Neutral implementation: Capacity Building Bonus, Regulation Control, and Daily expense
- Difficult implementation: Right Conversion Method, Public Private Partnership, and Planned Unit Development



In the following section, we will present the findings derived from the survey and in-depth interviews. Within this segment, the analytical tool employed is the Analytic Hierarchy Process (AHP), a method utilized for analysis and the determination of optimal alternatives. Nevertheless, as each respondent provides varying responses, the mean value is employed to ascertain the most significant measures for the development of affordable housing.

1) Financial Subsidization on demand side

Table 19: The results of Financial Subsidization on Demand Side

Questionnaire				Sectors			Total		
				Public Sector (6 Persons)	Academic Sector (5 Persons)	Private Sector (5 Persons)	Mean	Variance	Result
Measures	Housing Loans	Level of Implementation	Difficult	Difficult	Easy	2.77	0.96	Neutral	
		Level of Impact (AHP)	0.48145	0.58763	0.71175	1.78			
	Housing Grants	Level of Implementation	Difficult	Neutral	Neutral	3.34	0.52	Neutral	
		Level of Impact (AHP)	0.46291	0.32339	0.07383	0.86			
	Daily expenses subsidization	Level of Implementation	Neutral	Easy	Neutral	3.04	0.87	Neutral	
		Level of Impact	0.05564	0.08898	0.21443	0.36			

Source: Survey Data Collection by Researcher

A. Housing Loans

Common Perspectives

An analysis of the stakeholder survey regarding the perspective on housing loans is presented in Table 19. The analysis of implementation that all respondents

agree that the housing loan is “Neutral” to implement as the part of supporting measure on affordable housing development. However, when analyzing the impact of implementing housing loans, all respondents agree that housing loans have the greatest impact on supporting affordable housing development. Based on the AHP analysis score, the private sector specifically identifies housing loans as the most impactful measure for affordable housing development.

Both the academic and public sectors concur that implementing housing loans poses challenges. The public sector highlights the macroeconomic implications of housing loans, as they need to be considered within the broader economic context. Similarly, the academic sector emphasizes that housing loans can become a long-term burden, particularly for individuals lacking financial security. On the other hand, the private sector agrees that housing loans are easy to implement and considers them a critical tool for stimulating the housing market. Most of them focused on lending, especially the private sector, which wants the state to take this matter seriously. Similar to what the NHA stated, housing in the price groups below a million and 1-3 million has a high loan rejection rate. The majority considers this measure essential for the development of affordable housing.

Contrasting Perspectives

However, it is challenging to implement because financial matters are interrelated with banking and the national economy. Excessive lending affects the stability of the domestic economy and the risks to banks. Most academics argued that solving the root causes and stabilizing the financial foundations of the people of the country requires improving both the macro- and micro-economy, which can increase household income rather than lending money and encouraging people to lend money for the purchase of a permanent house once they are not ready with their financial status.

B. Housing Grant

According to the analysis of stakeholders' survey results on housing grants, most respondents believe that housing grants are “Neutral” to implement but can positively impact to address housing shortages and high housing costs as shown in Table 17.

Contrasting Perspectives

In contrast, the respondents from both public sector and the academic sector view this as “difficult” to implement because financial matters require many steps and a substantial amount of money. The majority of academics concur that the state should implement this measure to facilitate people's access to housing without requiring them to acquire or construct it themselves.

The respondent from academic express that “The government should focus on implementing more measures and tools for renting rather than solely promoting homeownership. This is especially important for individuals who are not financially stable or are unable to afford a house of their own.

Low-income individuals require significant financial resources in their lives, particularly when it comes to acquiring a small house. However, this approach is not conducive to accommodating the expansion of household size.

One viable option is the provision of housing grants or housing vouchers, which can assist individuals in renting housing anywhere they choose. This approach eliminates the need for the government to construct or entirely subsidize housing on its own”.

Nonetheless, the application of this measure necessitates financial and target-group considerations. As a result of shifting the burden to unprepared people, measures taken against low-income households or those in vulnerable financial situations will prioritize rental assistance over homeownership. This measure will reduce the cost burden for middle-income individuals who do not yet have access to housing prices in the city, allowing more individuals to access housing.

C. Daily Expense Subsidization

Following an analysis of the survey results regarding stakeholders' perspectives on subsidizing daily expenses, it is found that most respondents hold a "Neutral" on the implementation of Daily Expense Subsidization measure as shown in Table 17. Furthermore, the AHP analysis reveals unanimous agreement among the respondents that measures focused on subsidizing daily expenses have a lower impact on the development of affordable housing when compared to other measures providing financial support on the demand side. This is primarily due to challenges associated with controlling the provision of such assistance and effectively targeting the intended group. However, it was acknowledged that implementing measures to subsidize daily expenses is relatively straightforward.

The result of in-depth interview from the private sector in terms of the location of affordable housing projects plays a significant role in determining daily expenses. Developers must carefully analyze specific target groups and consider locations that minimize daily expenses while maintaining affordable pricing. This strategic approach ensures that the affordability of housing extends beyond the purchase price, taking into account the ongoing costs associated with daily living.

In summary, while stakeholders recognized the simplicity of implementing measures to subsidize daily expenses, they concluded that such measures have limited influence on the overall development of affordable housing. Instead, emphasis was placed on the

importance of location analysis to effectively reduce daily expenses while ensuring housing affordability.

2) Funding and Financing Model

Table 20: Funding and Financing Measures

Questionnaire				Sectors			Total		
				Public Sector (6 Persons)	Academic Sector (5 Persons)	Private Sector (5 Persons)	Mean	Variance	Result
Measures	Funding and Financing Model	Housing Fund	Level of Implementation	Difficult	Difficult	Difficult	3.24	0.87	Difficult
			Level of Impact (AHP)	0.55893	0.61441	0.05138	1.22		
		Public Private Partnerships	Level of Implementation	Difficult	Neutral	Difficult	3.41	0.66	Difficult
			Level of Impact (AHP)	0.10253	0.26837	0.19657	0.57		
		Tax Abatements	Level of Implementation	Difficult	Easy	Easy	2.89	0.73	Neutral
			Level of Impact (AHP)	0.33855	0.11722	0.75205	1.21		

Source: Survey Data Collection by Researcher

A. Housing Fund

Common Perspectives

Following an analysis of the survey results regarding stakeholders' perspectives on Housing Fund, It is found that most respondents from all sectors agree that the housing fund is "Difficult" to implementation as shown in Table 20. Although the public sector and academics find it difficult to establish a fund for housing development. From the AHP analysis, the respondents from public sector and the academic sector agree that housing funds is essential for the development of affordable housing to support the supply side. In addition, the opinion of respondent from NHA argues that in the past,

NHA and BMA had the concept of housing fund management, but they stuck to their role as government agencies, which cannot act for any commercial purposes. From an academic's point of view, the key to establishing a fund is identifying the source of funding, and government funding is possible due to the availability of numerous financial tools such as bond sales and mortgage loans. Similar to the viewpoint from academic, the respondent from academic sector expressed the viewpoint that “Presently, the movement of state funds remains stagnant, and there is uncertainty surrounding their allocation. However, it is believed that the state still maintains investment channels, such as bonds, through which funds can be channeled to acquire the necessary resources for developing affordable housing”.

Contrasting Perspectives

However, the results from the AHP analysis indicate that the private sector does not consider the housing fund to be significant for the development of affordable housing. This perspective stems from the fact that developers often possess sufficient budgetary resources to undertake the development process and can create products that align with the target price range. The respondent from private sector expressed the viewpoint that “The private sector does not necessarily seek financial assistance but rather emphasizes the importance of measures that facilitate their operations and sales. These measures include providing loans for home purchases or reducing fees to incentivize easier accessibility and encourage individuals to buy properties more readily”.

B. Public-Private Partnerships

Common Perspectives

Analyzing the stakeholder survey on public-private partnerships in the development of affordable housing, it is evident that the implementation of such

partnerships is deemed "Difficult" by both the public and private sectors. However, academics hold a "Neutral" perspective, considering it feasible to implement this measure, as illustrated in Table 18.

The results of the Analytic Hierarchy Process (AHP) analysis indicate that respondents from both the public and private sectors do not agree on the significant impact of Public-Private Partnerships (PPPs) on affordable housing development. However, academics believe that PPPs do have an impact on affordable housing development and can serve as crucial tools for the public sector to encourage private sector involvement in developing affordable housing. The respondent from public sector expressed the viewpoint that *"Implementing PPP in projects targeted towards low-income individuals presents challenges. The low yield associated with such projects makes them less attractive, except in cases where the land is situated in prime city locations such as Bon-Kai Flat and Huay-Kwang Flat"*. Similar to the private sector, they argue that they are not familiar with the public-private partnership model for affordable housing development. Hence, to convince the private sector, the state needs to clarify the contract and provide developers with information regarding the advantages and disadvantages.

Contrasting Perspectives

Contrarily, academics also argue that the government should develop examples or the prototype of successful projects for the private sector to comprehend and recognize the potential benefits of investing with the government. According to academics, the government requires additional personnel to effectively persuade and negotiate with the private sector, taking into account financial and investment advantages. Academic respondents expressed the viewpoint that *"The private sector lacks confidence in Public-Private Partnerships (PPPs) due to concerns regarding limitations and the perceived benefits of engaging in such partnerships with the public sector. Thus, the public sector needs to clarify the advantages that developers would*

gain from investing in affordable housing development and the incentives that would encourage private sector participation”.

C. Tax Incentive

Common Perspectives

An analysis of the stakeholder survey on the perspective of tax incentive measures for the private sector involved in affordable housing projects reveals a consensus among all parties that the implementation of such measures is considered "neutral," and the state does not necessarily need to invest in their development. However, there are varying viewpoints among the sectors regarding the level of implementation. It is evident that both the academic and private sectors perceive the implementation of such partnerships as "easy." However, the public sector's view, as illustrated in Table 18, is that this measure is considered "neutral" to implement.

Similarly, the results from the Analytic Hierarchy Process (AHP), which reflect the viewpoint of the private sector, tax cuts are recognized as the most critical factor in fostering affordable housing development. However, it is essential to engage in consultation to achieve a consensus on the specific requirements of the private sector. The respondent from public sector expressed the viewpoint that *“In order to gain the trust and active participation of the private sector, it is recommended that tax incentive measures specifically targeting affordable housing developers be implemented for a period of 5 years. By extending the duration of these tax incentives, it would effectively demonstrate the benefits to the private sector and encourage their active involvement in affordable housing initiatives”.*

3) Urban Planning Mechanism

Table 21: Urban Planning Measures

Questionnaire				Sectors			Total		
				Public Sector (6 Persons)	Academic Sector (5 Persons)	Private Sector (5 Persons)	Mean	Variance	Result
Measures	Urban Planning Incentives	Inclusionary Zoning	Level of Implementation	Difficult	Difficult	Difficult	3.72	0.87	Difficult
			Level of Impact (AHP)	0.54776	0.2271	0.02164	0.80		
		Regulation control relaxation	Level of Implementation	Neutral	Easy	Neutral	2.78	0.70	Neutral
			Level of Impact (AHP)	0.06437	0.0148	0.31238	0.39		
		Capacity Building (FAR Bonus)	Level of Implementation	Neutral	Neutral	Easy	2.79	0.43	Neutral
			Level of Impact (AHP)	0.03648	0.24820	0.22346	0.51		
		Planned Unit Development or PUD	Level of Implementation	Difficult	Neutral	Neutral	3.28	0.50	Difficult
			Level of Impact (AHP)	0.24735	0.24636	0.0249	0.52		
		Parking Requirement	Level of Implementation	Difficult	Neutral	Difficult	3.10	0.65	Difficult
			Level of Impact (AHP)	0.10405	0.26354	0.41762	0.79		

Source: Survey Data Collection by Researcher

A. Inclusionary Zoning

Common Perspectives

Analyzing the survey results of stakeholders regarding their perspectives on inclusionary zoning measures for affordable housing development to reduce inequality reveals a consensus that implementing such measures is challenging in the context of Thailand, particularly in Bangkok. All respondents agree that the implementation of inclusionary zoning measures is deemed "difficult" in the context of Bangkok as shown in

Table 21. Both academics and the private sector argue that inclusionary zoning is not suitable for the Thai context.

The respondent from academic expressed the viewpoint that *“The concept of inclusionary zoning originated in the American context as a response to exclusionary development practices that hindered the construction of affordable housing. In the United States, factors such as large lot sizes led to the exclusion of affordable housing developments. Consequently, some states implemented inclusionary zoning measures, which allowed for high-density development while requiring developers to provide affordable housing units.”*

Taking into account the Thai context, it is my belief that the direct application of inclusionary zoning may not be suitable. The unique circumstances and characteristics of the Thai housing market and urban planning differ significantly from those in the United States, rendering the direct transferability of inclusionary zoning less appropriate.

In the context of Thailand, the city planning laws are relatively flexible and less stringent compared to those in the United States. Consequently, the challenges faced in Thailand's affordable housing market primarily stem from market failures, which play a crucial role in determining whether or not affordable housing developments can be viable.

It is important to note that the concept of inclusionary zoning, which is implemented in the United States due to limitations imposed by large zoning lot sizes, may not directly apply to the Thai context. In Thailand, the main obstacles to affordable housing stem from market failures caused by high land prices rather than zoning restrictions.

Contrasting Perspectives

However, the results from the Analytic Hierarchy Process (AHP) analysis indicate that the respondents from public sector considers inclusionary zoning to be significant for affordable housing development, despite its challenges in implementation. In-depth interviews with the public sector also highlight their recognition of the importance of considering such measures, even though there are currently no plans for their immediate implementation. The state prioritizes the task of persuading the private sector to invest, considering it more crucial than enforcing to implement inclusionary zoning measures.

B. Regulation Control

Common Perspectives

An analysis of the stakeholder survey on the perspective of regulation control in urban planning for affordable housing projects reveals a consensus among all parties that the implementation of such measures is considered "neutral" in terms of difficulty in implementing them in Bangkok, as illustrated in Table 19. Furthermore, the results from the Analytic Hierarchy Process (AHP) analysis indicate that all respondents agree that regulation control is not a significant measure to support affordable housing development.

Contrasting Perspectives

However, there are differing viewpoints from both the public sector and NGOs. They acknowledge that while regulation control may not be the primary factor impacting affordable housing development, it still holds significance in determining and enhancing such development. The respondent from public sector expressed the viewpoint that *"Affordable housing is a complex undertaking that cannot be achieved unilaterally."*

Neither the private sector nor the public sector can accomplish it alone. The support of the public sector is crucial for the success of affordable housing initiatives. Urban planning plays a significant role in facilitating the efficient utilization of land, determining appropriate activities in specific areas, and utilizing subsidy tools to provide sufficient incentives for private sector involvement.

One challenge faced by urban planning in Thailand is its limited authority compared to jurisdictions like Singapore, where the Urban Redevelopment Authority (URA) holds legal jurisdiction over urban development. In Thailand, urban planning has limited power, mainly focused on determining land use rather than comprehensive housing development. There is a need to shift the perspective on housing, ensuring it is not treated as a political commodity.

Many measures and policies related to housing are influenced by partisan politics, and there is a lack of specialized housing expertise within political circles to address the collective housing market effectively. It is essential to have dedicated professionals with expertise in housing who can provide informed perspectives and guide policy decisions”.

Similar to the viewpoint of respondents from NGOs, it was stated that *“However, urban planning plays a crucial role in the development of affordable housing; however, its functionality needs to be defined more clearly. Achieving this requires engaging in dialogue with other sectors involved in development. Specifically, it is essential to explore how urban planning laws and guidelines can help reduce obstacles or increase incentives for affordable housing development.*

C. Capacity Building or Floor Area Ratio (FAR) Bonus:

An analysis of the stakeholder survey on the perspective of Capacity Building or Floor Area Ratio (FAR) Bonus for affordable housing projects reveals a consensus

among all parties that the implementation of such measures is considered “neutral” in terms of difficulty in implementing them in Bangkok, as illustrated in Table 19. Furthermore, the results from the Analytic Hierarchy Process (AHP) analysis indicate that all respondents agree that Capacity Building or Floor Area Ratio (FAR) Bonus is not considered the most significant measure to support affordable housing development.

According to the analysis of the stakeholder survey regarding the measures allowing developers to construct more floor area than would otherwise be permitted, most participants have not yet recognized the significance of this measure in promoting affordable housing development. However, all sectors consider it to be easy to implement, as the city of Bangkok is currently issuing this measure. As a result of implementing this measure, the National Housing Authority (NHA) utilized the Din Daeng Housing Redevelopment Project to employ the floor area ratio (FAR) bonus and construct high-rise buildings instead of limiting development to 8-story buildings, thus facilitating denser land use in the area.

The respondent from academic expressed the viewpoint that “*The provision of a FAR (Floor Area Ratio) bonus to developers of affordable housing projects, as stipulated by the city planning law, has proven to be unsuccessful. This measure lacks sufficient incentives for the private sector due to the unprofitable nature of the affordable housing market.*”

E. Planned Unit Development or PUD

Common Perspectives

An analysis of the stakeholder survey on the perspective of “Planned Unit Development (PUD)” for affordable housing projects reveals a consensus among all parties that the implementation of such measures is considered “difficult” in terms of difficulty in implementing them in Bangkok, as illustrated in Table 19. Furthermore, the

results from the Analytic Hierarchy Process (AHP) analysis indicate that all respondents agree that “Planned Unit Development (PUD)” is not considered the most significant measure to support affordable housing development.

Planned Unit Development (PUD) can be implemented for large-scale development projects in the city, allowing for requests to change land use types in exchange for the development of affordable housing. Both the state and academics concur on the significance of the state's involvement in affordable housing development. However, the state maintains the viewpoint that negotiations involving multiple parties are necessary for development on public land. The absence of an integrated cross-party development plan poses challenges to implementation. Similarly, academics share the perspective that this measure can be effectively deployed, particularly in major project areas where the state holds primary landownership.

Contrasting Perspectives

In contrast to the viewpoint of the private sector, they have observed limited development on large land plots, primarily because many of these plots are owned by the state. The state, as the authority over such lands, including those belonging to the State Railway of Thailand (SRT) and the Crown Property Bureau, has the ability to negotiate lease agreements for the development of affordable housing.

F. Reducing Parking Requirement

Common Perspectives

An analysis of the stakeholder survey on the perspective of the "Reducing Parking Requirement" measure for affordable housing projects reveals a consensus among all parties that the implementation of such measures is regarded as “Difficult” to implement in Bangkok, as illustrated in Table 19. Furthermore, the results from the

Analytic Hierarchy Process (AHP) analysis indicate unanimous agreement among the respondents that the "Reducing Parking Requirement" measure is a significant measure to support the development of affordable housing.

Based on the results of the in-depth interviews conducted with respondents from various sectors regarding their perspectives on parking reduction measures, there is unanimous agreement that parking requirements should be reduced or modified to offer greater flexibility. Particularly from the private sector and academic standpoint, reducing the parking requirement can enhance floor area utilization, leading to reduced construction costs without the need for additional height.

The respondent from private sector expressed the viewpoint that *When it comes to measures for reducing parking requirements, I believe it is feasible. While regulations can be amended to decrease parking obligations, it's important to consider the preferences of customers who prioritize parking availability.*

4) Land Management Mechanism

Questionnaire				Sectors			Total		
				Public Sector (6 Persons)	Academic Sector (5 Persons)	Private Sector (5 Persons)	Mean	Variance	Result
Measures	Land Management	Public land	Level of Implementation	Neutral	Neutral	Easy	2.87	0.98	Neutral
			Level of Impact (AHP)	0.50794	0.14608	0.32196	0.98		
		Public land leasing	Level of Implementation	Neutral	Neutral	Easy	2.87	0.41	Neutral
			Level of Impact (AHP)	0.08916	0.17543	0.32494	0.59		
		Right Conversion Method	Level of Implementation	Difficult	Difficult	Difficult	3.80	0.43	Difficult
			Level of Impact (AHP)	0.13168	0.32542	0.02282	0.48		
		Land Tax Readjustment	Level of Implementation	Neutral	Neutral	Neutral	3.16	0.70	Neutral
			Level of Impact (AHP)	0.27123	0.35308	0.33028	0.95		

Source: Survey Data Collection by Researcher

A. Public Land:

Common Perspectives

An analysis of the stakeholder survey on the perspective of the "Public Land" measure for affordable housing projects reveals a consensus among all parties that the implementation of such measures is regarded as "Neutral" to implement in Bangkok, as illustrated in Table 20. Furthermore, the results from the Analytic Hierarchy Process (AHP) analysis indicate unanimous agreement among the respondents that the "Public Land" measure is the most significant measure to support the development of affordable housing.

The results of a survey of stakeholders regarding the development of affordable housing projects on public land by government authorities are analyzed. Stakeholders agreed that government authorities could easily implement this measure, but they must negotiate it among the government authorities.

Contrasting Perspectives

In reality, only a few agencies can negotiate the development of housing projects on public land. However, if there were mediators to negotiate the development of affordable housing projects on public land, the amount of land available for affordable housing development in the city would increase significantly.

The respondent from NHA expressed the viewpoint that "*The National Housing Authority (NHA) holds an advantage over the private sector due to its extensive land bank, which enables the development of affordable housing. The NHA can also lease land from government agencies, such as the Treasury Department, at a lower cost.*

However, the availability of NHA land is currently limited, with most of it located in the suburbs. Additionally, some NHA land falls under city planning laws as conservation areas where construction is restricted, and some areas lack necessary infrastructure.

B. Public land leasing

Common Perspectives

An analysis of the stakeholder survey on the perspective of the "Public land leasing" measure for affordable housing projects reveals a consensus among all parties that the implementation of such measures is regarded as "Neutral" to implement in Bangkok, as illustrated in Table 20. Furthermore, the results from the Analytic Hierarchy

Process (AHP) analysis indicate unanimous agreement among the respondents that the "Public land leasing" measure is not a significant measure to support the development of affordable housing.

The majority of respondents agree that the public land leasing plan can be easily implemented because the state has the ability to negotiate, as revealed by an analysis of the survey results on the perspectives of measures to allow developers to lease public land. However, from the private sector's point of view, they are not interested in the rental model because managing financial and leasing contracts under the rental scheme is more complicated than the home ownership scheme.

C. Right Conversion Method Readjustment

Common Perspectives

An analysis of the stakeholder survey on the perspective of the "Right Conversion Method Readjustment" measure for affordable housing projects reveals a consensus among all parties that the implementation of such measures is regarded as "Difficult" to implement in Bangkok, as illustrated in Table 20. Furthermore, the results from the Analytic Hierarchy Process (AHP) analysis indicate unanimous agreement among the respondents that the "Right Conversion Method Readjustment" measure is not a significant measure to support the development of affordable housing.

Analysis of the stakeholders' survey results on the perspective of "Right Conversion Method Readjustment" measures reveals that all parties find it challenging to implement such measures. This is mainly due to the fragmented ownership of urban land, with multiple owners involved, making deployment difficult. Likewise, the private sector has not recognized the advantages and necessity of this measure as it significantly increases construction costs. The expensive land trade-off is not deemed worthwhile for constructing high-rise buildings for Affordable Housing sales.

D. Land Tax Readjustment

Common Perspectives

An analysis of the stakeholder survey on the perspective of the "Land Tax Readjustment" measure for affordable housing projects reveals a consensus among all parties that the implementation of such measures is regarded as "Neutral" to implement in Bangkok, as illustrated in Table 20. Furthermore, the results from the Analytic Hierarchy Process (AHP) analysis indicate unanimous agreement among the respondents that the "Land Tax Readjustment" measure is the most significant measure compared to the other measures on land management mechanisms.

Moreover, an analysis of the survey of stakeholders' opinions on land tax adjustment measures reveals that all parties agree that taxes can be used to stimulate the development of affordable housing. However, there is some disagreement regarding compulsion, and efforts should be made to persuade the private sector to participate in more development voluntarily. The government has implemented tax reduction and land tax exemption measures to decrease the cost of housing, which is beneficial for the demand side. Additionally, academics have suggested that land development may not be necessary in some areas. Instead, focus should be given to areas with more abandoned buildings, such as city buildings and shopfronts, which can be renovated and utilized as affordable rental housing.

Chapter 6: Conclusion and Recommendation

In Chapter 6, the summary will be structured as follows, compiling information from Chapter 2 regarding the perspectives on affordable housing in different countries, and considering Chapter 4, which examines the context and situation in Bangkok. This chapter will explore how these perspectives align or differ from the stakeholders' views. Building upon the findings from the questionnaire survey and in-depth interviews in Chapter 5, the aim is to ensure that the development of affordable housing is efficient and capable of addressing housing issues in Bangkok, while aligning with the context and appropriateness. It will also identify the limitations and significant gaps that need to be addressed in order to align the development of affordable housing with the researcher's perspectives. The researcher will provide guidelines and policies to facilitate effective development in the desired direction.

6.1. Definition

6.1.1. Defining Critical Factors in Terms of Range of Target Income for Affordable Housing

1) Chapter 2

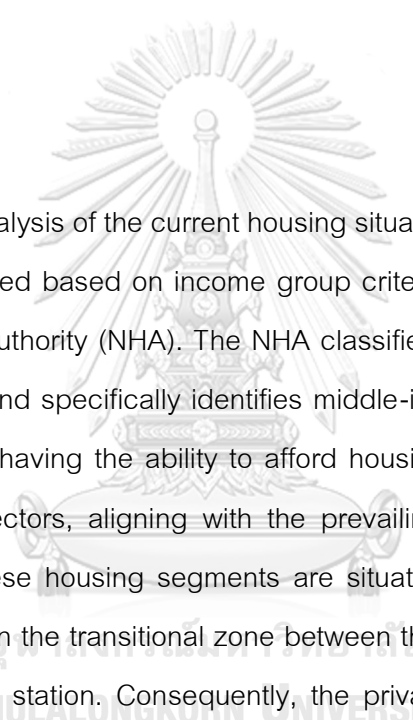
According to numerous international reviews, the target group for affordable housing encompasses not only individuals with low incomes, but also extends to middle-income individuals. This expansion of the target group introduces two distinct models.

1. The first model classifies individuals based on the level of assistance required. For instance, individuals belonging to the low-income group receive more support in accessing affordable housing compared to those in the middle-income group. Consequently, the types of housing options available vary within each income group. For instance, individuals in the low-income group have the choice of either purchasing

or renting, depending on their financial capabilities. Support tools provided in this model include Housing Grants, Housing Loans, and other similar resources.

2. The second model differentiates based on the type of housing provided. It proposes a clear separation between rental segments for low-income individuals and the buying segment for middle-income individuals. This model enables a distinct market division and facilitates the implementation of support measures that align with the specific needs of the target groups.

2) Chapter 4



Based on an analysis of the current housing situation in Bangkok, housing prices in the city are determined based on income group criteria as outlined in the report by the National Housing Authority (NHA). The NHA classifies housing accessibility groups according to income, and specifically identifies middle-income individuals in the 61-70 percentile segment as having the ability to afford housing in the lower price segment provided by private sectors, aligning with the prevailing selling prices and rents in Bangkok. However, these housing segments are situated at a considerable distance from the city center or in the transitional zone between the city center and the suburbs, far away from the BTS station. Consequently, the private sector faces constraints in developing projects in these areas due to high land prices.

The research indicates that middle-income individuals are required to allocate more than 30% of their income towards housing expenses in order to reside within the city or in suburbs near the train station. Therefore, it is imperative for middle-income individuals to be granted access to affordable housing and receive housing support measures from the government, particularly in light of the escalating housing prices and the overall cost of living.

3) Chapter 5

Based on the survey results, a significant majority (over 87% of respondents) perceive affordable housing as a viable residential option for individuals with low incomes falling within the 41-60 percentile range. However, this group represents only a small portion, approximately 13%, as seen from academic and government perspectives. Therefore, it is suggested that the discussion should also encompass middle-income individuals. In-depth interviews have revealed the necessity of expanding the target group to include middle-income individuals in the 61-70 percentile range. This is due to the fact that middle-income individuals face similar housing accessibility challenges and lack assistance measures, much like those with low incomes.

Furthermore, there is an alternative perspective suggesting that a singular fixed price should not be established for affordable housing. Instead, prices should be adjusted according to the income level of the target group. Additionally, it is recommended to extend the scope of the target groups beyond income categories, encompassing first jobbers and students, to ensure comprehensive coverage for all individuals who are unable to afford market-priced housing.

4) Gap and Obstacles

Despite the contextual considerations in Thailand and the policies adopted by other countries, which emphasize the inclusion of middle-income groups in affordable housing initiatives, the prevailing perspective among stakeholders, as gleaned from surveys and in-depth interviews, indicates that the primary focus for affordable housing continues to be individuals with low incomes, specifically in both the public and private sectors. Consequently, in order to establish a shared understanding among all relevant parties regarding the inclusion of middle-income individuals in the concept of affordable

housing, it is imperative to delineate clear segmentation. This approach will facilitate the effective implementation of government support measures.

5) Policy recommendation

- a) **Stakeholder Engagement and Education:** Foster discussions and engagement among stakeholders, including government agencies, developers, housing experts, and community representatives, to establish a shared understanding of the importance of including middle-income individuals in affordable housing initiatives. Raise awareness about the benefits and potential solutions for affordable housing that caters to a broader range of income groups.
 - i. **Establish a platform for exchange and dialogue:** A platform should be created to facilitate open discussions and foster consensus among stakeholders in order to identify common ground for defining target groups. This will ensure that all parties have a shared understanding and provide a comprehensive framework for effective implementation.
 - ii. **Foster understanding:** It is crucial to promote a deep understanding among stakeholders that middle-income individuals represent a significant segment of society that deserves assistance in accessing affordable housing within urban areas. This awareness will help garner support and ensure equitable housing opportunities for this group.

- b) **Clear Segmentation of Target Groups:** Establish clear segmentation criteria for affordable housing programs that encompass both low-income and middle-income individuals. This segmentation should consider income levels, with distinct support measures for each group. This approach will ensure that resources are appropriately allocated and that support measures align with the specific needs and financial capabilities of each income group.

- i. **Expand data collection efforts:** The scope of data collection should extend beyond solely capturing income data from urban populations. It should encompass "hidden" populations as well, in order to gain insights into the true housing needs and demands of all segments of society. This comprehensive data will enable informed decision-making and targeted policy interventions.
- ii. **Income-Based Pricing Guidelines:** Implement income-based pricing guidelines that take into account the income level of the target group. Rather than a singular fixed price for affordable housing, prices should be adjusted to align with the income levels of low-income and middle-income individuals. This will facilitate affordability and enable individuals to access suitable housing options based on their income.

6.1.2. Defining Critical Factors in Terms of Housing Contract (Renting or Buying)

1) Chapter 2

Renting or purchasing property in foreign countries is primarily influenced by various factors, including property agents, landowners for development, and target groups. There are three main approaches to consider:

1. **State-led development on state-owned land:** This approach predominantly involves rental agreements as the primary option. The state takes the lead in developing housing projects on land owned by the government. These projects are primarily aimed at providing rental options.
2. **State-led development on state-owned land with a combination of purchasing and renting options:** In this approach, the state-led development includes both

purchasing and renting options, which are segmented based on income groups. Rental options are specifically targeted towards low-income groups, while purchasing involves acquiring the right to occupy the property, which can be sold or used for a new purchase. This model can be referred to as a "99-year lease" system.

3. Involvement of various private sector entities: This approach allows for the participation of different private sector entities in affordable housing development. It is not limited to specific rental or purchasing formats. However, this system requires a central agency to oversee market demand and supply in order to maintain a balance between the two.

2) Chapter 4

Based on the analysis of current and future market trends in Bangkok, it is anticipated that there will be an increase in the demand for rental homes due to the growing need for mobility and expansion. Renting provides a flexible housing solution that does not impose long-term financial burdens. However, there still exists a demand for homeownership in order to attain residential stability. Despite this demand, there is a dearth of developers focusing on rental housing. Only a few small-scale investors purchase properties from the private sector and lease them out for profit.

In terms of government measures, the emphasis has primarily been on supporting homeownership. This has been accomplished through the implementation of policies such as reducing loan-to-value ratios (LTV), providing mortgage loans, and even offering incentives to the private sector to encourage the development of affordable housing.

3) Chapter 5

According to the survey, the majority of respondents believe that both buying and long-term renting are suitable for the development of affordable housing. In particular, all respondents from the private sector chose buying, while those who preferred renting were mainly respondents from the academic and professional group. The academic and professional group emphasized renting in urban areas and advised against promoting long-term rental burdens when individuals are not ready.

On the other hand, the government is primarily interested in long-term renting to ensure residential stability for the public. The private sector expressed their preference for buying as they believe that renting requires more complex management and may pose challenges in the long run. Therefore, the private sector chooses to focus on the sales model. An additional viewpoint on this issue is that the duration of rental should consider the location. For example, short-term rentals are more suitable in urban areas, and old buildings in the city can be renovated and developed into rental properties.

4) Gap and Obstacles

Academics assert the significance of renting, particularly in urban areas, placing emphasis on its importance over homeownership. In foreign countries, there are diverse models employed, making it unnecessary for the government to solely undertake their development. For instance, the government can acquire residential properties from the private sector and offer them for rent, or they can encourage the revitalization of residential areas to enhance their livability. However, private developers tend to overlook the construction of rental housing, thereby rendering it the responsibility of the government to take the lead in its development. Nonetheless, the government must clearly define and allocate specific target groups for rental housing to ensure effective implementation.

5) Policy recommendation

- a) **Diversify Affordable Housing Models:** Create greater ecological diversity in housing, considering not only price but also factors such as room size and project location. Market demands extend beyond price, and it is important to address these additional considerations. Implement a range of affordable housing models that include both rental and homeownership options. This will cater to the diverse needs and preferences of different income groups. Encourage private sector involvement in affordable housing development, while ensuring that rental housing is given adequate attention.
- i. **Increase rental housing in urban areas:** Private developers face challenges in effectively managing rental properties due to long-term burdens. Therefore, it is necessary for central and local governments to play a role in providing rental housing through the following measures:
- 1) The government can acquire properties from the private sector for short- to medium-term rentals.
 - 2) Local governments can enhance residential areas within the city to accommodate rentals of varying durations.
- b) **Adjust policies and incentives:** Foster collaboration among multiple stakeholders, including the government and private sector, to revise Board of Investment (BOI) measures or incentives. It is crucial to ensure that affordable housing is not solely defined based on price, as price alone should not be the determining factor. The affordability threshold of 1.2 million baht should not be limited to urban areas or areas with limited access to public transportation, as this may result in increased expenses in other aspects. Additionally, even if housing prices are affordable, locations near job opportunities tend to be developed for homeownership, which lacks flexibility. Considering that many individuals need

to adapt and relocate for work, having long-term assets near job centers may not be suitable for the development of affordable housing.

6.1.3. Defining Critical Factors in Terms of Price for Affordable Housing

1) Chapter 2

The price of affordable housing, often discussed by academics, should not exceed 30% of an individual's income. However, when examining the definitions and pricing methods employed in different countries, multiple criteria come into play. These criteria can be categorized into two models:

Model 1: This model entails government intervention and price control in the market to ensure that affordable housing prices do not surpass a specified limit. In most countries following this model, the housing price is set not to exceed 25% of the income of the target group. This may vary based on income groups and the type of housing, such as rental housing for low-income individuals or homeownership for middle-income individuals. The goal is to ensure affordable housing payments and cater to the specific needs of each income group.

Model 2: In certain countries, there are no specific price regulations tied to income levels. Instead, housing prices are determined based on factors such as location or the size of the dwelling. The central or local government does not intervene in market prices but provides financial assistance based on the income level of each group.

2) Chapter 4

Based on the prevailing housing prices in Bangkok, even individuals with moderate incomes find themselves having to allocate more than 30% of their earnings

towards housing expenses when purchasing or renting a property within or near the city, particularly those close to the mass transit system. If housing costs fall below the 30% threshold, it is typically for residences situated far from the city center or lacking convenient access to public transportation. This situation necessitates additional expenditures for daily commuting, placing a burden on residents. Consequently, individuals with low incomes face significant challenges in affording rental housing within the city, often resulting in their accommodation being limited to small and substandard rooms.

However, it is important to acknowledge that certain measures, such as the condo BOI (Board of Investment) scheme, currently exist to support the availability of affordable housing. This scheme imposes a price limit of not exceeding 1.2 million Baht. Despite these efforts, developers encounter difficulties in developing affordable housing projects within the city due to the high costs of land acquisition.

3) Chapter 5

In surveys, there is generally little disparity in opinions. The majority of respondents believe that when purchasing a property, the monthly mortgage payment should not exceed 25% of the target group's income. However, when it comes to renting, the rental expense should not exceed 20% of the target group's income. Nevertheless, some academics propose that housing prices should not be fixed but rather should vary based on factors such as location, size, and their correlation with financial assistance programs that cater to different income levels.

These measures establish pricing guidelines that regulate the size, format, and location of affordable housing. Although price determination is based on the affordability of low-income households, it has resulted in the construction of small and uniformly sized affordable housing units. These units are often characterized by low-rise buildings and are situated far from mass transit stations.

4) Gap and Obstacles

Debates still persist regarding the standardized criteria for price determination, and it is necessary to engage in discussions among stakeholders to determine the appropriate course of action. The options under consideration include using income-based affordability as the basis for pricing or setting prices based on location. These factors will ultimately shape the future direction of supportive measures. Currently, there is no specific organization tasked with overseeing the establishment of standard pricing. The Board of Investment (BOI) has only imposed a price limit on BOI-approved condos, ensuring they do not exceed 1.2 million baht. Consequently, affordable housing units predominantly adhere to a single ownership model, are situated in urban areas, and feature small-sized units. The market still suffers from a dearth of affordable rental houses or alternative housing options beyond compact studio apartments measuring no more than 24 square meters.

5) Policy recommendation

- a) **Income-Based Affordability Threshold:** Set a threshold for affordable housing prices not to exceed 30% of an individual's income, in line with the commonly accepted standard. This threshold should apply to both rental and homeownership options.
- b) **Government Intervention and Price Control:** Introduce government intervention and price control measures to ensure that affordable housing prices remain within the established affordability threshold. The government should work closely with developers and relevant stakeholders to determine pricing guidelines that cater to different income groups and housing types.
- c) **Location-Based Pricing:** While income-based affordability is crucial, consider implementing location-based pricing to account for variations in housing costs in

different areas. Prices can be adjusted based on factors such as proximity to city centers, access to public transportation, and availability of amenities. This approach will enable individuals to access affordable housing options that are well-connected and reduce additional expenses associated with commuting.

6.1.4. Defining Critical Factors in Terms of Provider for Affordable Housing

1) Chapter 2

In other countries, two models exist for providing affordable housing. Model 1 involves state agencies as the providers of affordable housing. Model 2 allows for the participation of other sectors, enabling all parties to engage in the process. The state plays a supportive role in terms of financing. If the development is on state-owned land, the state or local government can act as the developer (with state-owned land as an indicator). Alternatively, the state can permit the private sector to lease state-owned land at a lower price than the market value for affordable housing development without requiring state support.

2) Chapter 4

Currently, two significant measures have been implemented in Bangkok to promote affordable housing providers. The first measure is the provision of special usage rights or FAR (Floor Area Ratio) Bonus, which is determined by the BMA. This measure allows all sectors to develop affordable housing. The second measure is the Condo BOI, which provides tax privileges to developers of affordable housing. However, the implementation of these measures still faces disputes regarding regulations and practical application.

3) Chapter 5

The majority of respondents agree that both the state and the private sector should be the primary providers of affordable housing. However, the role of the local authority, such as the BMA, differs among stakeholders. The state and academics believe that the local authority, like the BMA, can act as a provider. On the other hand, the private sector sees the local authority, particularly the BMA, as a supporter rather than a provider. In-depth interviews revealed that the main obstacles for the BMA are its limited role and its inability to generate profit from funds. Additionally, the BMA lacks funding and expertise in housing construction, unlike the National Housing Authority (NHA). Therefore, the BMA can only serve as a supporter by providing information, acting as an intermediary for coordination, and creating policies or measures to support the development of affordable housing.

4) Gap and Obstacles

While local government agencies should play a role in the development of affordable housing, they may lack direct expertise in this area. The Bangkok Metropolitan Administration (BMA) has the capacity to act as an intermediary, coordinating the use of state land for affordable housing development in collaboration with real estate developers, cooperatives, or the private sector. Furthermore, support in the form of regulations and laws can facilitate the development of affordable housing.

One limitation of local government agencies in affordable housing development is their inability to engage in profit-seeking activities. The lack of incentives for the private sector to invest in affordable housing is primarily due to the low profitability associated with such developments in various forms.

5) Policy recommendation

- a) Negotiations among stakeholders: Negotiations should be conducted to define the role of local government in overseeing housing development at all levels within the city, in addition to planning regulations.
- b) Public land and public-private partnerships: PPPs can be effectively utilized to develop affordable housing in Bangkok. It is crucial to promote collaboration between the government and private sector to enhance accessibility to affordable housing. Moreover, cooperation with non-profit developers and community groups can leverage their expertise and access to capital.
- c) Revise the Regulations: The enforcement of regulations or implementation of taxes can serve as a means to fund housing development in Bangkok through land tax readjustment.
- d) Incentives for affordable housing: Provide financial incentives, such as tax deductions, subsidies, or low-interest loans, to encourage developers to include affordable housing units in their projects. Improve the permitting process and reduce regulatory barriers to facilitate easier and more cost-effective development of affordable housing.
- e) Public land and development: Allocate public land or offer special conditions for sale or lease to affordable housing providers to facilitate the purchase and development of affordable housing projects. Support the conversion of underutilized or vacant properties into affordable housing through programs such as land banks or property tax benefits.

- f) Funding and subsidies: Allocate dedicated funding sources and subsidies specifically for the development and maintenance of affordable housing. Explore options such as housing trust funds, impact fees, or inclusionary zoning policies to generate revenue for affordable housing projects.

- g) Data collection and research: Invest in comprehensive data collection and research to inform affordable housing policies and improve decision-making. Monitor housing market trends, demographics, and the effectiveness of affordable housing programs to identify areas for improvement and resource allocation.

6.2. Conclusion on Critical Criteria of Affordable Housing

6.2.1 Defining Critical Criteria in Terms of Aged and household type for Affordable Housing

1) Chapter 2

In different countries, there are diverse perspectives on the categorization of affordable housing: 1) Categorization based on age and household size: Age is commonly used as a criterion for categorizing the population into two main groups: young adults and working-age individuals, and the elderly. Additionally, categorization based on household characteristics includes groups such as "New-wed," referring to newly married couples, and the "family" group, which comprises multiple family members. 2) Specific group categorization: This includes social housing, which provides rental housing for low-income individuals; intermediate affordable housing, which offers rental and purchase options for middle-income groups; and key worker housing, which focuses on providing rental housing near job centers.

2) Chapter 4

Households consisting of 1-2 individuals often face financial stability issues, including recent graduates who cannot afford homeownership in the city. Affordable housing priced between 1-2 million baht has witnessed increased sales due to its affordability. However, such homes are predominantly located on the outskirts of the city, resulting in additional commuting expenses for residents. Furthermore, there is a trend among the younger generation to prefer renting, as they seek greater independence and prefer not to be burdened with long-term commitments. The group affected by rising housing costs extends beyond individuals with low incomes to include young adults and working-age individuals with moderate incomes.

3) Chapter 5

The majority of respondents believe that the main target group should focus on individuals aged 25-40 who are in the process of establishing their financial status and desire to reside in the city. However, the government suggests prioritizing the elderly as a vulnerable group with reduced income-earning capacity. Experts also recommend the establishment of sustainable housing finance systems to support the future aging population, such as the Central Provident Fund (CPF), which can serve as a retirement housing guarantee.

4) Gap and Obstacles

The primary target group encompasses various categories that need to be considered. In addition to income levels within each household, factors such as singles, newly married couples, students, and individuals entering the workforce should be taken into account. These groups play a crucial role in driving the city's workforce. Therefore, it is essential to provide affordable housing in proximity to job centers and educational institutions. However, it requires careful timing and suitable locations.

5) Policy recommendation

- a) **Diverse Categorization of Affordable Housing:** Develop a comprehensive categorization system for affordable housing that considers different criteria such as age, household size, and specific group needs. This will enable targeted housing solutions for various segments of the population, including young adults, working-age individuals, the elderly, newly married couples, and low to middle-income groups. Tailoring housing options to specific groups ensures that their unique needs and challenges are addressed effectively.
- b) **Rental Options and Flexible Housing Solutions:** Recognize the preferences of the younger generation for renting and their desire for flexibility and independence. Encourage the provision of affordable rental options alongside homeownership opportunities. This approach accommodates the needs and financial situations of individuals aged 25-40, providing them with affordable and flexible housing solutions that align with their lifestyles and aspirations. Promote innovative rental models, such as co-living and shared housing, to enhance affordability and foster a sense of community.
- c) **Addressing Financial Stability for 1-2 Person Households:** Recognize the challenges faced by 1-2 person households, including recent graduates and individuals with moderate incomes, in achieving financial stability and homeownership. Develop supportive measures, such as affordable housing priced between 1-2 million baht, that are conveniently located within the city. This will reduce commuting costs and enhance the affordability of housing options for this group. Explore partnerships with private developers to increase the supply of affordable housing units within city limits.
- d) **Focus on Elderly and Sustainable Housing Finance:** Acknowledge the vulnerability of the elderly and their reduced income-earning capacity. Prioritize

affordable housing initiatives that cater to the needs of the elderly population, ensuring their access to safe, suitable, and affordable housing options. Additionally, establish sustainable housing finance systems, such as the Central Provident Fund (CPF), to support the future aging population's housing needs. This will provide retirement housing guarantees and financial stability for elderly individuals.

6.2.2. Defining Critical Criteria in Terms of size for Affordable Housing

1) Chapter 2

The size of affordable housing in different countries is often classified based on the number of bedrooms, and the bedrooms typically have a minimum size of about 6-9 square meters. Some countries have regulations specifying the sizes and functions of rooms based on the number of bedrooms, to ensure suitability for living and prevent overcrowding. The size of the households should also be considered to avoid excessive congestion in the kitchen. There are three standard sizes available:

1-Room (Room, Kitchen, and WC) 23 sq.m.

2-Room (Bedroom, Kitchen, Living, and WC) 37 sq.m.

3-Room Improved 33 sq.m. (2 Bedrooms, 2 WCs, kitchen, and living)

These sizes are standardized, and it is not allowed to have sizes smaller than the specified minimum. The central government is responsible for regulating and allocating the construction of different-sized rooms to meet market demands.

2) Chapter 4

According to housing regulations, the size of condominiums should not be smaller than 20 square meters. However, the suitable size for a dwelling is approximately 24 square meters for 1-2 people. The BOI has defined affordable housing with a minimum room size of 24 square meters, which should be priced within 1.2 million

baht. These factors determine the size and location of affordable housing, which are limited to small-sized units suitable for individuals or couples.

3) Chapter 5

Opinions vary regarding the number of people per household and the types of households. It is generally agreed that the number of people per household should be related to the size of the rooms, and there should be multiple size options to suit different types of households. Sometimes, the room sizes are determined as the smallest size for construction without considering the size of the household, especially in multi-story buildings. These small-sized units often accommodate 3 -4 members or two generations (parents and children) in a single room, which may lead to a lack of privacy for parents and potential social problems. Therefore, it is important to consider the actual number of occupants rather than just the room size. For example, the CODI mentions that the size of the dwelling should not be limited to only one size, but rather based on the number of occupants, such as one person per 10 square meters.

Furthermore, there are additional interesting points from respondents from CODI regarding the room size. Apart from suitability, designers must consider the true objectives of the projects and the desired duration of occupancy. For instance, if a temporary room is designed, it may encourage residents to seek better alternatives.

4) Gap and Obstacles

Currently, low prices are set without considering the suitability in terms of size. The low pricing leads to developers reducing the size or facilities and compromising the quality of materials or certain project costs to achieve affordability.

5) Policy recommendation

a) **Regulatory Oversight:** NHA needs to establish standards for affordable housing. Implement effective regulatory oversight by the central government to ensure compliance with the established minimum room size standards and quality requirements for affordable housing projects. Regular inspections and enforcement of regulations will maintain the integrity of affordable housing developments and protect the rights and well-being of residents.

- i. **Establish Minimum Room Size Standards:** Introduce regulations that specify minimum room sizes for affordable housing units based on the number of bedrooms and the size of the household. These standards should ensure suitability for living, prevent overcrowding, and provide residents with adequate space for privacy and comfortable living conditions. Consider the international standards and best practices when determining the minimum room sizes.
- ii. **Allow for Multiple Size Options:** Instead of limiting affordable housing units to a single standardized size, provide flexibility by allowing for multiple size options. This will accommodate different types of households, including individuals, couples, and families with varying sizes. Offering a range of unit sizes ensures that the housing meets the specific needs of different household compositions, promoting comfortable living conditions and preventing potential social problems associated with overcrowding.

6.2.3. Defining Critical Criteria in Terms of Appropriate Location for Affordable Housing

1) Chapter 2

In various countries, efforts have been made to distribute affordable housing across different areas, including cities, suburbs, and locations near employment opportunities. Each area may have different price regulations established by the state to ensure prices remain below market rates or provide assistance to target groups, ensuring their ability to reside near job opportunities.

However, it is crucial to establish strategies and management related to location and tenure. For instance, in urban areas, short-term and mid-term rentals may be more suitable for the target groups based on their specific needs. On the other hand, suburban areas may focus on long-term rentals and homeownership.

2) Chapter 4

There is a demand for housing near cities or areas with convenient transportation links. Being located too far from the city incurs travel expenses and longer commuting times. Considering rental and residential property prices along with the income level of individuals with moderate income, even those earning between 36,701 and 45,300 Baht per month would need to spend over 30% of their income to rent or own properties within the city, which serves as an employment hub. Referring to the 20-25% benchmark for rental and ownership costs, it is evident that individuals with moderate income can afford housing within that range. However, such housing would likely be located in suburban areas, necessitating commuting time and expenses to access the city.

3) Chapter 5

The majority viewpoint regarding the location of affordable housing suggests that it should be situated between cities and suburbs or in areas close to employment opportunities. However, there is a significant emphasis on factors related to convenient access to public transportation systems, enabling affordable travel to the city. Therefore, key components to consider for the location of affordable housing include the proximity of bus stops and secondary roads, providing alternative transportation options.

4) Gap and Obstacles

Despite the prevailing opinion regarding the importance of access to public transportation in the location of affordable housing in various countries, there is a discrepancy between perception and reality. Even if affordable housing projects are situated near bus stops, residing in the suburbs still entails long commuting times to reach the city, which serves as a major employment hub. This presents a significant gap in terms of location. Although proximity to a bus stop is beneficial, the ideal location for affordable housing should strike a balance between commuting time and expenses by being positioned in the intermediate area between the city and suburbs.

Alternatively, if the location is in a suburban area and there is a need to minimize commuting, it is essential to develop affordable housing near train stations. Trains offer faster transportation and are not as affected by traffic, resulting in time savings. However, train fares tend to be high, necessitating consideration of cost assistance for low-income groups to alleviate the financial burden.

The issue of accessing public transportation is of utmost importance in the location requirements of affordable housing. It is crucial to strike a balance between housing prices and daily living expenses. If affordable housing is situated in an area with low

housing prices but high daily living expenses, the success of the project may be compromised.

5) Policy recommendation

- a) **Balanced Location Strategies:** The location of affordable housing can be determined based on the demand in each area, ensuring comprehensive and widespread coverage. Develop a comprehensive location strategy for affordable housing that ensures distribution across different areas, including cities, suburbs, and areas near employment opportunities. Consider the specific needs and preferences of target groups in each area. In urban areas, focus on short-term and mid-term rentals to cater to individuals seeking proximity to job opportunities. In suburban areas, emphasize long-term rentals and homeownership options for those looking for more stability. This balanced approach will provide affordable housing options that suit the needs and circumstances of different populations.
- b) **Proximity to Employment Opportunities:** Prioritizing the importance of the location for affordable housing includes proximity to urban areas or areas with convenient transportation links to employment centers. Additionally, identifying areas with development potential is crucial for future development into affordable housing. Access to job opportunities plays a crucial role in improving economic mobility and reducing commuting expenses and time. By situating affordable housing in proximity to employment hubs, residents can save on transportation costs and enjoy better work-life balance.
- c) **Access to Public Transportation:** Ensure that affordable housing projects are located near bus stops and secondary roads to provide convenient access to public transportation systems. This enables affordable travel to the city and other essential destinations. Consider the development of affordable housing near

train stations as well, as trains offer faster transportation options and are less affected by traffic congestion. However, acknowledge the potential high train fares and explore cost assistance measures for low-income groups to alleviate the financial burden.

- d) **Cost Assistance for Low-Income Groups:** Recognize the financial challenges faced by low-income groups in accessing affordable housing, particularly in areas with higher living expenses. Implement cost assistance programs and subsidies to alleviate the burden of housing and transportation costs. This can include rental subsidies, down payment assistance for homeownership, and reduced public transportation fares for eligible individuals and families. These measures ensure that affordable housing remains truly affordable and accessible to those who need it most.

6.2.4 Defining Critical Criteria in Terms of Housing Type for Affordable Housing

1) Chapter 2

In most countries, the predominant form of affordable housing is apartment complexes (low-rises of 4-8 floors), which include both high-rise and low-rise buildings. This is due to the need to develop an adequate number of units within limited available space.

However, there are some countries where affordable housing takes the form of various types of homes, including single-family houses, townhouses, and apartment complexes. Developers in these cases come from different sectors. In such instances, the government does not have a role in intervening in market prices, but it plays a crucial part in implementing measures to assist and support everyone in accessing affordable housing.

2) Chapter 4

In Bangkok, the implementation of measures to support affordable housing development has revealed limitations regarding building characteristics. The FAR (Floor Area Ratio) Bonus policy aims to incentivize developers to increase the quantity of affordable housing in the city by allowing them to expand the building's usable area. This policy primarily targets the private sector, aiming to encourage their involvement in affordable housing. However, the application of this measure has been restricted to the use of condominiums for increasing density in development.

Similarly, the BOI (Board of Investment) Condo policy encourages private sector participation in affordable housing development. While this policy provides certain privileges, it has not fully achieved its intended objectives. The resulting developments are dispersed throughout the city, and the buildings tend to be low-rise due to the higher costs and complexities associated with constructing taller buildings.

3) Chapter 5

In the majority of opinions, the emphasis of development should be on maximizing the quantity of affordable housing, especially within cities. Therefore, there is no preference for single-family homes in affordable housing development. Most believe that low-rise or high-rise building formats should be used to achieve the highest possible efficiency in land use. From interviews conducted with government officials and experts, the aim is to develop the city in a dense manner, avoiding dispersion. The private sector can develop affordable housing in urban areas and prefers low-rise buildings due to lower construction costs and easier permitting processes.

In addition, experts propose utilizing urban renovation by repurposing existing buildings in the city for rental housing and employing cross-subsidization. This involves

creating mixed-income housing projects, where revenue from higher-priced residences can support the development of affordable housing.

4) Gap and Obstacles

All parties agree that urban areas should be developed in high-rise building formats to optimize land utilization. However, constructing tall buildings involves higher costs, more complex permitting processes, and longer return on investment periods. These factors discourage private developers from investing in high-rise projects or developing high-rise affordable housing within the city due to the high land prices, making it challenging to meet the desired affordability.

5) Policy recommendations:

- a) **Diversify Housing Types:** Encourage the development of diverse housing types within affordable housing initiatives. While apartment complexes currently dominate the affordable housing landscape, consider incorporating other types such as single-family houses, townhouses, and mixed-use developments. This approach will provide a broader range of housing options that cater to different preferences and needs, promoting inclusivity and diversity within affordable housing projects.
- b) **Review and Enhance FAR Bonus Policy:** Currently, there are still challenges in implementing these incentives due to insufficient motivation for private entities. Therefore, there needs to be a collaborative effort to discuss and exchange ideas regarding the needs of all parties involved in order to collectively push forward the adoption of these measures. Thus, conduct a thorough review of the Floor Area Ratio (FAR) Bonus policy to address its limitations and ensure its effectiveness in promoting affordable housing development. Expand the scope of the policy beyond condominiums to include other building types, such as low-

rise and high-rise affordable housing projects. This expansion will incentivize private developers to participate in affordable housing initiatives and increase the quantity of affordable units available in the city.

- c) **Urban Renovation and Cross-Subsidization:** To increase revenue for the NHA in developing affordable housing projects. Promote urban renovation and repurposing of existing buildings for rental housing as a strategy to increase the affordable housing stock. Encourage the creation of mixed-income housing projects where revenue from higher-priced residences can subsidize the development of affordable units. This approach utilizes existing infrastructure and supports the integration of affordable housing within established urban areas.
- d) **Address Land Price Challenges:** Land is the largest cost factor and a crucial factor in determining the price of affordable housing. Acknowledge the challenge of high land prices in urban areas, which can hinder the development of affordable housing projects. Implement measures to address this issue, such as land value capture mechanisms, land banking, or public land allocation for affordable housing purposes. These strategies can help reduce the cost of land acquisition, making it more feasible for developers to create affordable housing in desirable locations.
- e) **Public-Private Partnerships:** Developing affordable housing in urban areas is challenging for the private sector due to high land prices that make development financially unfeasible. Additionally, most unused urban land is owned by the government, including land within existing housing projects that are slated for redevelopment. This creates opportunities for developing vacant spaces in the city for affordable housing. However, the NHA does not necessarily have to invest directly but can involve private entities. However, due to concerns from

the private sector about partnering with the government, it is important to engage in negotiations to find common ground for development. These discussions can provide valuable input for the effective implementation of Public-Private Partnerships (PPPs). Foster collaboration between the public and private sectors to enhance the development of affordable housing. Establish partnerships that leverage the expertise and resources of both sectors to address the obstacles and gaps in affordable housing initiatives. This can involve joint ventures, incentive programs, and cooperative planning processes to ensure a holistic and sustainable approach to affordable housing development.

6.2.5. Defining Critical Criteria in Terms of Facilities within Affordable Housing Project

1) Chapter 2

Regarding facilities in foreign countries, they prioritize facilities that promote a good quality of life for residents. This includes green spaces and common recreational areas, which are tailored to the specific needs of each project. Inside the residential units, there are various types of rooms, including single-family rooms and shared rooms with common areas. In every room, there is a kitchen for cooking. In shared rooms, there are also living rooms, bathrooms, and communal dining areas, with separate private bedrooms.

In most countries, residential development is spread throughout different parts of the city. Within residential areas, there are necessary public facilities for daily living and to reduce commuting, such as markets, food centers, exercise areas, playgrounds, clinics for the elderly, preschools, and public transportation. In addition to considering the affordability of housing, these countries also prioritize the cost of living and convenience for daily life at every stage, aiming to provide a good quality of life.

2) Chapter 4

In Bangkok, the current development of affordable housing under the term "affordable housing" consists of two measures:

1. Projects supported by the Board of Investment (BOI) are granted a three-year corporate income tax exemption. These projects must be developed with a price not exceeding 1.2 million baht. Developers determine the price factor and design the product, with most private developers focusing on internal room functions and providing green and central common areas. Unnecessary facilities are removed to reduce annual common area expenses.

2. Projects utilizing Floor Area Ratio (FAR) bonuses. Currently, there is only one project that has applied for FAR bonuses, which is the redevelopment of Din Daeng District. The project involves converting an eight-story flat building into a high-rise condominium. The units within the building have bathrooms and shared rooms, along with common areas for activities among the residents, parking spaces, and designated green areas.

However, there are no specific requirements for the minimum facilities that developers must provide to residents. If the development is undertaken by the government at a lower price than the market, it may lack the attractive facilities that private developers offer. The advantages and disadvantages of government development lie in the lower price and lower annual common area expenses compared to private developers.

Private developers consider facilities as part of the market that helps buyers make decisions, in addition to price and location. However, an excessive increase in facilities and unnecessary common areas, such as swimming pools and fitness centers,

would increase the annual common area expenses, which residents need to consider as continuous expenses in the long run.

3) Chapter 5

The majority of respondents believe that only necessary facilities should be provided, such as kitchens, green spaces, and security systems. Some facilities are considered excessive, such as swimming pools and fitness centers since they would increase long-term expenses for residents. However, there is also a counterargument that facilities should not be reduced to just the functions within the living units, but should include recreational spaces within the project to foster interaction among the residents and create a community. Some facilities contribute to improving the overall quality of life without the need to travel into the city. In addition to considering the price of affordable housing, it is necessary to consider the quality of life and the cost of daily living, which must be balanced and within the means of the residents without becoming a long-term burden.

4) Gap and Obstacles

There is no central agency responsible for setting standards for minimum facilities, nor an overseeing organization for the overall development. Facilities are developed separately, and some can be shared, similar to cases in foreign countries where some facilities are shared, such as public spaces and playgrounds. However, local authorities still need to support and provide basic facilities that are essential for daily living, such as public spaces.

5) Policy recommendation

- a) **Establish Minimum Facility Standards:** It is recommended to establish clear and comprehensive minimum facility standards for affordable housing projects.

These standards should prioritize essential facilities that enhance the quality of life for residents, such as kitchens, green spaces, and security systems. By setting minimum facility requirements, the government can ensure that affordable housing projects provide necessary amenities while avoiding excessive and costly facilities.

- b) **Establishing Authority for Oversight and Coordination:** It is recommended to establish a central agency or organization tasked with the responsibility of setting standards, overseeing the development, and coordinating the provision of facilities in affordable housing projects. This central body would ensure that minimum facility standards are met, foster collaboration among government agencies, private developers, and local authorities, and provide guidance and support for the comprehensive development of affordable housing communities. Ideally, this agency should be at the state level, as state agencies possess the authority to amend laws and possess expertise in the housing sector. The National Housing Authority (NHA), being an organization specialized in housing, should establish a dedicated department for setting standards in affordable housing. These standards should clearly define the minimum requirements for essential amenities and facilities that must be provided in affordable housing projects. The standards should prioritize necessary conveniences that enhance residents' quality of life, such as kitchens, green spaces, and security systems. By implementing government-mandated requirements for essential amenities, the government can ensure that affordable housing projects meet the necessary conveniences while avoiding excessive luxury features that would result in high costs.
- c) **Encourage Shared Facilities:** These spaces can be developed by the government itself or through incentivizing private entities to undertake projects in their respective areas. Promote the concept of shared facilities within affordable

housing projects. This can include public spaces, playgrounds, and recreational areas that foster community interaction and create a sense of belonging among residents. By implementing shared facilities, it becomes more cost-effective to provide amenities that contribute to an improved quality of life without burdening individual households with high maintenance expenses.

- d) **Balancing Cost of housing, Daily expenses and Quality of Life:** Consideration should be given to both the quality of suitable housing and the balance of associated costs. Strike a balance between the affordability of housing and the cost of daily living. While it is important to provide affordable housing units, it is equally crucial to consider the overall quality of life for residents. This means providing necessary facilities that improve daily living standards without placing a long-term financial burden on residents. Balancing affordability with the provision of essential facilities contributes to a sustainable and livable affordable housing environment.

6.2.6 Defining Critical Criteria in Terms of Parking within Affordable Housing Project

1) Chapter 2

Most countries provide parking spaces in projects due to legal requirements, but some countries have managed parking spaces that are related to the control of the number of cars within the country. In countries where there is control over the number of private cars, even though there are parking spaces in affordable housing projects, those who want to reserve a parking space must pay a daily or monthly fee. As a result, most people need to rely more on public transportation systems to reduce costs, as public transportation is cheaper than using private cars. However, in order to implement these strategies, there must be a widespread and efficient public transportation system to replace private car usage.

2) Chapter 4

In the Bangkok Metropolitan Area, the parking space requirements for condominiums are determined based on the usage of the building area. For every 120 square meters of construction area, there must be one parking space, or for rooms with a floor area of 60 square meters or more, there must be one parking space per room. However, the parking space requirements for residential areas are only divided into two categories, and there is no specific requirement for affordable housing projects.

3) Chapter 5

The majority of respondents believe that parking spaces are still necessary within projects, with most suggesting that they should be around 30% of the number of residential units. Additionally, there are interesting viewpoints from academics regarding the consideration of parking space requirements according to the law. They suggest that exceptions should be made for affordable housing projects, taking into account the accessibility of public transport in the project's location and whether the income group primarily relies on private cars or public transportation. Such considerations can help reduce the number of parking spaces required in the project by utilizing the building space more effectively without increasing its height.

4) Gap and Obstacles

The parking space regulations currently focus on condominiums but do not provide detailed information on the types of condominiums or criteria that could help reduce the number of parking spaces. For instance, the accessibility of public transport, especially for affordable housing located in urban areas where land prices are high, should be considered. This is necessary to optimize the use of land while reducing parking space

requirements and potentially increasing the number of residential units without increasing the building's height.

5) Policy recommendation

- a) **To Develop and Review Comprehensive Parking Requirement in the local Regulations:** There should be a review and improvement of the current parking regulations, considering the type of usage alone. Therefore, there should be more detailed specifications in residential buildings, especially for affordable housing projects. The regulations should take into account various factors such as the project's location, access to public transportation systems, reliance on private cars, or the public transportation system of different income groups. Considering these factors, the required parking spaces can be reduced to increase land efficiency and potentially increase the number of residential units without increasing the height of the buildings.
- i. **I. Flexibility in parking space requirements:** To enhance the flexibility of parking space regulations, it is advisable to consider introducing flexibility in parking space requirements for affordable housing projects. This can be achieved by setting a reasonable percentage of parking spaces in relation to the number of residential units, such as the suggested 30%. Such an approach would allow for a balanced solution, accommodating the parking needs of residents while also promoting alternatives like public transportation and reducing excessive parking requirements.
 - ii. **Conducting Detailed Assessments:** Due to the intricate nature of the laws, the parking requirements for each project may vary. However, it is crucial to establish criteria for evaluating projects to ensure that the

parking spaces align with these criteria. It is recommended to conduct thorough assessments of affordable housing projects in order to determine specific parking space requirements based on various factors, including location, accessibility to public transportation, and the target income group. This approach will aid in tailoring parking space regulations to the specific needs and characteristics of affordable housing projects, optimizing land use, and minimizing unnecessary parking requirements.

- b) **To Encourage Public Transportation Infrastructure:** In addition to amending the provisions for reducing parking spaces, there must be convenient and comprehensive travel alternatives. This should be integrated with strategies that rely on public transportation systems to encourage people to use public transport more. Therefore, the key is to develop and improve a widespread and efficient mass transit system, including improving route coverage and the capacity to provide transportation options, particularly in areas with affordable housing projects. By providing convenient and accessible public transportation systems, residents will rely less on private cars, reducing the necessity for parking spaces.

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6.3. The Relationship between Appropriate Definition, Critical Criteria, and Supporting Measures

6.3.1. The stage of negotiation and stakeholders' engagement

The stage of negotiation and stakeholder engagement is crucial for driving policy implementation. It requires collaboration among key stakeholders, including the public sector, private sector, academic sector, and non-governmental organization sector. Currently, certain public sector organizations, such as the BMA and BOI, have incorporated the concept of affordable housing into their development initiatives.

However, debates and disagreements persist regarding its implementation. Therefore, to ensure the sustainable development of the Affordable Housing policy, it is necessary to establish a process that serves as the initial platform for negotiations and understanding the definition and critical criteria of affordable housing among the stakeholders involved in the policy development process in Bangkok.

Based on policy recommendations derived from key issues and variables in defining the concept and critical criteria of affordable housing, a diagram summarizing these elements can be created, as shown in Figure 8. The researchers have combined the definitions and critical criteria selected by stakeholders, along with considerations from Chapters 2 and 4, to explore the relationships and potential measures that could contribute to the development model of affordable housing.

6.3.2. Target Group

The target group can be categorized into two main groups: low-income households and middle-income households. This division is essential for establishing pricing and assistance mechanisms. Within the low-income group, particularly those in the 41-60 percentile range, they should be able to rent housing at a price that does not exceed 20% of their primary income. If the rental cost exceeds this limit, both the middle-income group and the low-income group should be able to either rent or purchase a house at a price that does not exceed 25% of their income.

6.3.3. Type and Size of Affordable Housing

Within each group, there are subdivisions of residential types based on household categories. The groups that all parties agree should be prioritized include the working-age group of 25-40 years old and the elderly group aged 60 years and above. These groups can be further divided into three types:

1. 1 Bedroom for Single/Couple Household (Aged 25-44): This category refers to small households and can consist of individuals or couples. They typically fall within the age range of 25-44 years old. The housing units for this group are small, typically comprising one bedroom, a bathroom, and a kitchen. The size of these units ranges from approximately 25-38 m². In terms of location, these projects should be situated in areas close to job opportunities in the city or in the vicinity of rail transit stations. The building types suitable for this category are often high-rise buildings, as land prices in urban areas are high. Alternatively, experts have suggested renovating existing old buildings into affordable rental homes. This not only increases the availability of rental housing but also contributes to the revitalization of the neighborhood.
2. 2 Bedroom for Newly Formed Family with More Than Three Members (Aged 25-40): This category refers to households that have recently formed and consist of more than three members. The age range for this group is 25-40 years old. The housing units are larger than the previous category, typically featuring two bedrooms, a bathroom, a living room, and a kitchen. The size of these units ranges from approximately 38-50 m². Similar to the previous category, the location of these projects should be between city areas near rail transit stations or in urban fringe areas near rail transit stations. The building types suitable for this category can be either high-rise or low-rise buildings, depending on land use regulations.
3. More than 2 bedroom Bedroom Family with Elderly Members: This category refers to households that have elderly members, and they often consist of multiple generations living together. Each unit within this category typically comprises three bedrooms, a bathroom, a living room, and a kitchen. The size of these units is larger, ranging from approximately 50-70 m². Similar to the previous two categories, the projects' location should be between city areas

near rail transit stations or in urban fringe areas near rail transit stations. The building types suitable for this category can also be either high-rise or low-rise buildings, depending on land use regulations.

6.3.4. Provider and Affordable Housing Authority

The housing providers are divided based on the tenure status, namely rental and ownership. From the interviews, it is evident that private developers are not interested in rental housing due to its longer and more complex process compared to ownership. Therefore, the responsibility of providing rental housing falls primarily on the public sector. In Bangkok, the relevant government agencies involved in housing development include BMA (Bangkok Metropolitan Administration), NHA (National Housing Authority), and CODI (Community Organizations Development Institute). Among them, NHA has the most expertise in housing development, making it a primary developer. However, since NHA is tasked with developing housing projects nationwide, there may be conflicts when focusing specifically on development in Bangkok. Therefore, the researchers propose the establishment of a specialized organization as a central agency for Affordable Housing development. This organization should have the flexibility to make independent budget decisions to facilitate coordination and collaboration with various stakeholders. Additionally, it should have the authority to amend regulations. The main roles of this organization would include:

Central organization for Affordable Housing oversight in Bangkok, especially BMA, is the most capable organization to undergo significant transformations. Currently, BMA's responsibility includes providing housing for government officials and homeless individuals. However, BMA has expressed its intention to expand its role in housing development. Therefore, this organization has the potential to take on a significant role in overseeing affordable housing development in Bangkok. Its main roles in this regard are as follows:

1) Acting as a central coordinating agency and providing a platform for stakeholders to collaborate and foster mutual understanding. This involves developing measures, policies, and regulations, as well as seeking support from the central government. It should be a separate entity from government departments to have the authority to establish laws and regulations and request support from the central government, such as funding or lower interest rates on loans compared to the private sector. However, it should also have decision-making autonomy and flexibility to communicate and collaborate with multiple parties, reducing bureaucratic systems.

2) Managing funds for affordable housing development through the Housing Fund. The fund's revenue comes from collaborative efforts in housing development with organizations such as the National Housing Authority (NHA), the Community Organizations Development Institute (CODI), and private sectors through various tools. For example, public land can be utilized by NHA and public landowners for affordable housing development. Collaboration with the private sector can be in the form of Public-Private Partnerships (PPPs), where joint development takes place on public land, or through urban planning regulations that mandate the provision of affordable housing in each area using inclusionary zoning tools. This zoning ensures that certain districts or land areas have a specified amount of affordable housing. If the requirements are not met, developers must pay land taxes as compensation, and this revenue can be used to fund affordable housing development. Alternatively, providing FAR (Floor Area Ratio) bonuses requires negotiations with the private sector to offer benefits that incentivize their participation.

In summary, the BMA's affordable housing fund generates revenue from three sources:

- Rental income and joint investments with the private sector in various forms of housing development.

- Compensation fees and land taxes collected from developers who fail to incorporate affordable housing within their projects.
- Providing housing loans within the system. The fund is used to support housing loans and housing grants for individuals who purchase or rent homes within the system.

3) Ensuring market balance in the availability of affordable housing. This involves using data on housing needs for different groups to create market equilibrium. It also includes controlling the quantity of affordable housing stock to meet demand and allocate it appropriately to target groups.

4) Overseeing standards and quality of affordable housing. This involves setting standards for room sizes, facilities, materials, safety, and livability.

However, it should be noted that these policy recommendations are based on the researcher's opinions supported by case studies from various countries, the current situation in Bangkok, and interviews. The aim is to initiate the development of Affordable Housing policies in Bangkok. This proposed direction is just one suggestion, and a platform for exchanging opinions among stakeholders would ensure the most effective development of policy. The writer hopes that this research will be of some use in improving housing conditions in Bangkok and contribute to the development of genuine affordable housing policies.

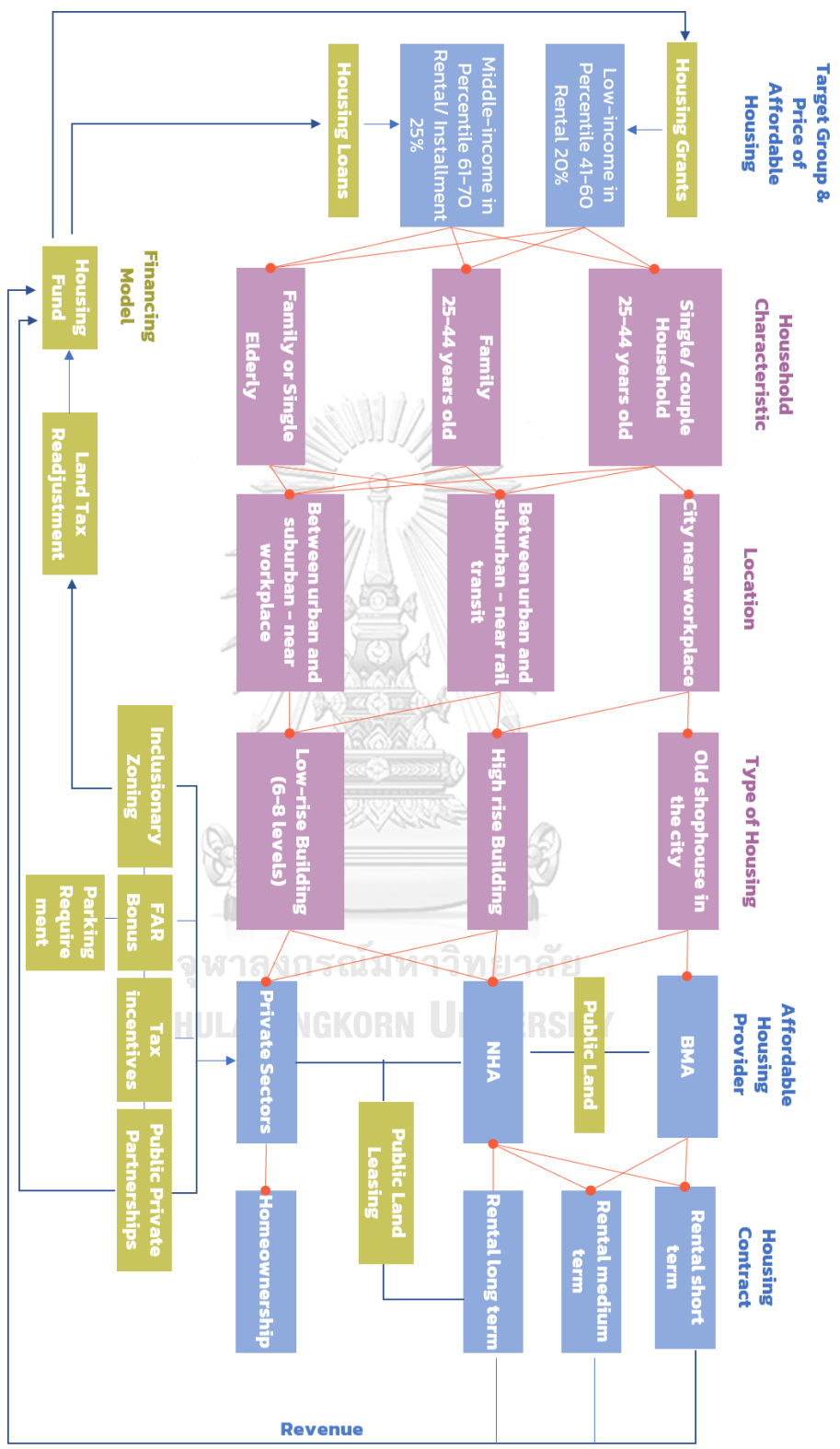


Figure 8: The relationship between definition, critical criteria and supporting measures base on stakeholders' response.

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