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Transit-oriented development and housing inequality: Testing the effectiveness of the Balanced Housing policy in Jakarta, Indonesia

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Being a dissertation submitted to the faculty of The Built Environment as part of the requirements for the award of MSc Housing and City Planning at University College London:

I declare that this dissertation is entirely my own work and that ideas, data, and images, as well as direct quotations, drawn from elsewhere are identified and referenced.

Acknowledge

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Content

List of figures

List of diagrams

List of tables

Abstract

Transit-oriented Development (TOD) has been widely practised in Hong Kong, London, and New York City, to improve urban lives by integrating land use and transportation planning (Murray and Weerappulige, 2021), and addressing urban-related issues, comprising poverty, transport emissions, disintegrated urban system, and lack of affordable housing (Boarnet et al., 2017). However, TOD poses potential risks of transit-induced gentrification and housing inequality (Ahlfeldt and Wendland, 2009). Several countries, including Thailand, India, Colombia, the US, and the UK, introduced inclusionary housing concepts to respond to the risks. In Indonesia, the Balanced Housing policy was created to form social harmony in TOD areas (Mungkasa, 2020). However, its effectiveness is yet to be studied (Farha, 2017; Maharani, 2015).

This study compares inclusionary housing policy in Jakarta and cities in developing and developed countries to identify the literature gaps. This research collects primary and secondary data through grey and academic literature reviews, semi-structured interviews, and electronic surveys. The analysis of housing inequality and the Balanced Housing policy's effectiveness is based on house price mappings around the selected TOD areas in Jakarta, the electronic survey's findings from the impacted communities, and the perspectives of experts, planners, academics, private developers, and non-profit organisations on the policy's enforcement in Jakarta.

The research finds that despite contributing to housing production, the Balanced Housing policy is still ineffective in fostering inclusive neighbourhoods and creating affordable housing to address housing inequality in Jakarta TOD areas. The research findings and lessons learned from other countries become the basis to provide policy suggestions for Indonesia's government to improve the Balanced Housing and conversion fund policy, including the need for creating a more efficient planning process and enforcement. This research also recommends future studies to provide more dialogues between academia and practitioners on the Balanced Housing policy's effectiveness in Jakarta TOD areas.

1. Introduction

1.1 Research context

Transit-oriented Development (TOD) is a concept that aspires to enhance mobility, increase life's quality, alleviate urban poverty, boost affordable housing production, and foster urban integration (Boarnet et al., 2017; Derakhti and Baeten, 2020). It is also the solution to myriad social issues by creating mixed-use and mixed-income communities around transit (Calthorpe, 1993; Clagett, 2014). Since the beginning, TOD has been gaining attention in big cities, including Tokyo, Hong Kong, London, and New York City, as means to reduce car dependency and promote more sustainable urban growth (Atmadja and Bogunovich, 2019). In Jakarta, the local government utilises TOD to increase housing density around transit zones to reduce housing shortages (Endangsih et al., 2021).

However, TOD may threaten low-income people with displacement (Rayle, 2015). TOD inflates the land and property values (Ahlfeldt and Wendland, 2009; Duncan, 2011; Gibbons and Machin, 2005), creating a mismatch between house prices and people's financial ability (Pollack et al., 2010). Furthermore, rising house prices in TOD districts potentially lead to transit-induced gentrification (Dawkins and Moeckel, 2016), which displaces current residents to less-desirable locations (Stein, 2019) for more reasonably priced settlements (Dawkins, 2016; Dong, 2017; Renne, 2008).

The housing disparity between social classes formed by the profit-oriented private developers within the TOD areas (Sumandoyo, 2017) prompted the Government of Indonesia to enact the Balanced Housing policy to capture incremental land value for the public benefit (Canelas, 2018). The initiative was first launched in the 1990s and intended to solve the housing inequality in the TOD areas and Indonesia's affordable housing crisis.

During its 30 years of operation, the policy has been modified several times to accommodate the private sector's concerns. Albeit the adjustments, Farha (2017), in the Housing, Humanity, and Human Rights report, cites that the Balanced Housing policy in Jakarta remains ineffective due to a lack of adequate monitoring in its enforcement

(Maharani, 2015). Hence, this research will examine the Balanced Housing policy's effectiveness in accomplishing the government's purpose to create inclusive neighbourhoods and promote affordable housing development in TOD areas in Jakarta.

1.2 Problem statement

Immergluck (2009) highlights the phenomenon of increasing property prices in anticipation of announcing a business action or a project. According to Nazwar (2021), property prices rise within 1,500 metres of the current and new TOD areas (Li and Chau, 2016). The rumour of new TODs also contributes to the price increments (Aulya and Winarso, 2019). The inability to keep up with the rising rents and properties values leads to the housing unaffordability issue, displacing economically vulnerable people from TOD areas (Atkinson, 2000a; Goetz et al., 2010; Grube-Cavers and Patterson, 2014) and exacerbating social and housing inequality (Fernandez et al., 2016; Edwards, 2002; Tunas and Peresthu, 2010; Rolnik, 2013).

Studies acknowledge that gentrification and housing inequality are TODs' byproducts that affect cities worldwide (Immergluck, 2009; Manzo et al., 2008; Rayle, 2015; Revington, 2015). To promote housing equity for all socioeconomic classes, several countries, including Thailand, India, Colombia, the US, and the UK, incorporate inclusionary housing policies, such as Windfall Gain Tax and mandatory affordable housing percentage (De Kam et al., 2014). Similarly, through Law of Republic Indonesia Number 1/2011 about Residential and Settlement Area, Indonesia's government introduced a new Balanced Housing ratio to maintain harmony between social classes (Mungkasa, 2020) and provide equal housing opportunities for low-income people in TOD districts (Benson, 2010).

The ordinance requires developers to build houses with a 1:2:3 ratio. Developers must build two middle-income and three low-income homes for every commercial home created. 1.5 low-income dwellings must be built for every middle-income home constructed. In response to the private sector's concerns over the inability to build affordable units in the main development sites, Indonesia's government, through Government Regulation Number 12/2021 about Residential and Settlement Area, allows developers to convert the obligation

of building low-income housing into funds that the government will manage to build affordable units in other locations. Nonetheless, the policy's efficacy is still yet to be studied.

Several studies underlined the detrimental implications of TOD (Chapple et al., 2017; Immergluck and Balan, 2018; Rayle, 2015) and supported inclusionary housing policies (Calavita et al., 1997; De Kam et al., 2014; Kontokosta, 2015), including Indonesia's Balanced Housing policy (Maharani, 2015; Mungkasa, 2020; Widoyoko, 2007), as the solution to the issues. However, Padeiro et al. (2019) argue that little is known about TOD's equity- and gentrification-related results due to the lack of empirical research on housing equity issues. Furthermore, no literature has examined the Balanced Housing policy's efficacy in Jakarta TOD regions. This research seeks to fill the gap by investigating housing equality and the Balanced Housing policy's effectiveness in Jakarta TOD areas.

1.3 Research aim and objectives

1.3.1 Research aim

As highlighted in the research context, Indonesia's government has attempted to respond to housing inequality and the affordable housing crisis in Jakarta TOD areas by applying the Balanced Housing policy to oblige private sectors to include affordable housing for low-income people in the proposed developments. This research aims to evaluate the Balanced Housing policy's effectiveness in the TOD areas in solving housing inequality and creating affordable housing for low-income communities in Jakarta.

1.3.2 Research question

How effective is the Balanced Housing policy in the TOD areas in addressing housing inequality and supporting the affordable housing provision in Jakarta?

1.3.3 Research objectives

Four objectives are addressed in this research to support the research question and achieve the main research aim.

1. Identify the extent of housing affordability and equality in Jakarta TOD areas based on the house price mappings and electronic surveys.
2. Investigate the challenges and barriers to developing affordable housing in Jakarta TOD areas.
3. Understand different opinions of different categories of people (experts, planners, academics, private developers, and non-profit organisations) through semi-structured online interviews regarding the issues surrounding the Balanced Housing policy's application and its impact on low-income communities.
4. Generate planning policy recommendations for Indonesia's government in terms of the Balanced Housing policy enforcement based on the key research findings.

The analysis in this research will be conducted by considering mainly some districts of DKI Jakarta.

1.4 Structure overview

This research is composed of six chapters. The first chapter introduces the research context, problem statement, research question, and objectives. The second chapter reviews all the relevant literature and case studies from other cities in developing and developed countries as the foundation for the analysis and conclusion parts of the research. The third chapter highlights the case study selection, data collection methods implemented in the research, analysis, and ethical considerations. The fourth chapter outlines the case study background and analyses the data obtained from the previous chapter by using the theories from the literature review and comparable case studies to develop the research findings. The last chapter concludes the findings from the analysis chapter and answers the research question, proposes policy recommendations based on the analysis and the case studies comparisons from Chapter Two, highlights the research limitations, and provides avenues for further research.

2 Literature review

This chapter aims to provide the reader with a brief overview of the key literature of this research. The chapter begins by defining the TOD concept, its benefits, and its risks, including gentrification and housing inequality. Consequently, the chapter covers the inclusionary housing policy as the solution to the risks and compares the practices in developing and developed countries to identify critical points that make the policy succeeds. Lastly, the chapter summarises the take-home points to emphasise the research context and highlight the current research gaps.

2.1 Transit-oriented development (TOD)

The TOD concept has been long established (Jamme et al., 2019) and referred to as a pedestrian-friendly neighbourhood development (Cervero and Gorham, 1995; Kamruzzaman et al., 2014; Loo, 2009; Renne and Ewing, 2013; Pollack et al. 2014), with high-density and land use diversity (Curtis et al., 2016; Khasnabis et al., 2010; Lastrape and Lewis, 2010; Marx et al., 2006; Nasri and Zhang, 2014; Parker, 2002; Porter, 1997; Vale, 2015), within the radius of 2,000-foot or 10-minute walk from a transit node (Calthorpe, 1993).

Figure 1. TOD concept
Source: Calthorpe (1993)

Zaręba et al. (2019) imply that TOD offers numerous advantages and can produce a more livable, equitable, and sustainable city (Salat and Ollivier, 2017).

2.2 Benefits of TOD

Studies indicated that TOD might reduce automobile dependency by increasing transit ridership, decreasing greenhouse gas (GHG) emissions, improving urban quality of life (Hess and Lombardi, 2004; Laaly et al., 2017; Shelton and Lo, 2003), and making houses more affordable by reducing transportation expenses (Cervero, 2004; DeMaio, 2009). Murray and Weerappulige (2021) suggest that the integration of land use and transportation planning in the form of TOD, as seen in Singapore, Japan, the UK, and the US, plays a significant role in reducing transport emissions and achieving carbon neutrality by changing how people commute.

Furthermore, transportation cost savings make TOD an attractive living district for middle-class families who prefer to live in a compact and mixed-use environment (Dong, 2017). TOD also delivers a positive economic impact in the region (Jamme et al., 2019; Renne and Wells, 2005) by attracting investors and companies to generate more job opportunities (Belzer et al., 2011; Nelson et al., 2015), leading to higher residential demand in the area (Ibraeva et al., 2020).

2.3 Risk of TOD

2.3.1 Gentrification

Interestingly, rising demand in TOD zones raises property values (Cervero and Duncan, 2002), making currently affordable units unaffordable in the future (Alonso, 1964; Muth, 1969; Immergluck, 2009). This phenomenon can lead to neighbourhood gentrification (Zuk et al., 2015), which Redfern (2003) defines as a form of class constitution produced by changes in economic basis that modify social structure. Furthermore, Bardaka et al. (2018) perceive gentrification as the influx of middle- and upper-class residents within the central city districts, leading to the housing stock deterioration in certain neighbourhoods (Zuk et

al., 2015). Some researchers identify gentrification in TOD areas as the cause of displacement, segregation, polarisation, and the loss of affordable housing (Atkinson and Bridge, 2004; Lees, 2008).

Many studies suggest that skyrocketing house prices near transit poses the risk of transit-induced gentrification (Kahn, 2007; Lin, 2002; McIntosh et al., 2014; Saunders and Smith, 2014), where higher socioeconomic status (SES) neighbourhoods move into the lower SES neighbourhoods (Glass, 1964) due to higher accessibility provided by the TOD. This, in turn, displaces the financially vulnerable communities, who have high dependencies on public transportation yet cannot compete in the housing market, to unfavourable locations (Lim et al., 2013; Yupho, 2014).

2.3.2 Housing inequality

According to the above theories, TODs, which were envisioned to improve living quality and create inclusive cities (Derakhti and Baeten, 2020), generated socially segregated areas by abandoning low-income societies from the housing market (Sassen, 2014). Transit-induced gentrification deteriorates interactions across social strata (Jacobs, 1992; Putnam, 2001; Wellman and Leighton, 1979) and affects the neighbourhood's social composition (Moore, 2018). Gentrification also leads to neighbourhood homogeneity (He et al., 2021; Lees, 2004; Slater, 2006), creating elite enclaves (Kohn, 2013) and leaving little to no opportunities for lower SES populations to live in the area (Monkkonen and Zhang, 2014). The housing unaffordability, lack of mixed-income (Clagett, 2014) and tenure diversity (Atmadja and Bogunovich, 2019), and the limited access for low-income communities to reside in the transit areas result in housing inequality (Dorling, 2014; Grander, 2021).

Brooks et al. (2011) argue that people with higher purchasing power will have more alternatives to housing locations, including the desirable TOD spots, than those with lower purchasing power (Dorling, 2014). Moreover, the hyper-consumption and investment pressure from higher SES populations (Ryan-Collins et al., 2017) impede the lower SES populations from entering the housing ladder (Ronald, 2008; Utomo, 2019; McKee, 2012).

This phenomenon widens the gap between the winners and losers in society (Acemoglu and Robinson, 2013; Hasoloan, 2018; Tunas and Peresthu, 2010).

Due to financial constraints, low-income communities must sacrifice house quality, health, and privacy by living in crowded homes, relocating to less desirable locations, or becoming homeless (Adjei & Kyei, 2013; Feijten & Mulder, 2005; Turner, 1976; Boarnet et al., 2017; Quigley & Raphael, 2004). As evidenced in big cities, especially in developing countries, the inability to pay for additional transport costs and proper dwellings around transit forces low-income groups to reside in the leftover spaces in the city (Turner, 1976), creating urban slums and squatter settlements (Rondinelli, 1990). The housing inequality caused by the lack of socioeconomic diversity also hinders low-income people from having a better quality of life (Appleyard et al., 2014; 2019).

2.4 Inclusionary housing policy

Land value capture and inclusive planning regulations were introduced to enforce the private sectors to include affordable housing in the development (Calavita and Mallach, 2010b) to circumvent gentrification (Suzuki et al., 2015) and housing inequality (Litman, 2003; Pucher and Renne, 2003). Shastry (2010) agrees that TODs should be mixed-use while housing low-income communities. However, Batley (1996) contends that affordable units provided through private involvement remain insignificant, particularly in developing countries, due to the lack of thorough performance assessment (World Bank, 1994). Hall (2015) argues that private sector engagement is prone to bribery and corruption without transparency and robust monitoring. He also suggests that land value capture inflates other house prices to compensate for affordable housing. Calavita and Mallach (2010c) explain that inclusionary housing practices vary between places, thus affecting its performance.

2.4.1 Inclusionary housing policy in TOD areas in developing countries

Gentrification is a global phenomenon that affects some big cities, including Bangkok, Thailand (Margono et al., 2020; Nakamura et al., 2016). As experienced in Bangkok, luxurious condominiums, department stores, and schools dominate the transit areas

(Pongprasert, 2019). The Thai government adopted the Windfall Gains Tax in 2018 to fund new transit infrastructure and affordable housing by charging property owners 5% of the inflated price for every transfer of ownership (Abiad et al., 2019). Nevertheless, the government's lack of action plans and official contracts has become one of the main issues in guaranteeing long-term housing affordability for low-income inhabitants in TOD areas (Margono et al., 2020).

Delhi, India, takes a different approach that mandates developers to provide a minimum of 30% affordable units of the proposed development, with proportions of 50% for 32-40 sqm and 50% for 62 sqm (Singh, 2016). However, experts argue that the fixed percentage and the strict proportion of unit size weaken developers' participation (Jain and Singh, 2019; Singh, 2016). On the flip side, the government allows the floor area ratio (FAR) of 4 without any height restrictions to incentivise the developers to comply with the regulation (Singh, 2016).

Bogota, Colombia, practices land banking near future transit areas for affordable housing development (Cervero, 2005) and adopts an inclusionary housing policy that obliges developers to provide at least 20% affordable housing (Santoro, 2019). The percentage of affordable housing is subject to viability assessments, with more expensive regions having a lower portion of the low-income housing (Santoro, 2015). Developers may supply affordable units in less expensive areas to make the project financially viable (Mallach, 2010). This flexibility reflects the inclination to trade-off between housing inclusion and housing production in Bogota (Yuniati, 2013).

2.4.2 Inclusionary housing policy in TOD areas in developed countries

Numerous developed countries, like the US and the UK, have successfully integrated transit-oriented affordable housing (TOAH) by incorporating TOD policies and appealing incentives to encourage private sector engagement. With a required percentage of 12.5 to 15% affordable units, Montgomery County in Maryland, USA, serves as an example of a successful case (Benson, 2010). Additionally, the houses must be affordable for 30 years for homeownership units and 99 years for rental units. Knowing that affordable housing sales

would generate fewer profits, the Maryland Department of Planning offered a density bonus of up to 22% to private developers (Dawkins and Moeckel, 2016).

Boulder city in Colorado, USA, implemented a more lenient inclusionary housing policy, making affordable housing provision in TOD areas a voluntary rather than an obligation. However, the policy has been ineffective since its first implementation in 1980. Due to the failure of the loosely structured regulation, the government required private sectors to provide 20% affordable housing with a 99-year affordability period (Benson, 2010), aiming to ensure home affordability in TOD areas as the market evolves (Collinson, 2011).

In contrast to the US, London, UK, applies a case-by-case affordable housing requirement based on the site's constraints and potential (Ward et al., 2016). In the case of the Northern Line Extension (NLE), the council of Lambeth requires 40% of the housing surrounding the proposed station to be affordable, while the council of Wandsworth mandates one-third or at least 15% (Findeisen, 2020). If an onsite provision is not feasible, developers can build affordable units offsite or pay in lieu. The discretionary approach on each TOD site encourages greater private developers' engagement in supplying affordable dwellings (Papa, 2017).

2.4.3 Comparative studies of cities in developing and developed countries

Table 1. Comparison summary between cities in developing and developed countries
Source: Author's summary

No.	Author	Case Study	Policy	Key Findings
1	Basyir and Isnaeni, 2018; Mungkasa, 2020; Poerbo, 2020	Jakarta, Indonesia	- Balanced housing scheme with the ratio of 1:2:3 - Developers may convert the affordable homes obligation into funds paid to the government to build affordable units elsewhere	- No monitoring body or organisation - Private sectors monopolise housing supply and pricing in the housing market - The conversion fund's effectiveness is still unknown
2	Abiad et al., 2019; Margono et al., 2016; Pongprasert, 2019	Bangkok, Thailand	- Windfall gain tax with a cap at 5% of the inflated value for every transfer of ownership is made	- Lack of a government action plan and contract to provide affordable housing in TODs

3	Chava et al., 2018; Jain and Singh, 2019; Singh, 2016	Delhi, India	- 30% fixed percentage for affordable housing - FAR of 4 without height limitations	- The non-negotiable percentage discourages developers to participate
4	Cervero, 2005; Santoro, 2015; Santoro, 2019; Yuniati, 2013	Bogota, Colombia	- Mandatory 20% affordable housing, subject to viability assessments - The government reserves land around future transit routes before the value rises for affordable housing development - Developers can build affordable units offsite in less expensive areas	- Illustrate the tendency to trade-off between housing inclusivity with housing production, aiming to solve the housing crisis
5	Benson, 2010; Dawkins and Moeckel, 2016	Montgomery, USA	- 12.5-15% affordable units in exchange for up to a 22% density bonus - Houses to be affordable for 30 years for homeownership units and 99 years for rental units	- The programme successfully boosted the affordable housing provision in TODs since 1974
6	Benson, 2010	Boulder, USA	- 20% affordable housing for new development with a tax waiver incentive - Developers can build affordable housing offsite or pay in lieu - Houses to be affordable for 99 years	- The inclusionary housing policy became ineffective when it was voluntary rather than obligatory, resulting in a regulatory amendment requiring 20% affordable housing in the project
7	Findeisen, 2020; Papa, 2017; Ward et al., 2016; Lambeth Core Strategy, 2011; Wandsworth Core Strategy, 2012	London, UK	- 15-40% affordable housing, subject to viability assessments of the site's specific costs - Developers can build affordable units offsite or pay in lieu	- The non-fixed affordable housing provision percentage becomes the GLA's strategy to encourage better developer engagement

The summary table illustrates how cities in developing and developed countries adopt different inclusionary housing policies with varying incentives and highlights the key findings from each city.

Nevertheless, the literature used to create the comparative metric has limitations. Research on Jakarta and Bangkok assert high land and housing prices without providing the pricing distribution around transit and view from the impacted communities to support the TOD's housing inequality argument. Studies on Delhi and Bogota lack the developers' perspectives on the existing inclusionary housing policy and the challenges in developing

affordable housing onsite. Similarly, research on Montgomery, Boulder, and London do not provide developers' views on the discretionary affordable housing requirement, making the research finding one-sided. This research aims to address the limitations of these studies.

2.5 Chapter summary

TOD was created to produce a more livable, equitable, and sustainable city by reducing car dependencies, decreasing GHG emissions, improving urban life quality, lowering transport costs, and increasing the region's economy. TOD also poses gentrification and housing inequality risks to low-income communities. Transit-induced gentrification causes displacement, segregation, polarisation, and the loss of affordable housing. It eliminates financially vulnerable communities from the housing market, broadening the gap between society's winners and losers and forming socially segregated neighbourhoods and housing disparity around transit. This creates urban slums and impedes low-SES populations from having better life quality.

Some countries, including Indonesia, Thailand, India, Colombia, the US, and the UK, establish inclusionary housing regulations, such as the Windfall Gain Tax, Section-106, and the Balanced Housing policy, to provide equal living opportunities for all socioeconomic classes in transit areas. The comparative study indicates that inclusionary housing policy works well when it is mandatory, flexible in percentage, supplemented with attractive incentives, well-monitored, and has a clear affordability period. However, few studies discuss housing equality and the Balanced Housing policy's performance in Jakarta TOD districts. This research intends to fill the gap by assessing the Balanced Housing policy's efficacy in solving housing inequality and creating affordable homes for low-income people in Jakarta TOD areas.

3 Research methodology

This section outlines the methods used in accomplishing the research objectives:

1. Identify the extent of housing affordability and equality in Jakarta TOD areas based on the house price mappings and electronic surveys.
2. Investigate the challenges and barriers to developing affordable housing in TOD areas in Jakarta.
3. Understand different opinions of different categories of people (experts, planners, academics, private developers, and non-profit organisations) through semi-structured online interviews regarding the issues surrounding the Balanced Housing policy's application and its impact on low-income communities.
4. Generate planning policy recommendations for the Government of Indonesia in terms of the Balanced Housing policy enforcement based on the key research findings.

The chapter comprises five sub-chapters: case study selection, data collection methods, analysis, research methodology diagram flow, and research ethics. The data collection sub-chapter is broken down into grey literature, semi-structured interviews, and electronic surveys.

3.1 Research methodology diagram flow

The research methodology can be summarised in the diagram below.

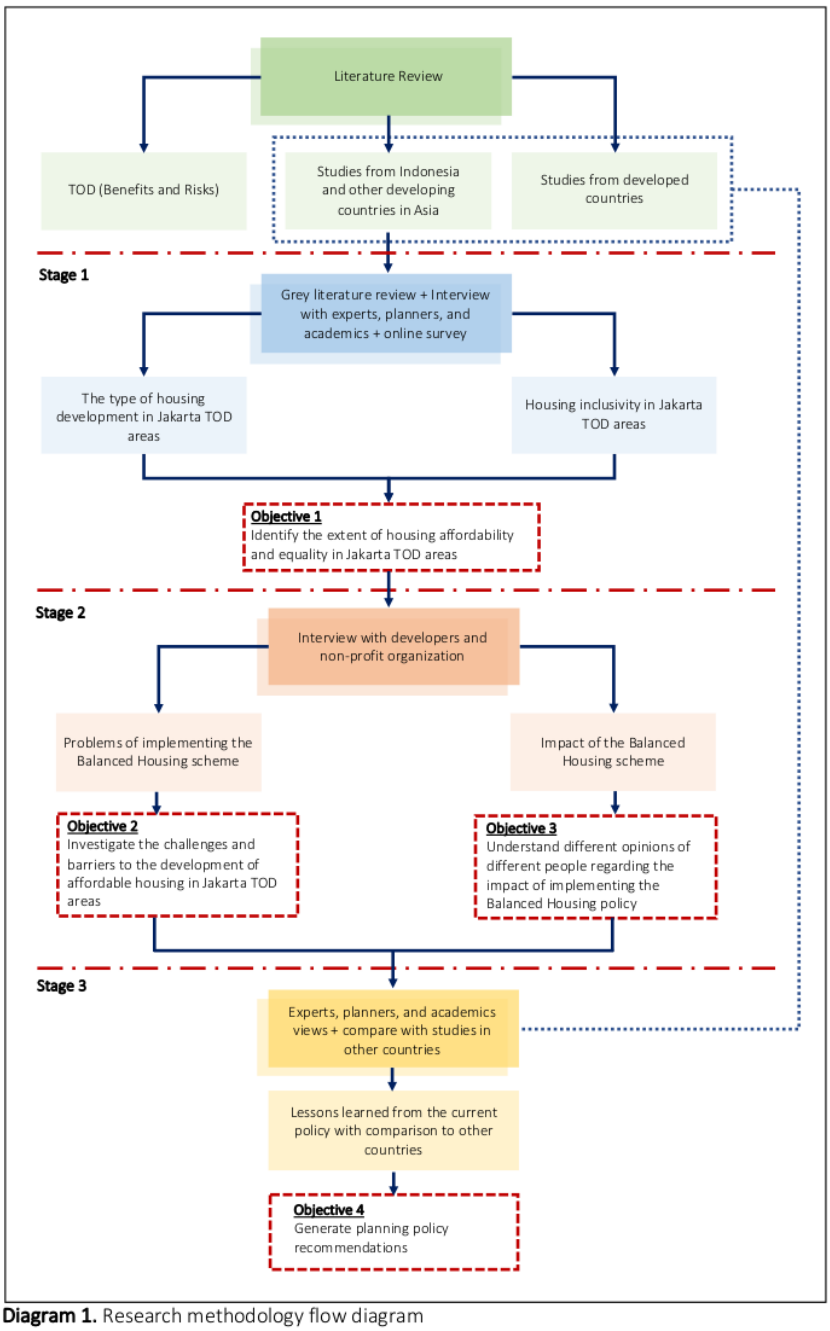


Diagram 1. Research methodology flow diagram
Source: Author's summary

The research began with a literature assessment on TOD, its benefits and risks, and inclusionary housing policies from developing and developed countries. The literature review became the foundation for the analytical chapter. Subsequently, the author collected secondary data through grey literature reviews and primary data through semi-structured interviews with experts, planners, and academics, and electronic surveys to understand affordable housing production, housing disparity, the Balanced Housing policy, and its implementation in TOD areas.

The second-stage analysis was based on the first-stage results. This stage analysed housing inequality in TOD areas by comparing house price mapping and the electronic survey result. The author then employed the information obtained through the semi-structured interview to assess the barriers and consequences of integrating low-income houses in TODs. The author compared the Balanced Housing policy loophole and the conversion fund regulation's influence on affordable units in TOD areas to studies from other countries in the literature review.

The study result was used to conclude the Balanced Housing policy's effectiveness in reducing housing inequality and supporting affordable housing production in Jakarta TOD districts. From this research findings, policy proposals were developed to improve the Balanced Housing policy and encourage greater private sector participation in affordable housing provision in Jakarta TOD districts.

3.2 Case study selection

To compare average income and housing around transit and assess the Balanced housing policy's performance in addressing housing inequality, the selected cases must consist of a substantial proportion of residential, including private developer-built homes. The case studies also become the basis for recruiting private developers for the semi-structured interviews. Based on these considerations, TOD Bundaran HI, Dukuh Atas, Setiabudi, and Bendungan Hilir in Central and South Jakarta were chosen as case studies.

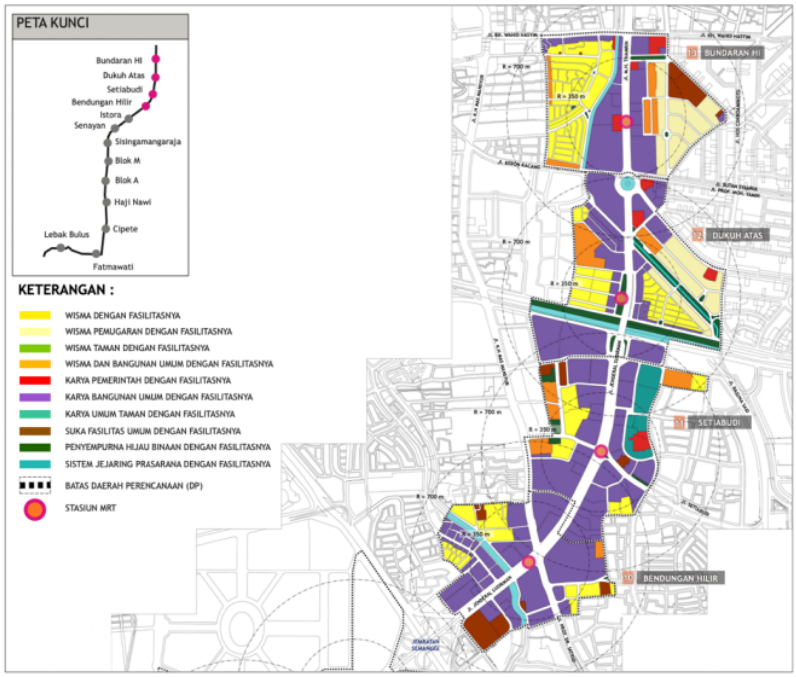


Figure 2. Case studies function mapping
Source: Dinas Tata Ruang DKI Jakarta (DKI Jakarta's Spatial Planning Department)

The illustration above shows that the chosen TOD areas are dominated by commercial and office functions (purple) with some middle- and high-density residential functions (yellow) behind them. All cases are equipped with MRT and BRT (TransJakarta), except for Dukuh Atas, which has additional modes of KRL (commuter line) and LRT. The developer of Jakarta's TOD projects, PT. MRT Jakarta, in one of the eight principles, strives to create social justice for all socioeconomic classes to work and live in TOD areas.

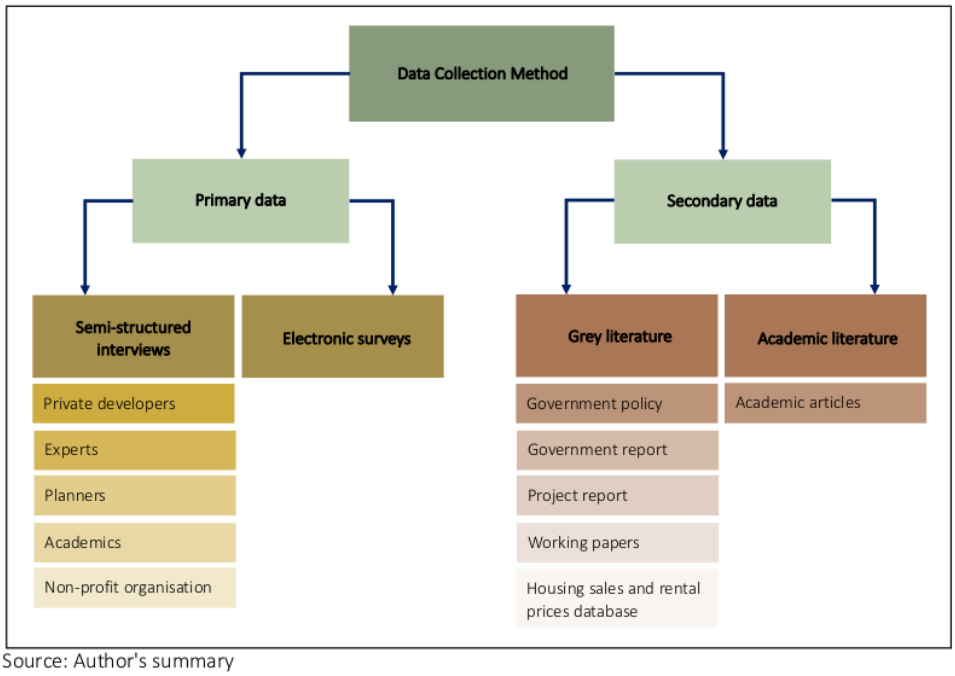
> *"Social justice (enabling new communities to survive and succeed in the long term by opening up employment and housing opportunities for all socioeconomic groups, maintaining existing communities and social networks in development areas, and providing social infrastructure to support identity and a more robust sense of community)." (PT. MRT Jakarta)*

Hence, analysing the selected cases will help achieve the research objective of identifying the extent of housing inclusivity and the Balanced Housing policy's effectiveness in forcing

private developers to create inclusive neighbourhoods through affordable housing provision around Jakarta TOD areas.

3.3 Data collection methods

This research used primary data from semi-structured interviews and electronic surveys and secondary data from grey literature. These data would be used to perform the analysis to answer each key objective.



Source: Author's summary

Diagram 2. Data collection methods

3.3.1 Grey literature

In the first data collection stage, the author undertook a comprehensive review of grey literature on the Balanced Housing policy document, government reports, project reports, and working papers. The grey literature was chosen based on its relevance to the existing Balanced Housing policy and the conversion fund ordinance implementation in Jakarta TOD regions. The grey literature review helped the author comprehend the issue of affordable

housing provision and how the Balanced Housing policy had contributed to creating affordable housing and resolving housing inequality in Jakarta TOD areas.

Subsequently, the author collected secondary data on the government's low-income housing price cap in Jakarta and private housing sales and rental prices in TOD areas using an internet search. The sales and rental prices were collected based on the number of bedrooms and unit sizes. The data collected from this stage would be used to create the house price mapping and analyse the extent of housing equality around the chosen TOD areas.

3.3.2 Academic literature

In addition to grey literature reviews, the author also gathered secondary data from academic articles. The literature was chosen based on the topic of the land price dynamics around Jakarta TOD areas, the government's intervention in the housing market, and the Balanced Housing policy's implementation in Jakarta TOD areas. This literature would be the empirical approach to understanding the extent of housing inequality and the Balanced Housing policy's effectiveness in Jakarta TOD areas.

3.3.3 Semi-structured interviews

Due to its advantages, the author chose semi-structured interviews as the primary data collection method in addition to the grey literature review. Unlike unstructured interviews, this approach allowed the interviewer to compare responses from participants on the same set of questions to create a more in-depth analysis (Schaeffer, 1991). It also developed the discussion based on the interviewee's responses, making it more interactive and engaging than the structured interviews while helping the interviewer extract clearer ideas from the interviewees (Rubin and Rubin, 2011). To obtain a thorough understanding of the Balanced Housing policy in general, its application and effectiveness in Jakarta TOD areas, and to reduce potential bias in collecting information (Siedman, 2006), a set of interviewees representing different organisations, including experts, planners, academics, private developers, and non-profit organisations, participated in semi-structured interviews.

The interviewees (experts, planners, academics, and non-profit organisations) were selected based on their knowledge and experience researching TOD in Jakarta. Private developers were chosen based on their mixed-use or residential projects around TOD areas in Jakarta. Snowball sampling was used to assist the author in locating more possible interviewees (Bryman, 2012). This research involved three experts, two government planners, three academics, two non-profit organisations, and three private developers, with a minimum of three years in the sector. All interviews lasted 60 to 120 minutes.

The interview questions were based on the findings from the grey literature review and the participant's role in the development. Experts, planners, academics, and non-profit organisations would be asked about TOD's influence on housing disparity, the performance of the Balanced Housing policy, and its impact on low-income people. For private developers, the questioning would focus on their difficulties in complying with the Balanced Housing policy and its implications for their developments. The questionnaires used for the semi-structured interviews can be found in the appendix of the dissertation.

3.3.4 Electronic surveys

In addition to grey literature reviews and semi-structured interviews, the author circulated a web-based questionnaire via Google Forms to obtain a larger sample while providing flexibility to the respondents (Evans and Mathur, 2005). The questionnaire included respondents' basic information, housing preference, public transport amenities, transportation preference, and view on the Balanced Housing policy. The questionnaire consisted of 26 questions, including 22 fixed-response questions and 4 ranked questions. The multiple-choice questions were supplemented with open-ended questions, allowing respondents to elaborate and specify their answers.

Table 2. Summary of questionnaire respondents
Source: Author's summary

Respondent Group	Number of Respondents
West Jakarta	30
East Jakarta	12
Central Jakarta	10

North Jakarta	11
South Jakarta	30
Other	7
Total	**100**

The questionnaire gathered responses from 100 participants representing the affected communities. The purpose was to extract a different perspective on the Balanced Housing policy and how inclusive the housing development is in Jakarta TOD areas. The responses were examined statistically to determine the home preference and affordability by income. This data was then retrieved to assess the existing condition of neighbourhood inclusivity in Jakarta TOD areas. The questionnaires used for the survey can be found in the appendix of the dissertation.

3.4 Analysis

This research used a qualitative approach to analyse the information obtained through grey literature, semi-structured interviews, and electronic surveys. In the first stage, the author analyses the minimum unit price of residential developments near the selected TOD zones with the government's low-income housing price cap. All prices are written in Indonesian Rupiah (IDR) and US Dollar (USD), with a conversion rate of 1 USD = IDR 14,487. The author then compared the initial analysis to the electronic survey result to evaluate housing equality in Jakarta TOD areas. Accordingly, the author employed semi-structured interviews with experts, planners, academics, and non-profit organisations to examine the Balanced Housing policy's effectiveness in tackling housing inequality in Jakarta TOD areas.

To analyse the challenges, barriers, and implications of supplying low-income houses in transit regions, the author compared the private developers' perspectives to the experts, planners, academics, and non-profit organisations. The author then investigated the Balanced Housing policy loophole and its impact on TOD affordable unit production. The author assessed the newly issued regulation, Government Regulation Number 12/2021, about Residential and Settlement Area, concerning the conversion fund as a complement

to the Balanced Housing policy by referring to the existing literature and practice in other countries.

Lastly, the author compared the practice of infusing affordable housing into Jakarta TOD areas through the Balanced Housing policy with other developing and developed countries with similar land value capture policies to identify the lessons learned and critical planning regulations that make other countries' cases successful. Following the comparative study and semi-structured interviews with multiple interest groups, the author recommended some policy and planning responses regarding the Balanced Housing policy enforcement to address the issues of housing inequality and affordable housing production in TOD areas.

3.5 Research ethics

This research interacted with participants through semi-structured online interviews. Privacy, confidentiality, and informed consent were ethical considerations (Allmark et al., 2009). To mitigate the ethical risks, the research goals and objectives were socialised, and a detailed information sheet was distributed via email to all participants as a consent letter before participating in the study and interviews. Before collecting data, participants had to give consent or feedback. The research did not disclose any personal information to safeguard participants' privacy. In addition, the author had also completed the risk assessment form as attached in the appendix.

4 Case study and analysis

This chapter presents the collected data and analysis from the case study. The first part discusses the Balanced Housing policy's background, incentives and disincentives, and the conversion fund. Then, it introduces Jakarta's housing prices around transit and people's living preferences. Subsequently, it explains the Balanced Housing policy's implementation in Jakarta TOD areas according to experts, planners, academics, non-profit organisations, and private developers. The second part examines the Balanced Housing policy's effectiveness in addressing housing inequality in Jakarta TOD areas. Furthermore, it touches on the Balanced Housing policy's loophole and implications for TOD affordable housing production. Finally, it analyses the conversion fund regulation and its impact on the Balanced Housing policy.

4.1 Balanced housing policy

The Balanced Housing policy was firstly introduced in 1992 under a joint decree of the Minister of Intern Affairs, Minister of Public Works, and Minister of Housing (Surat Keputusan Bersama 3 Menteri) of 1992 to create inclusive neighbourhoods where people from all socioeconomic classes could reside and benefit from the city infrastructures. The policy also aims to ensure the provision of low-income housing (Mungkasa, 2020). The Law of Republic Indonesia Number 1/2011 emphasises that housing and settlement development must comply with the location and the balanced housing composition between the basic, intermediate, and luxurious houses of 1:2:3, respectively (Chapter 9A, verse 2). The criteria for each housing classification are explained in the appendix.

The Minister of Housing Regulation Number 7/2013 elaborates that in multistory flats development, developers are required to build low-income houses of at least 20% of the total floor area (Chapter 9A, verse 5). If developers cannot build low-income houses on-site, developers may build low-income houses offsite within the same regency/city (Chapter 9A, verse 6). Furthermore, onsite or offsite low-income housing development must be prepared in planning documents to ensure balanced housing (Chapter 12, verse 5). The control of

balanced housing implementation is carried out in the planning, construction, and development stages (Chapter 14, verse 1).

4.2 Conversion fund

Government Regulation Number 12/2021 explains the conversion funds as funds in the form of managed funds or grant funds obtained from development actors as an alternative to the obligation to build subsidised basic houses as the implementation of Balanced Housing which is calculated based on the conversion calculation formula determined by the Minister (Chapter 1, verse 9). The regulation clarifies that if basic houses cannot be built in single or row houses, the obligation of building basic houses can be converted into funds to construct low-income houses (Chapter 21G, verse 1).

The regulation also states that in support of the affordable housing provision and conversion fund execution, the Agency for the Acceleration of Implementation (Badan Percepatan Penyelenggaraan Perumahan) will be formed with the purpose to

- Realise the fulfilment of developers' obligations;
- Accelerate the provision of decent and affordable homes for low-income people;
- Ensure ownership, occupancy, and the achievement of benefits from the affordable housing to the targeted group;
- Manage the Conversion Fund as an alternative to fulfilling the developers' obligations of Balanced Housing.

4.3 Incentives and disincentives

Law of Republic Indonesia Number 1/2011 and Government Regulation Number 10/2012 state that legal entities that practice the Balanced Housing policy would be incentivized in the form of:

- Tax incentive;
- Compensation;

- Cross subsidisation;
- The development of public infrastructure;
- The ease of obtaining planning permission;
- Governmental award;

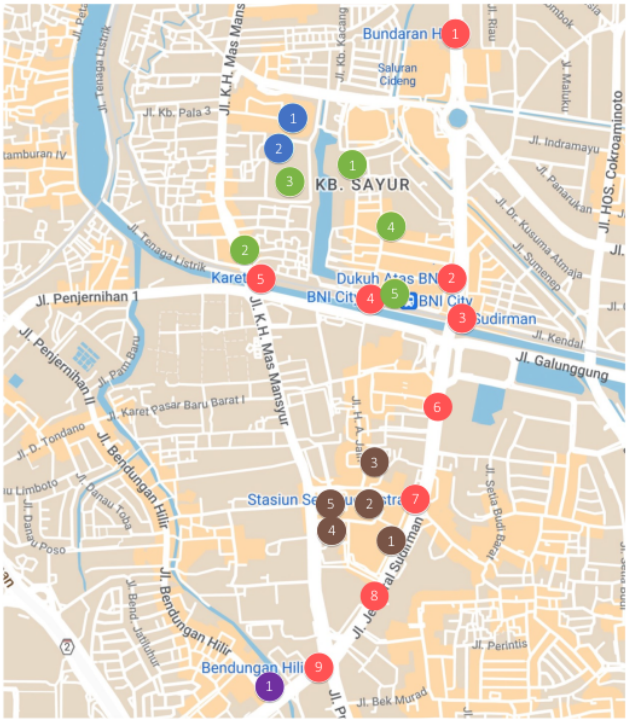
On the other hand, Government Regulation Number 14/2016 and Number 12/2021 mention that legal entities that carry out housing development without realising the Balanced Housing nor paying the conversion fund shall be subject to staged sanctions as depicted in the table below.

Table 3. Disincentives for the balanced housing policy and conversion fund
Source: Government Regulation Number 14/2016 and Number 12/2021

Stage	Sanctions	Balanced Housing policy	Conversion Fund
1	Two written warnings with a maximum period of five working days for each warning	√	√
2	Restriction on development activities	√	√
3	Building permits freeze (30 working days) or permanent suspension of construction works on the development	√	√
4	Revocation of business permits	√	√
5	Demolition of development	√	X
6	Monetary fine	√	√

4.4 Houses around transit

As described in Chapter 3, this research uses TOD Bundaran HI, Dukuh Atas, Setiabudi, and Bendungan Hilir in Central and South Jakarta as case studies. The distribution of private residential buildings and their prices around transit are as follows.



Transportation
1. Bundaran HI station
2. Dukuh Atas station
3. Karet station (KRL)
4. BNI City station (KRL)
5. Sudirman station (KRL)
6. Dukuh Atas station (TransJakarta)
7. Setiabudi MRT station
8. Karet station (TransJakarta)
9. Bendungan Hilir MRT station

TOD Bundaran HI apartments
1. Jakarta Residences
2. Thamrin Executive Residence

TOD Dukuh Atas apartments
1. 57 Promenade Apartment
2. Apartment Pavilion
3. Thamrin Residence
4. Le Park Residences
5. Apartment Talang Betutu

TOD Setiabudi apartments
1. Da Vinci Penthouse
2. The Plaza Residences
3. Anandamaya Residences
4. Istana Sahid
5. City Lofts Sudirman

TOD Setiabudi apartments
1. Sudirman Suites Apartment

Figure 3. Private residential mapping around the chosen case studies
Source: Author's summary

Table 4. Housing prices around the chosen case studies
Source: Author's summary

No	Apartment	Type	Size (m2)	Buy (IDR)	Margin	Rent (IDR)/mo	Margin
1	Jakarta Residences	1BR	28	750,000,000	346%	6,917,300	56%
2	Thamrin Executive Residence	1BR	28	850,000,000	406%	5,400,000	22%
3	57 Promenade Apartment	1BR	38	2,800,000,000	1,567%	10,300,000	132%
4	Apartment Pavilion	1BR	82	2,200,000,000	1,210%	10,000,000	125%
5	Thamrin Residence	1BR	42	950,000,000	465%	6,000,000	35%
6	Le Park Residences	3BR	193	13,500,000,000	7,936%	N/A	N/A
7	Apartment Talang Betutu	1BR	52	1,500,000,000	793%	5,000,000	13%
8	Da Vinci Penthouse	3BR	382	20,000,000,000	11,805%	90,000,000	1,927%
9	The Plaza Residences	1BR	74	3,800,000,000	2,162%	29,000,000	553%
10	Anandamaya Residences	2BR	133	7,000,000,000	4,067%	33,350,000	651%
11	Istana Sahid	2BR	130	2,700,000,000	1,507%	24,000,000	441%
12	Citylofts Sudirman	1BR	48	1,425,000,000	748%	9,000,000	103%
13	Sudirman Suites Apartment	1BR	43	2,200,000,000	1,210%	17,400,000	292%

The metric above summarises the lowest prices with the smallest unit sizes available on the market from each residential building. It is shown that the housing with the lowest selling and renting prices (Jakarta Residences and Thamrin Executive Residence) are one-bedroom units of 28sqm and are located slightly further from the stations. Meanwhile, the highest selling and renting homes (Le Park Residence and Da Vinci Penthouse) are three-bedroom units of 193sqm and 382sqm and are located within 350m from the Setiabudi MRT Station and Karet Station (TransJakarta).

According to Governor's Decree Number 588/2020, the low-income threshold for households in Jakarta is IDR 14,800,000 (USD 1,021.60) per month. Boarnet et al. (2017) indicate that for housing to be affordable, households should spend no more than 30% of their gross income on housing and 45% if transport expenses are added (Gabriel et al., 2005; Isalou et al., 2014). Hence, the maximum household spending on housing is IDR 4,440,000 (USD 306.44) for rent and IDR 6,660,000 (USD 459.82), including transport fees. Furthermore, Indonesia's Ministry of Finance posits that the price ceiling for Jakarta's basic house is IDR 168,000,000 (USD 11,592.72). Referring to these figures, all private housing around transit exceeds the price cap for buying by 346% to 11,805% and renting by 13% to 1,927%.

4.4.1 Impacted communities' views towards houses around transit

The electronic survey gathered 100 respondents with age, education level, occupation, and income distributions as follow.

Table 5. Respondents' age distribution
Source: Author's summary

Age Group	Total
18 - 24	11
25 - 34	74
35 - 44	12
45 - 54	3
55+	0

Table 6. Respondents' education level
Source: Author's summary

Education Level	Total
High school	0
Bachelor's degree	71
Master's degree	25
PHD	1
Other	3

Table 7. Respondents' occupation distribution
Source: Author's summary

Occupation	Total
Full-time paid employee	85
Part-time paid employee	3
Self-employed	8
Student	2
Unemployed	2

Table 8. Respondents' income distribution
Source: Author's summary

Income (Indonesian Rupiah)	Total
< 4,600,000	3
4,600,000 – 10,000,000	49
10,000,000 – 20,000,000	32
20,000,000 – 50,000,000	14
> 50,000,000	2

Table 8 shows that 49 respondents earn IDR 4,600,000 to IDR 10,000,000 (USD 305.8 to USD 664.9) per month, while 32 respondents earn IDR 10,000,000 to IDR 20,000,000 (USD 664.9 to USD 1,329.9) per month. This data contradicts the government's low-income threshold for households in Jakarta of IDR 14,800,000 (USD 1,021.60) per month, as a significant number of people earn less than the threshold. Although 77% of the respondents confirm the importance of having transport hubs or stations around 700m of their houses, the survey demonstrates that 54% of the respondents claim that houses around transport hubs or stations are unaffordable, and 68% could not afford to buy or rent houses within 700m from transport hubs or stations. This result emphasises housing inequality and unaffordability problems in Jakarta TOD areas.

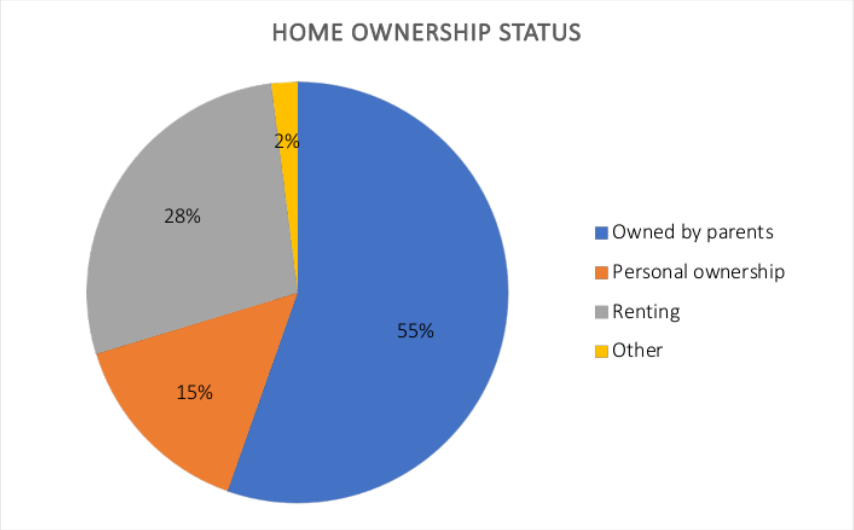


Diagram 3. Homeownership status
Source: Author's summary

The diagram above illustrates that most respondents live in houses owned by their parents, with 66.3% residing in landed houses and 33.7% residing in multi-family houses, making the cumulative expenses for housing and transportation less than 45% of their total income. However, the survey finds that 53.5% of the respondents prefer to move out to cheaper or more affordable areas despite being further from office or school.

The metric below shows that the respondents' office and school locations are dominated in West, Central, and South Jakarta, thus affecting the housing location preferences.

Table 9. Respondents' offices and schools and housing location preferences
Source: Author's summary

Location	Offices and Schools	Housing Location Preferences
West Jakarta	20	18
East Jakarta	5	3
North Jakarta	4	6
South Jakarta	36	48
Central Jakarta	28	11
Other	7	14

It is evident that most respondents prefer to live in South Jakarta due to the number of offices and schools. Despite having transport hubs or stations within 700m of their houses, 56% of the respondents prefer personal vehicles, 8% prefer online rides, and only 36% use public transport to offices or schools.

4.5 The Balanced Housing policy implementation in Jakarta TOD areas

4.5.1 Experts

The high land value and vague regulations hinder affordable housing development in Jakarta transit areas. Developers argue that the 2011 Balanced Housing policy allows offsite affordable housing development, and the requirement to build affordable housing in transit areas has never been emphasized until 2019, making developments with planning permission obtained before 2019 exempted from the obligation. Moreover, the unclear income targets for affordable housing make the housing products unaffordable for low-income groups.

Pusat Studi Urban Desain (Centre for Urban Studies) suggests that affordable housing development is not feasible in the first layer of TODs, and it affects the Balanced Housing policy's implementation in TOD areas.

"The Balanced Housing policy ratio should not be strictly imposed on all sites, considering land value, development potential, type of TOD, and the targeted communities' purchasing power. It is best to have a lower proportion of low-income housing in the first layer and develop more affordable housing in the second layer of TOD with a typology of mid-rise apartment blocks, as long as transit stations are accessible." (President Director of Pusat Studi Urban Desain)

Experts have opposing views on the conversion fund. Although it saves developers from the difficulties in affordable housing provision around transit, without a dedicated and trusted organisation, funds obtained from developers might be misused for other purposes than affordable housing provision around transit. Hence, the objective of creating inclusive neighbourhoods in transit areas through other means of land value capture would not be achieved.

4.5.2 Planners

According to planners, the government does not explicitly require low-income housing in TODs and is still deciding on the beneficiaries.

"The government is still assessing who would benefit from affordable housing provision in TOD areas and is analysing transit areas' housing price caps." (Funding Partnership Coordinator of DKI Jakarta Provincial Housing and Settlement Service)

The flexibility to build affordable dwellings offsite and unclear beneficiaries make it challenging to push developers to create inclusive neighbourhoods and contribute to the paucity of low-income homes in TOD areas. Additionally, most TOD projects are built on private-owned land, making it difficult for the government to take control of the housing prices. Besides, most government regulations can only affect developers as an appeal, not a responsibility.

Government Regulation Number 12/2021 mentions that the Agency for the Acceleration of Implementation will be formed to oversee and administer the conversion fund for affordable housing development. However, until recently, the organisation's structure was not formed, making the monitoring process ineffective. Instead, the government encourages public participation in supervising the implementation of the Balanced Housing and conversion fund policy while assuming control of the administrative process.

4.5.3 Academics

Most private developers only implement a mix of the 1:2 ratio for the commercial and intermediate houses while leaving out the low-income homes from their development.

> *"When we talk about Balanced Housing in TOD areas, there is no such thing as 3 low-income houses. Due to financial considerations, all private developers will only implement the 1:2 ratio for middle- and high-income houses." (Professor of Architecture, Planning, and Policy Development at Institut Teknologi Bandung)*

In Indonesia, developers negotiate with the government to avoid providing affordable homes in TOD districts (escape bargain), not to work towards creating inclusive neighbourhoods (planning bargain). Furthermore, without government intervention, housing prices in Jakarta TOD areas will always rise on the open market, making achieving inclusive neighbourhoods in transit zones harder.

One academic suggests that the government recognised what they could do with their policy power. However, their tolerance towards informal negotiations with developers without a robust ambition towards realising the inclusive neighbourhoods in TOD inhibits the Balanced Housing policy from operating as intended. The incentives and the conversion fund option are lucrative and attractive for developers. Nevertheless, the lenient implementation and lax policy monitoring and sanctions enforcement are the roots of the problem.

Professor at UCL's Bartlett School of Planning emphasises that planning policy success lies in its enforcement. He explains that the UK planning obligation policy works well due to a transparent economic framework and rigorous execution by the planning inspectorate and audit office to supervise developers' compliance. He also stresses the importance of the government's integrity to gain people's trust and ensure the developer's payment-in-lieu funds are materialised into affordable housing.

4.5.4 Private developers

Two main concerns inhibit developers from complying with the policy. First, the high land value near transit renders low-income housing impractical unless built on government-owned land. Second, incorporating low-income units into the project would undermine the exclusivity of housing products. Hence, developers will participate more if they can negotiate affordable housing locations.

Due to the lengthy administrative procedures, developers are hesitant to build affordable homes around TODs. Developers also regard the current incentives, including the FAR bonus, as inefficient as they are not automatically granted; developers must propose and wait for a governmental review before obtaining the incentives. Meanwhile, developers benefit from the government's tolerance and negotiate the disincentives form into fines for non-safety-related violations.

> *"Government decisions determine incentives, and the claiming process is not straightforward, causing private developers to forego the incentives. As for disincentives, Indonesia adopts the kinship principle where sanctions are negotiable as monetary fines, provided that it is not safety-related." (Private developer in Jakarta)*

The conversion fund generates two contrasting views for developers. Some developers perceive the conversion fund as lost revenue. Instead, they would invest the money into affordable housing or other income-generating infrastructure projects. In contrast, some developers consider the absence of the conversion fund's monitoring and

management body as a loophole that allows them to lock their obligation value to prevent inflation.

4.5.5 Non-profit organisations

Some organisations argue that without a clear target and robust enforcement, the Balanced Housing policy merely transfers the government's role to provide low-income houses to private developers.

> *"Until recently, there is no executable government regulation to support the Balanced Housing policy and affordable housing provision in TOD areas. The current policy seems to shift the government's responsibility to private sectors."*
> *(Executive Director of Jakarta Properti Institute)*

This issue is compounded by the lack of a policy to help low-income people live in TODs. The bureaucracy that requires developers to submit two separate planning proposals for the main and affordable housing development on the same site is considered discouraging.

All participating organisations are optimistic about the government's compulsory land purchase option. However, it must be complemented by a policy to turn purchased land into a special zone without following the market price increments and affecting the adjacent land value. The policy must also ensure that housing built on the purchased land would be affordable in perpetuity and protected from being purchased by private developers.

Non-profit practitioners speculate that the conversion fund would not perform optimally without a well-functioning monitoring organisation that oversees policy enforcement. One technical concern is the conversion fund appraisal, valid for six months from the appraisal date. Due to the lengthy administrative process, private developers must pay additional fees to perform another valuation. Hence, housing products would bear the additional expenses, making them unaffordable for low-income groups.

4.6 The Balanced Housing policy's effectiveness in addressing housing inequality in Jakarta TOD areas

As mentioned at the beginning of the chapter, Balanced Housing's initial purpose is to form inclusive neighbourhoods with mixed tenures for all socioeconomic strata. This approach mirrors what Ennis et al. (1995) imply regarding the fundamental purpose of land value capture: to address the social injustices in the project area, such as social exclusion or higher housing prices that filter out particular income classes. It also echoes Bertaud's (2009) argument that the government can use planning obligations to force private sectors to build affordable housing for the poor.

Based on the price mapping around the chosen TODs, all private residential sales and rental prices are above the low-income people's monthly income. The electronic survey result suggests that the skyrocketing house prices around TODs lead to the gentrification of low-income people. This issue resonates with the Planner's claim that the government does not require having low-income homes in TODs, and they are still examining house prices around transit and which income bracket will benefit from the houses offered. Consequently, the unclear beneficiaries and mismatch between house prices and average income underline social class segregation and housing disparity in Jakarta TOD areas.

Although the Balanced Housing policy requires developers to include low-income homes with a ratio of 1:2:3 or at least dedicate 20% of the total built area for affordable homes onsite, the flexibility to develop affordable homes offsite due to the financial constraints becomes developers' leeway for not creating inclusive neighbourhoods in transit zones. This strategy, like in Bogota, Boulder, and London, depicts the government's effort to accommodate developers' concerns over the project's financial viability due to the low-income housing development in high-priced land. Nevertheless, offsite development in Jakarta does not support the Balanced Housing policy's primary goal of creating inclusive neighbourhoods where all individuals, including low-income communities, have equal opportunities to reside and benefit from the accessibility in the transit zones.

One example is the middle- to high-income 57 Promenade Apartment, completed Q3 in 2022. The 452 units apartment complex with approximately 138,000m² floor area was built 700m from the Dukuh Atas MRT Station and 650m from the BNI City Station (KRL).

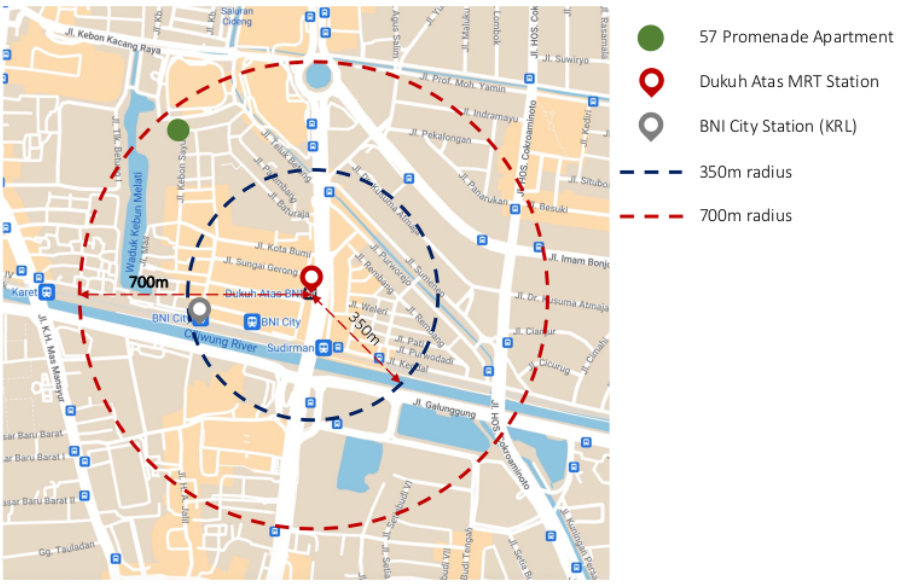


Figure 4. 57 Promenade Apartment within TOD Dukuh Atas radius
Source: Author's summary

Referring to the Balanced Housing policy, the development should provide at least 1,356 low-income housing or 27,600m² if built as flats. Due to the high land value on the main development site, the developer decided to fulfil their obligation to build low-income homes 14.5km away on their land bank in the Kalideres area in West Jakarta and preserve the main development as a middle-high apartment project. The developer's action technically does not violate the Balanced Housing policy, which allows offsite development within the same regency/city. However, it is worth examining how the flexibility of offsite development can contribute to creating inclusive societies.

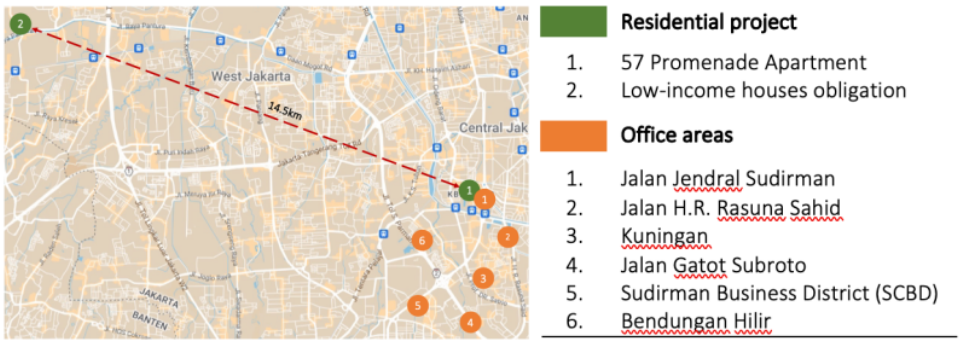


Figure 5. Low-income houses obligation for 57 Promenade Apartment project

Source: Author's summary

The illustration above shows that 57 Promenade Apartment was built in a prime location near MRT stations, commuter line (KRL) stations, and office buildings in Central and South Jakarta, while low-income homes were built in a less expensive area far from the business districts. This condition emphasises socioeconomic segregation and housing inequality in TODs. The government's tolerance for developers to build low-income homes elsewhere backfired. Similar to Bogota, allowing offsite low-income units development shows the government's priority on boosting housing production to eliminate backlogs rather than creating housing equalities and inclusive neighbourhoods within TOD areas.

4.7 The Balanced Housing policy's loophole and its implication on TOD affordable housing production

Soursourian (2010) posits that TOD planning and implementation must be guided to ensure inclusivity and equity for low- and medium-income communities. According to Hickey (2013), the most effective way to ensure housing affordability in TOD areas is to preserve it once built. Nevertheless, preserving affordable housing in TOD is not a simple task (Hickey, 2013), especially when it is built on private developers' land.

Firman and Fahmi (2017) argue that inserting affordable units in TOD areas in a big city is challenging as TODs are lucrative business opportunities for private developers. Unfortunately, Indonesia's government does not fully utilise its policy power to capture developers' profit. Due to the government's lenient enforcement of sanctions, private

developers can get away with developing exclusively homogeneous residential around TODs and negotiate to build the low-income units in their land reserve in other locations.

On the contrary, as noted by a professor at UCL's Bartlett School of Planning, the UK serves as an exemplary model due to its strict sanction enforcement that leads all policy breaches into the demolition of the development. The firm actions dissuade developers and prove the government's commitment to creating a conducive condition where the development actors abide by the rules. As a result, developers do not look for loopholes and leeway to negotiate existing rules. The negotiations between the government and developers are focused on delivering the obligations as expected and not on escape bargaining.

Furthermore, non-profit practitioners support Mungkasa's (2020) suggestion that the balanced housing scheme seems to shift the government's responsibility to developers without attractive government incentives and easy procedures to claim them. This condition coincides with Alterman and Kayden's (1988) theory that developer obligations through land value capture are the government's open-ended and flexible legal instrument to shift the burdens of supplying public amenities to private sectors.

Inclusionary housing aims to create racially and socioeconomically integrated communities by making the development pay for the sharp house price increases (Calavita and Mallach, 2009). Therefore, the government implementing inclusionary housing must offer developers compensating incentives to extenuate the cost of supplying less expensive housing. However, the lengthy process to claim incentives and the complicated planning application process discourage developers from complying with the policy or proceeding with the development.

The convertible disincentives, on the other hand, make the policy's list of sanctions ineffective. Developers convey that most sanctions are manageable as fines if the transgression is not safety-related. This irony renders the incentives and disincentives designed to promote the Balanced Housing policy merely a lure and bluff without any concrete actions. This also evidences that the staging scenarios of administrative sanctions

specified in the policy documents are often streamlined and highly flexible depending on the negotiations.

Besides the loopholes, implementing the Balanced Housing policy in TOD areas also has implications. One of the considerable impacts is the increments on developers' expenses, leading to price increases in high-priced homes and unit size decreases for low-priced ones. This trickle effect may benefit the lower SES due to the presence of low-income houses in TOD areas, but the reduction of sizes may have implications for occupants' wellbeing. This reality aligns with what Clapp (1981) and Tombari (2005) suggest that inclusionary housing in the form of planning gain will put cost burdens on developers, making market-priced homes more expensive and affecting the affordable housing supply.

4.8 Conversion fund regulation and its impact on the Balanced Housing policy

In line with Alterman (2012) and Hall (2015), some experts are sceptical about the conversion fund as it is prone to corruption and bribery. The condition is aggravated by the absence of the Agency for the Acceleration of Implementation, which is expected to execute and monitor the conversion fund. As a result, developers will still have an outstanding payment-in-lieu obligation as they could not pay the government directly. Due to fear of inflation, developers proactively calculate their conversion fund and negotiate with the government to lock the obligation value. This phenomenon showcases that the conversion fund ordinance functions not as intended. Furthermore, the survey shows that only 22% of the respondents are familiar with the Balanced Housing and conversion fund policy, making the public monitoring expected by the government ineffective.

Crook and Whitehead (2002) argue that planning gains through conversion funds or commuted sums are ineffective in creating housing equality between income and social classes. According to developers, the collected funds would be used to build affordable homes in other places, either on the government or private land. Hence, the conversion fund, which is supposed to complement the Balanced Housing policy in establishing inclusive neighbourhoods, merely boosts housing production in other locations and does not meet the policy's primary goal.

Similar approaches are commonly practised in other cities like Bangkok, Boulder, and London. The condition in Bangkok and the experts' argument highlight the importance of a monitoring body and clear action plans on the funds. Without these two factors, the gathered funds would be misappropriated from affordable homes development. In contrast, a transparent economic framework and rigorous execution from a dedicated inspectorate would earn public trust and help the conversion fund achieve its aim of supporting the Balanced Housing policy in creating housing inclusivity around TOD areas. It is worth noting that the conversion fund regulation still requires modification in its implementation. Hence, the ineffectiveness and underperformance of the current conversion fund policy do not determine its future performance.

5 Conclusion and recommendations

5.1 Conclusion

Like other countries, Indonesia's government strives to fight social exclusion and establish inclusive societies in TOD areas by enacting a value capture instrument of the Balanced Housing policy (Smolka and Amborski, 2000), which obliges developers to build affordable housing at a ratio of 1:2:3 or 20% of the total floor area built in the development. However, the balanced housing concept is widely misunderstood in its implementation as merely reducing the housing backlog, ignoring its main philosophy to maintain social harmony in society through co-existence among various strata. This reality puts Indonesia in a similar position to Bogota, where the government exchanged inclusion for housing production.

This research finds several challenges and barriers to developing affordable housing in Jakarta TOD areas. The lack of motivation and strong will in the Balanced Housing enforcement prevent the government from achieving the policy's goal of producing affordable housing and creating housing equality in TOD areas. It is evident from the house price mapping and electronic survey results that all private residentials in Jakarta TODs are priced above low-income people's financial capability, with a monthly income of IDR 4,600,000 to IDR 10,000,000 (USD 305.8 to USD 664.9) and are only affordable for middle- and high-income communities, emphasising housing inequality. Furthermore, without identifiable beneficiaries and housing price caps for the targeted communities, developing affordable housing in TODs becomes problematic and creates disparities between housing prices and low-income people's purchasing power. This condition is similar to Bangkok, where the government's lack of action to secure affordable housing in TOD areas for low-income people makes housing unaffordable.

Experts, academics, and non-profit practitioners agree that the Balanced Housing policy's loopholes impede its effectiveness. Complicated planning applications and incentive-claiming processes dissuade developers from integrating affordable housing in their primary schemes. The negotiable sanctions make the disincentives ineffective in

forcing developers to comply with the policy. The weak incentive and disincentive application render the policy's enforcement tool unattractive and inefficient. The expected public monitoring falls short, as only 22% of the survey respondents are familiar with the policy, showing the government's lack of socialisation of the policy to the public. Lastly, the organisational structure of the Agency for the Acceleration of Implementation, which monitors and manages the conversion fund, was not yet formed until recently, making the conversion and monitoring process disorganised.

Furthermore, it is noted that the Balanced Housing policy does not significantly impact lower SES communities as the low-income homes are not built in TOD areas due to the high land values issue that makes developing affordable housing in private-owned land around TOD areas financially unfeasible. The high land value becomes developers' concern that complicates the Balanced Housing scheme's application and underpins them to create socioeconomically homogenous dwellings, targeting the middle- and high-income classes to achieve the expected development returns while gentrifying low-income people into less expensive regions. Notwithstanding the proliferation of housing production in other sites, the existing Balanced Housing policy is ineffective in creating housing equality and inclusive neighbourhoods in TOD areas, where all social classes can benefit from the amenities and proximity to transport stations.

5.2 Policy recommendations

Based on the findings, the government should focus on its primary purpose to create inclusive neighbourhoods with some flexibility in implementing the Balanced Housing policy within the TOD areas considering the high land values versus the affordable housing development that might affect developers' profit. Doing so might hinder the government from the same situation in Delhi that discourages developers' participation due to the non-negotiable affordable housing percentage. Additionally, the government should set a clear target for housing beneficiaries and price caps to avoid market mismatches. The government could subsidise the agreed developers' proposed price to make it meet the low-income affordable housing price threshold in Jakarta.

Despite being lucrative, developers find the incentive-claiming process complicated. Hence, simplifying the reward mechanism might improve developers' appetite to follow the regulations. On the flip side, the government must be strict and wise when enforcing sanctions and disincentives on developers, as outlined in policy documents. Moreover, the government should also adhere to the staging administrative sanction scenarios to create a progressive deterrent effect that discourages developers from breaking the rules.

Alterman (2012) argues that land value capture, like the Balanced Housing policy, requires well-trained professionals to negotiate with the developers regarding the planning obligation without killing the projects. She also highlights that a transparent negotiation process with sufficient public monitoring ensures the planning obligation is practised for the public good. However, prior to negotiating, the government should understand the negotiation purposes to achieve planning gain, not escape bargain. According to planners, the government promotes public engagement in overseeing the implementation of the Balanced Housing and conversion fund policy. However, policy and sanctions would not be appropriately applied without proper institutional support. Thus, it is crucial to have a designated monitoring body to ensure policy enforcement produces balanced housing for all tenures in TOD areas. Furthermore, the government should provide more socialisation on the Balanced Housing policy to a wider public to share their aspiration to create balanced communities and housing equality in TOD areas and to encourage better engagement in monitoring the policy enactment.

To respond to the high land value issue in the first layer of TOD, the government could impose the low-income housing development obligation on the second layer. Similar to Bogota, which imposes a lower affordable housing percentage in expensive areas, providing a more lenient balanced housing implementation in the first layer of TOD would put Jakarta in a better position than Delhi and encourage better developers' participation. As in Bogota, Indonesia's government can practise preemptive land acquisition before the value inflates and fully control the development. The government might also consolidate the land on the second layer of TOD through compulsory purchase and partner with developers to build mid-rise affordable homes on top of the government's land to target the mid-low-income

people. Some developers note that the government often changes its mind about developing affordable homes on the second layer of TOD due to the land's development potential and opts for a more income-generating development. Therefore, the government must commit to building affordable homes on high-value lands regardless of the potential.

Finally, the new conversion fund policy does not bind the affordable housing provision to TOD areas. Nevertheless, similar to the Balanced Housing policy, priority should be given to providing affordable housing that can create inclusivity, especially in socioeconomically homogeneous TOD areas. Furthermore, like the Windfall Gain Tax in Bangkok, Indonesia's government should set a cap for conversion funds. Doing so might encourage developers to be responsible for creating inclusive societies by building certain portions of affordable housing in the main development.

5.3 Limitations of the research

Although this study has successfully assessed the Balanced Housing policy's effectiveness in TOD areas in addressing housing inequality and supporting affordable housing provision in Jakarta, there were some limitations to this research. Firstly, the limited duration and quantity of interviewees, including private developers within the chosen areas in Jakarta, become the key limitation. Thus, having more developer interviews would help the author identify more loopholes and potential changes to improve the Balanced Housing policy implementation.

Secondly, the electronic survey's sample data was considered small and did not adequately represent the impacted communities' concerns regarding housing inequality in TODs. The research findings are also limited due to the difficulties in locating the impacted communities from a particular neighbourhood in Jakarta TOD areas. There is a possibility that involving a specific neighbourhood as a representation of the impacted communities would make the research findings concerning housing disparity and gentrification in Jakarta TOD areas more accurate.

Thirdly, the semi-structured interview was composed of subjective questions that may result in biased responses. Furthermore, the conversion fund regulation is relatively new and still has room for improvement, making the policy analysis speculative. Despite the limitations, this research still contributes toward a better understanding of the Balanced Housing policy and its efficacy in solving housing inequality and creating inclusive neighbourhoods in Jakarta TOD areas while providing recommendations for future policy improvements.

5.4 Recommendations for further research

Further studies should examine a specific neighbourhood in Jakarta to determine the level of gentrification and interview some impacted communities concerning their aspiration to reside in TOD areas. Future research should involve more private developers to discover their concerns more in-depth about integrating balanced housing into their projects and analyse the impact of land ownership status on the Balanced Housing policy concerning affordable housing production in Jakarta TOD areas. Moreover, future studies could utilise a framework with measurable planning regulation criteria to appraise the effectiveness of the Balanced Housing policy. Further research should also analyse the performance of the conversion fund policy as a supplement to the Balanced Housing policy and assess the effectiveness as a whole.

Reference

Abiad, A., Farrin, K., and Hale, C. (2019) Sustaining transit investment in Asia's cities: A beneficiary-funding and land value capture perspective. ABD. [Online] Available from: <https://www.adb.org/publications/sustaining-transit-investment-asia-cities> [Accessed on 3 May 2022].

Acemoglu, D., and Robinson, J. A. (2013) Why nations fail: The origins of power prosperity and poverty. Profile Books: London.

Adjei, P. O. W., and Kyei, P. O. (2013) Linkages between income, housing quality and disease occurrence in rural Ghana. Journal of Housing and the Built Environment, 28, pp. 35-49.

Ahlfeldt, G. M., and Wendland, N. (2009) Looming stations: valuing transport innovations in historical context. Economic Letters, 150, pp. 97-99.

Allmark, P., Boote, J., Chambers, E., Clarke, A., McDonnell, A., Thompson, A., and Tod, A. M. (2009) Ethical issues in the use of in-depth interviews: Literature review and discussion. Research Ethics, 5(2), pp. 48-54.

Alonso, W. (1964) Location and land use. Harvard University Press: Cambridge, MA.

Alterman, R. (2012) Land use regulations and property values: The 'windfall capture' idea revisited. The Oxford Handbook of Urban Economics and Planning, Oxford: Oxford University Press, pp. 755-786.

Alterman, R., and Kayden, J. (1988) Toward a consensus vocabulary. In Private Supply of Public Services: Evaluation of Real-Estate Exactions, Linkage, and Alternative Land Policies, New York: NYU Press, pp. 22-32.

Appleyard, B. S., Ferrell, C. E., Carroll, M. A., and Taecker, M. (2014) Towards livability ethics: A framework to guide planning, design, and engineering decisions. Transportation Research Record: Journal of the Transportation Research Board, 2403(1), pp. 62-71.

Appleyard, B. S., Frost, A. R., and Allen, C. (2019) Are all transit stations equal and equitable? Calculating sustainability, livability, health, & equity performance of smart growth & transit-oriented-development (TOD). Journal of Transport & Health, 14.

Atkinson, R. (2000a) Measuring gentrification and displacement in greater London. Urban Studies, 37(1), pp. 149-165.

Atkinson, R., and Bridge, G. (2004) Gentrification in a global context. Routledge: London, UK.

Atkinson, R., Burrows, R., and Rhodes, D. (2016) Capital city? London's housing markets and the super-rich. In: Hay I and Beaverstock JV (eds) Handbook on Wealth and the Super-Rich. Cheltenham, UK; Northampton, MA, USA: Edward Elgar, pp. 225-243.

Atmadja, F, and Bogunovich, D. (2019) Shaping compact cities for livability, affordability and sustainability (L-A-S): A comparative assessment of TODs in Jakarta and Auckland. 55th ISOCARP World Planning Congress Jakarta-Bogor, Indonesia.

Aulya, M., and Winarso, H. (2019) Dinamika harga lahan zona nilai tanah Kawasan TOD Dukuh Atas dan Kawasan TOD Harmoni (The dynamics of land prices in the land value zone for the Dukuh Atas TOD area and the Harmoni TOD area). Sekolah Arsitektur, Perancangan dan Pengembangan Kebijakan ITB: Bandung, Indonesia.

Bardaka, E., Delgado, M. S., and Florax, R. J. G. M. (2018) Causal identification of transit-induced gentrification and spatial spillover effects: The case of the Denver light rail. Journal of Transport Geography, 71, pp. 15-31.

Barker, K. (2014) Housing: Where's the plan? London Publishing Partnership: London.

Basyir, B. C., and Isnaeni, H. (2018) Maximizing RUSUNA development in TOD Jakarta: Case study TOD Lebak Bulus Jakarta. E3S Web of Conferences, 67.

Belzer, D., Srivastava, S., Austin, M., and Wood, J. (2011.) Transit and regional economic development. Center for Transit-Oriented Development (CTOD).

Benson, N. (2010) A tale of two cities: Examining the success of inclusionary zoning ordinances in Montgomery County, Maryland and Boulder, Colorado. Journal of Gender, Race and Justice, 13(3). University of Iowa: Iowa.

Bertaud, A. (2009) Land markets, government interventions, and housing affordability. Wolfensohn Center for Development: Washington, D.C.

Boarnet, M. G., Bostic, R., Williams, D., Santiago-Bartolomei, R., Rodnyanksy, S., and Eisenlohr, A. (2017) Affordable housing in transit-oriented developments: Impacts on Driving and policy approaches. National Centre for Sustainable Transportation (NCST), University of Southern California: Los Angeles.

Bocarejo, J. P., Portilla, I., and Pérez, M. A. (2013) Impact of Transmilenio on density, land use, and land value in Bogota. Research in Transportation Economics, 40(1), pp. 78-86.

Bryman, A. (2012) Social research methods 4e. Oxford University Press: Oxford, UK.

Calavita, N. and Mallach, A. (2009) Inclusionary housing, incentives, and land value recapture. Lincoln Institute of Land Policy: Cambridge, MA.

Calavita, N. and Mallach, A. (2010b) An international perspective on inclusionary housing. In: N. Calavita and A. Mallach eds., 2010b. Inclusionary housing in international perspective: Affordable housing, social inclusion, and land value recapture. Lincoln Institute of Land Policy: Cambridge, MA, Ch. 1., pp. 1-13.

Calavita, N. and Mallach, A. (2010c) National differences and commonalities: Comparative analysis and future prospects. In: N. Calavita and A. Mallach eds., 2010c. Inclusionary housing in international perspective: Affordable housing, social inclusion, and land value recapture. Lincoln Institute of Land Policy: Cambridge, MA, pp. 359-386.

Calavita, N., Grimes, K., and Mallach, A. (1997) Inclusionary housing in California and New Jersey: A comparative analysis. Housing Policy Debate. 8(1), pp. 109-142.

Calthorpe, P. (1993) The next American metropolis: Ecology, community, and the American dream. Princeton Architectural Press: New York.

Canelas, P. (2018) Challenges and emerging practices in development value capture. In: Ferm, J. and Tomaney, J. (Eds.), Planning Practice: Critical Perspectives from the UK. New York: Routledge, pp. 70-84.

Chapple, K., Loukaitou-Sideris, A., Waddell, P., Chatman, D., and Ong, P. (2017). Developing a new methodology for analyzing potential displacement. University of California: Los Angeles.

Cervero, R. (2005). Progressive transport and the poor: Bogota's bold steps forward. Access Magazine, 1(27), pp. 24-30.

Cervero, R., and Duncan, M. (2002) Transit's value-added effects: Light and commuter rail services and commercial land values. Transportation Research Record: Journal of the Transportation Research Board, 1805(1), pp. 8-15.

Cervero, R., and Gorham, R. (1995) Commuting in transit versus automobile neighbourhoods. Journal of the American Planning Association, 61 (2), pp. 210-225.

Chava, J., Newman, P., and Tiwari, R. (2018) Gentrification of station areas and its impact on transit ridership. Case Studies on Transport Policy, 6, pp. 1-10.

Clagett, M. T. (2014) If it's not mixed-income, it won't be transit-oriented: Ensuring our future developments are equitable & promote transit. Transportation Law Journal, 41, pp. 1-32.

Clapp, J. M. (1981) The impact of inclusionary zoning on the location and type of construction activity. Journal of the American Real Estate & Urban Economics Association, 9, pp. 436-456.

Cobbold, C. (2007) What is the extent of buy to leave empty in England? DTZ: Reading.

Collinson, R. (2011) Rental housing affordability dynamics, 1990-2009. Cityscape: A Journal of Policy Development and Research, 13(2), pp. 71-103.

Crook, A. D. H., and Whitehead, C. M. E. (2002) Social housing and planning gain: Is this an appropriate way of providing affordable housing? Environment and Planning A: Economy and Space, 34, pp. 1259-1279.

Curtis, C., Renne, J. L., and Bertolini, L. (2016) Transit-oriented development: Making it happen. Transport and Mobility. Routledge: London.

Dawkins, K., and Moeckel, R. (2016) Transit-induced gentrification: Who will stay, and who will go? Hous. Policy Debate 2016, 26, pp. 801–818.

De Kam, G., Needham, B., and Buitelaar, E. (2014) The embeddedness of inclusionary housing in planning and housing systems: insights from an international comparison. Journal of Housing and the Built Environment, 29, pp. 389-402.

DeMaio, P. (2009) Bike-sharing: history, impacts, models of provision, and future. Journal of Public Transportation, 12(4), pp. 3.

Derakhti, L., and Baeten, G. (2020) Contradictions of transit-oriented development in low-income neighbourhoods: The case study of Rosengard in Malmo, Sweden. Institute for Urban Research: Malmo, Sweden.

Dewi, S. P. (2017) Gentrification process in DKI Jakarta Province, Indonesia. Technische Universität: Darmstadt.

Dong, H. (2017) Rail-transit-induced gentrification and the affordability paradox of TOD. Journal of Transport Geography, 63, pp. 1-10.

Dorling, D. (2014) All that is solid: The great housing disaster. Penguin: Harmondsworth.

Duncan, M. (2011) The impact of transit-oriented development on housing prices in San Diego, CA. Urban Studies. 48 (1), pp. 101-127.

Edwards, M. (2002) Wealth creation and poverty creation. City 6(1), pp. 25-42.

Ellen, I. G., and Weselcouch, M. (2015) High-opportunity neighbourhoods in NYC are losing affordable housing. NYU Furman Center for Real Estate and Urban Policy: New York.

Endangsih, T., Kusumawanto, A., Widyastuti, D. T. (2021) Transit-oriented development: An approach to a sustainable development locus: Jatinegara Station, East Jakarta. RSF Conference Series: Engineering and Technology, 1(2), pp. 61-73.

Ennis, F., Healey, P., and Purdue, M. (1995) Negotiating development: Rationales and practice for development obligations and planning gain. Routledge: New York.

Evans, J. R., and Mathur, A. (2005) The value of online surveys. Internet Research, 15(2), pp. 195-219.

Farha, L. (2017) Housing, Humanity and Human Rights. Rujak centre for urban studies: Jakarta.

Feijten, P., and Mulder, C. H. (2005) Life course experience and housing quality. Housing Studies, 20(4), pp. 571-587.

Fernandez, R., Hofman, A., Aalbers, M. B. (2016) London and New York as a safe deposit box for the transnational wealth elite. Environment and Planning, 48(12), pp. 2443–2461.

Findeisen, F. (2020) Financing the Northern Line Extension: the politics of governing Greater London. Territory, Politics, Governance. Routledge: New York.

Firman, T., and Fahmi, F. Z. (2017) The privatization of metropolitan Jakarta's (Jabodetabek) urban fringes. Journal of The American Planning Association, 83(1), pp. 68-79.

Gabriel, M., Jacobs, K., Arthurson, K., Burke, T, and Yates, J. (2005) Conceptualising and measuring the housing affordability problem. Australian Housing and Urban Research Institute.

Glass, R. (1964) Aspects of change. In: Brown-Saracino, J. (Ed.), The Gentrification Debates. Routledge: New York, pp. 19-29.

Gibbons, S., and Machin, S. (2005) Valuing rail access using transport innovations. Journal of Urban Economics, 57, pp. 148-169.

Goetz, E. G., Ko, K., Aaron, H., Hoang, T., and Jeff, M. (2010) The Hiawatha Line: impacts on land use and residential housing value. University of Minnesota Center for Transportation Studies report.

Grander, M. (2021) The inbetweeners of the housing markets – young adults facing housing inequality in Malmö, Sweden. Routledge: London.

Grube-Cavers, A., and Patterson, Z. (2014) Urban rapid rail transit and gentrification in Canadian urban centres: A survival analysis approach. Urban Studies 52(1), pp. 178-194.

Hall, D. (2005) Why public-private partnerships don't work. Public Services International Research Unit (PSIRU) University of Greenwich: London.

Hasoloan, J. T. (2018) Defining transit-oriented development (TOD) potential along the commuter line stations in Jakarta. Massachusetts Institute of Technology: Cambridge, MA.

Hess, D., and Lombardi, P. (2004) Policy support for and barriers to transit-oriented development in the inner city: Literature review. Transportation Research Record: Journal of the Transportation Research Board, 1887, pp. 26-33.

Hidayat, R., and Sumandoyo, A. (2017) Dibelit masalah di hunian bertingkat (Problems in Multistorey Housing) [Online] Available from:https://tirto.id/dibelit-masalah-di-hunian-bertingkat-cfDS [Accessed 20 March 2022].

Ibraeva, A., Correia, G. H. A., Silva, C., and Antunnes, A. P. (2020) Transit-oriented development: A review of research achievements and challenges. Transportation Research Part A, 132, pp. 110-130.

Immergluck, D. (2009) Large redevelopment initiatives, housing values and gentrification: the case of the Atlanta Beltline. Urban Studies 46(8), pp. 1723-1745.

Immergluck, D., and Balan, T. (2018). Sustainable for whom? Green urban development, environmental gentrification, and the Atlanta Beltline. Urban Geography, 39(4), pp. 546-562.

Isalou, A.A., Litman, T., and Shahmoradi, B. (2014) Testing the housing and transportation affordability index in a developing world context: A sustainability comparison of central and suburban districts in Qom, Iran. Transport Policy, 33, pp. 33-39.

Jain, D., and Singh, E. (2019) Transit-oriented development in India: A critical review of policy measures. International Journal of Recent Technology and Engineering (IJRTE), 7.

Jamme, H., Rodriguez, J., Bahl, D., and Banerjee, T. (2019) A twenty-five-year biography of the TOD concept: From design to policy, planning, and implementation. Journal of Planning Education and Research, 39(4), pp. 409-428.

Kahn, M. E. (2007) Gentrification trends in new transit-oriented communities: Evidence from 14 cities that expanded and built rail transit systems. Real Estate Economics, 35, pp. 155-182.

Kamruzzaman, Md., Baker, D., Washington, S., and Turrell, G. (2014) Advance transit-oriented development typology: Case study in Brisbane, Australia. Journal of Transport Geography, 34, pp. 54-70.

Khasnabis, S., McElmurry, S. P., Elibe, E. A., Dutta, U., and Tenazas, E. (2010) Incorporating environmental sustainability into transit-oriented development on Detroit light rail transit system. Michigan Ohio University Transportation Center: Detroit.

Kontokosta, C., E. (2015) Do inclusionary zoning policies equitably disperse affordable housing? A comparative spatial analysis. Journal of Housing and the Built Environment, 30(4), pp. 569-590.

Laaly, S., Jeihani, M., and Lee, Y. (2017) A multiscale, transit-oriented development definition based on context-sensitive paradigm. Transportation Research Record: Journal of the Transportation Research Board, 2671, pp. 31-39.

Lastrape, K. M., and Lewis, C. A. (2010) An evaluation of the effects of transit-oriented development in a suburban environment. Center for Transportation Training and Research, Texas Southern University: Houston.

Lees, L. (2008) Gentrification and social mixing: Towards an inclusive urban renaissance? Urban Studies, 45(12), pp. 2449-2470.

Li, R. Y. M., and Chau, K. W. (2016) Econometric analyses of international housing markets. Routledge: London.

Lim, H., Kim, J., Potter, C., and Bae, W. (2013) Urban regeneration and gentrification: Land use impacts of the Cheonggye stream restoration project on the Seoul's central business district. Habitat International, 39, pp. 192-200.

Lin, J. (2002) Gentrification and transit in northwest Chicago. Transportation Quarterly, 56(4), pp. 175-191.

Lo, R. H. (2007) The city as a mirror: Transport, land use and social change in Jakarta. Urban Studies, 47(3), pp. 529-555.

Loo, B. P. (2009) How would people respond to a new railway extension? Habitat Intern, 33, pp. 1-9.

Maharani, S. (2015) Pengembangan perumahan dengan hunian berimbang bagi pemenuhan kebutuhan untuk masyarakat berpenghasilan rendah (Housing development with the Balanced Housing scheme to meet the needs of low-income communities). Jurnal Penelitian Hukum Legalitas, 9(1), pp. 41-50.

Mallach, A. (2010) The global reach in inclusionary housing. In: N. Calavita and A. Mallach eds., 2010. Inclusionary housing in international perspective: Affordable housing,

social inclusion, and land value capture. Lincoln Institute of Land Policy: Cambridge, MA, Ch. 9., pp. 323-357.

Manzo, L. C., Kleit, R. G., and Couch, D. (2008) Moving three times is like having your house on fire once: The experience of place and impending displacement among public housing residents. Urban Studies, 45(9), pp. 1855-1878.

Margono, R. B., Abadi, A. A., and Zuraida, S. (2020) Transit-induced gentrification in Bangkok, Thailand: A review. IOP Conference Series: Earth and Environmental Science, 532(1).

Marx, P. L., Stallsmith, E., and Zimmerman, M. (2006) Developing transit: Transit-oriented development, joint development and housing. Mass Transit, 32, pp. 42-48.

McIntosh, J., Turbka, R., and Newman, P. (2014) Can value capture work in a car dependent city? Willingness to pay for transit access in Perth, Western Australia. Transportation Research Part A: Policy and Practice, 67, pp. 320-339.

McKee, K. (2012) Young people, homeownership, and future welfare. Housing Studies, 27(6), pp. 853-862.

Moore, R. D. (2018). Condominium development and gentrification in Bangkok, Thailand: A study of housing pathways. Sheffield Hallam University.

Mungkasa, O. (2020) Catatan kritis tentang hunian berimbang (Critical notes on the Balanced Housing scheme) [Online] Available from: <https://www.researchgate.net/publication/343167954_Catatan_Kritis_tentang_Hunian_Berimbang> [Accessed on 3 May 2022].

Murray, A., and Weerappulige, A. (2021) Transport challenges - How integration of land use and planning can lead to carbon neutrality [Online] Available from: < https://www.beca.com/ignite-your-thinking/ignite-your-thinking/march-2021/transport-challenges-how-integration-of-land-use#:~:text=Integrated%20land%20use%20and%20transport%20planning%5B3%5D%20provides%20an%20environment,per%20capita%20emission%20transport%20options> [Accessed on 8 July 2022].

Muth, R. (1969) Cities and housing. University of Chicago Press: Chicago, IL.

Nakamura, K., Gu, F., Wasntarasook, V., Vichiensan, V., and Hayashi, Y. (2016) Failure of transit-oriented development in Bangkok from a quality of life perspective. Asian Transport Studies, 4(1), pp. 194-209.

Nasri, A., and Zhang, L. (2014) The analysis of Transit-oriented development (TOD) in Washington, D.C. and Baltimore Metropolitan Areas. Transport Policy, 32, pp. 172–79.

Nazwar, H. A. (2021) Transit-oriented development: Insentif terhadap nilai properti (Transit-oriented development: The incentives towards properties' value). Jurnal Manajemen Aset dan Penilaian, 1(2), pp. 30-39.

Nelson, A., Miller, M., Eskic, D., Kim, K., and Ewing, R. (2015) Do TODs make a difference? Project. National Institue of Transportation and Communities.

Newman, P., and Matan, A. (2013) Green urbanism in Asia: The emerging green tigers. World Scientific: Singapore.

Padeiro, M., Louro, A., and Da Costa, N. M. (2019) Transit-oriented development and gentrification: A systematic review. Transport Reviews, 39(6), pp. 733-754.

Papa, E. (2017) Implementing transit-oriented development in Greater London. Transit-Oriented Development and Sustainable Cities, 12, pp. 186-197.

Parker, T. (2002) Statewide transit-oriented development study: Factors for success in California: Final Report. California Department of Transportation: Sacramento.

Peraturan Gubernur Daerah Khusus DKI Jakarta Nomor 182 Tahun 2012 tentang Panduan Rancang Kota Pengembangan Koridor MRT Jakarta Tahap Satu (Regulation of the Governor of the Special Region of DKI Jakarta Number 182/2012 about Urban Design Guidelines for the Development of the Jakarta MRT Corridor Phase One).

Poerbo, H., W. (2020) Affordable residential in TOD area. IOP Conference Series: Earth and Environmental Science, 532(1).

Pollack, S., Bluestone, B., and Billingham, C. (2010) Maintaining diversity in America's transit-rich neighbourhoods: Tools for equitable neighbourhood change. Dukakis Center for Urban and Regional Policy: Boston.

Pongprasert, P. (2019) Determinants of luxurious condominium prices in Bangkok CBD: A case study of encouraging housing affordability in Bangkok, Thailand. International review for spatial planning and sustainable development D: Planning Assessment, 10(1), pp. 167-182.

Porter, D. R. (1997) Synthesis of transit practice 2.0: Transit-focused development. Transit Cooperative Research Program: Washington, DC.

Pucher, J., and Renne, J. L. (2003) Socioeconomics of urban travel: Evidence from the 2001 NHTS. Transport Quarterly, 57(3), pp. 49-77.

Quigley, J. M., and Raphael, S. (2004) Is housing affordable? Why isn't it more affordable? Journal of Economic Perspectives, 18(1), pp. 191-214.

Rayle, L. (2015) Investigating the connection between Transit-oriented development and displacement: Four hypotheses. Hous. Policy Debate 2015, 25, pp. 531-548.

Redfern, P. A. (2003) What makes gentrification 'gentrification'? Urban Studies, 40(12), pp. 2351-2366.

Renne, J. L. (2008) Evaluating transit-oriented development. In proceedings of the transportation research board 87th annual meeting, Washington, D.C., pp. 13-17.

Renne, J. L., and Ewing, R. (2013) Transit-oriented development: An examination of America's transit precincts in 2000 & 2010. UNO Transportation Institute, 17.

Renne, J. L., and Wells, J. S. (2005) Transit-oriented development: Developing a strategy to measure success. Transportation Research Board, Rutgers University: New Jersey.

Revington, N. (2015). Gentrification, transit, and land use: Moving beyond neoclassical theory. Geography Compass, 9(3), pp. 152-163.

Rolnik, R. (2013) Late neoliberalism: The financialization of homeownership and housing rights. International Journal of Urban and Regional Research, 37(3), pp. 1058-1066.

Ronald, R. (2008) The Ideology of homeownership: Homeowner societies and the role of housing. Springer: New York.

Rondinelli, D. A. (1990) Housing the urban poor in developing countries: The magnitude of housing deficiencies and the failure of conventional strategies are worldwide problems. The American Journal of Economics and Sociology, 49(2), pp. 153-166.

Rubin, H. J., and Rubin, I. S. (2011) Qualitative Interviewing: The art of hearing data. SAGE Publications: Michigan.

Ryan-Collins, J., Lloyd, T. and MacFarlane, L. (2017) Rethinking the economics of land and housing. Zed Books: London.

Salat, S., and Ollivier, G. (2017) Transforming the urban space through transit-oriented development: The 3V Approach. World Bank: Washington, DC.

Santoro, P. F. (2015) Urban planning instruments for promoting social interest housing: From zoning to obligatory percentages in São Paulo, Brazil, in dialog with Bogotá, Colombia. Brazilian Journal of Urban and Regional Studies, 17(2), pp. 99-117.

Santoro, P. F. (2019) Inclusionary housing policies in Latin America: Sao Paulo, Brazil in dialogue with Bogota, Colombia. International Journal of Housing Policy, 19(3), pp. 385-410.

Sassen, S. (2014) Expulsions: Brutality and complexity in the global economy. Harvard University Press: Cambridge, Massachusetts.

Saunders, B., and Smith, K. (2014) Quality of life, quality of place: Growing local economies through equitable transit-oriented development. Open Communities and the Center for Neighborhood Technology: Chicago.

Schaeffer, N. C. (1991) Conversation with a purpose – or conversation? Interaction in the standardized interview, in Measurement errors in surveys. Wiley: New York, pp. 367-391.

Shastry, S. (2010) Spatial assessment of transit-oriented development. University of Twente: Ahmedabad.

Shelton, D. S., and Lo, A. K. (2003) Transit-oriented development in the Seattle, WA, USA, Area. ITE Journal, 73(8), pp. 46-51.

Siedman, I. (2006) Interviewing as qualitative research: A guide for researchers in education and the social sciences. Teachers College Press: New York.

Sim, L. L., Yu, S. M., Han, S. S. (2003) Public housing and ethnic integration in Singapore. Habitat International, 27, pp. 293-307.

Singapore Housing and Development Board Annual Report 2020/2021 [Online] Available from:https://www20.hdb.gov.sg/fi10/fi10221p.nsf/hdb/2021/assets/ebooks/annual-report-2021.pdf [Accessed 23 March 2022].

Singh, P. (2016) Assessment of TOD policies and implementation process cases of Delhi, Ahmedabad. Urban Mobility India Conference and Expo.

Smolka, M. O., and Amborski, D. (2000) Value capture for urban development: An Inter-American Comparison. Lincoln Institute of Land Policy: Cambridge, MA.

Soursourian, M. (2010) Equipping communities to achieve equitable transit-oriented development. Community Investments, 22(2), pp. 22-27.

Tombari, E. A. (2005) Smart growth, smart choices series: The builder's perspective on inclusionary zoning. National Association of Home Builders: Washington, D.C.

Tunas, D., and Peresthu, A. (2010) The self-help housing in Indonesia: The only option for the poor? Habitat International, 34(3), pp. 315-322.

Turner, J. F. C. (1976) Housing by people: Towards autonomy in building environments. Marion Boyars: London.

Undang-undang Republik Indonesia No. 1 Tahun 2011 tentang Perumahan dan Kawasan Permukiman (Law of the Republic Indonesia Number 1/2011 about Residential and Settlement Area).

Undang-undang Republik Indonesia No. 4 Tahun 1992 tentang Perumahan dan Permukiman (Law of the Republic of Indonesia Number 4/1992 about Residential and Settlement).

Utomo, WP (2019) Indonesia Millennial Report 2019: Understanding The Behaviour of Indonesian Millennials. [Online] Available from:https://cdn.idntimes.com/content-documents/indonesia-millennial-report-2019-by-idn-times.pdf [Accessed 24 May 2022].

Vale, D. S. (2015) Transit-oriented development, integration of land use and transport, and pedestrian accessibility: Combining node-place model with pedestrian shed ratio to evaluate and classify station areas in Lisbon. Journal of Transport Geography, 45, pp. 70-80.

Ward, E. J., Dimitriou, H. T., Wright, P., and Dean, M. (2016) Application of policy-led multi-criteria analysis to the project appraisal of the Northern Line Extension, London. Research in Transportation Economics, 58, pp. 46-80.

Yuniati, V. (2013) Inclusionary housing in Indonesia: The role of balanced residential ratio 1:3:6 in Makassar. Erasmus University: Rotterdam.

Yupho, S. (2014) Evaluating indirect impacts of Transit-Oriented Development (TOD): The case of Bangkok, Thailand. AESOP Congress, TU Darmstadt: Utrecht.

Zaręba, A., Widawski, K., Krzemińska, A., and Dzikoska, A. (2019) Multiscale transit-oriented development (TOD) for sustainable communities. IOP Conference Series: Earth and Environmental Science, 214.

Zuk, M., Bierbaum, A. H., Chapple, K., Gorska, K., and Loukaitou-Sideris, A.(2018) Gentrification, displacement, and the role of public investment. Journal of Planning Literature, 33(1), pp. 31-44.

Appendices

Appendix 1. Housing classification criteria

Government Regulation Number 12/2021 on Chapter 21E, verse 2, 3, and 4 emphasise the housing classification based on the selling price with details as follow.

Table 10. Housing classification criteria
Source: The Government Regulation Number 12/2021

House Type	Criteria
Basic	- Targeted for low-income people - Selling price set by the government
Intermediate	- Sold at 3 to 15 times the basic houses
Luxurious or commercial	- For-profit - Sold at more than 15 times the basic houses

Chapter 21F, verse 3 details the proportion by stating that the provision of 3 (three) basic houses consists of subsidised and non-subsidised basic houses with the ratio of:

- In large urban areas, 1 (one) subsidised basic house compared to 3 (three) non-subsidised basic houses with a percentage of 25% : 75%;
- In medium urban areas, 2 (two) subsidised basic houses compared to 2 (two) non-subsidised basic houses with a percentage of 50% : 50%;
- In small urban areas, 3 (three) subsidised basic houses compared to 1 (one) basic house with a percentage of 75% : 25%.

Appendix 2. List of research participants

No.	Position	Organisation	Category
1	Interagency Relations Department Manager	Real Estate Indonesia (REI)	Experts
2	Urban Designer	PT Pandega Desain Weharima (PDW)	Experts
3	President Director	Pusat Studi Urban Desain (PSUD)	Experts
4	Funding Partnership Sub-coordinator	DKI Jakarta Provincial Housing and Settlement Service	Planners
5	Supervisor	DKI Jakarta Department of Human Settlements, Spatial Planning and Land	Planners
6	Professor of Architecture, Planning, and Policy Development	Institut Teknologi Bandung	Academics
7	Faculty of Architecture Engineering	Universitas Katolik Parahyangan	Academics
8	Professor of Housing and City Planning	University College London	Academics
9	Private developers in Jakarta	-	Developers
10	Private developer in London	-	Developers
11	Consultant	World Bank	Non-profit Organisations
12	Executive Director	Jakarta Properti Institute (JPI)	Non-profit Organisations

Appendix 3. Semi-structured interview questionnaire

Interview Participant Information Sheet

Transit-oriented development and housing inequality: Testing the effectiveness of the Balanced Housing policy in Jakarta, Indonesia

INTRODUCTION

You are invited to participate in a study on Housing Inequality in Jakarta TOD areas. It is critical that you comprehend the study's goals and what participation entails. Please take your time to read the following information and the Participation Information Sheet thoroughly before deciding whether or not to participate. Thank you for reading this.

PARTICIPANT CONSENT FORM

Research Title

Transit-oriented development and housing inequality: Testing the effectiveness of the balanced housing policy in Jakarta, Indonesia

Department

Housing and City Planning, Bartlett School of Planning

Name of Researcher

Thomas Hartanto

Contact of Researcher

thomas.hartanto.21@ucl.ac.uk , University College London, London WC1E 6BT, United Kingdom

1. What is the purpose of this study?

This study aims to examines the extent of housing inequality and the effectiveness of the Balanced Housing policy in Jakarta TOD areas from the end-user perspective.

2. Who is conducting the research?

This research is conducted by Thomas Hartanto as a requirement of completion for the MSc Housing and City Planning at University College London.

3. Why have I been invited?

This research aims to examine the Balanced Housing policy's effectiveness in TOD areas in Jakarta and to produce a policy recommendation for the government that can better accommodate the private developers' concerns in implementing the balanced housing concept in TOD areas in Jakarta. By participating in this research, you are helping to understand better what are the difficulties or concerns of the developers in implementing the balanced housing concept in the development.

4. Do I have to take part in this study?

No – participation in this study is entirely voluntary. You must read and sign a participant consent form if you wish to participate. You can withdraw from participating at any time without providing a reason.

5. What will happen to me if I take part?

You will be asked some questions based on your role in the developments. Generally, the interview will discuss about TOD's influence on housing disparity, the performance of the Balanced Housing policy, its impact on low-income people, and the difficulties in complying with the Balanced Housing policy and its implications for the developments. The interview takes approximately 60 – 120 minutes to complete.

6. What are the possible disadvantages and risks of taking part?

Taking part in this research is not associated with any substantial risks.

7. Will my taking part in the study be kept confidential?

We will rigorously maintain the confidentiality of every piece of information we gather about you for the study. In any upcoming reports or publications, your identity will not be revealed.

8. What will happen to the results of the research study?

Results will be published in standard academic outputs, including general interest magazines/newspapers/journals. You will not be mentioned by name in any document or publication.

9. Data protection privacy notice

Your private information will be handled for the reasons outlined in this notice. The legal basis for processing your personal data will be for the public's interest. The legal basis for processing special category personal data will be statistical, historical, or research-related objectives. All collected data will be processed and stored safely according to UCL's data protection guide (https://www.ucl.ac.uk/library/research-support/research-data-management/best-practices/how-guides/handling-sensitive-personal) and UK General Data Protection Regulation 2018 (https://www.legislation.gov.uk/ukpga/2018/12/contents/enacted)

10. Contact for further information

For further inquiries, questions, or information, please contact the researcher through email at thomas.hartanto.21@ucl.ac.uk

Interview Consent Form

Thank you for agreeing to be interviewed as part of the above research project. Before you agree to take part, please complete this consent form by ticking the boxes to acknowledge the following statements and sign your name at the bottom of the page.

This consent form needs to be filled out and returned to the researcher before conducting the interview. Please kindly contact the researcher should you have further inquiries or questions regarding the details of your participation.

1.	I certify that I have read and understood the Participant Information Sheet and the purpose of the research.	
2.	I understand that participation in this study is entirely voluntary, and I may withdraw from participating at any time without providing a reason.	
3.	I agree to take part in the study through the online interview, and I understand that my information will be used for the reasons disclosed to me.	
4.	I agree that my participation will be audio recorded for accuracy, and I consent to the use of this material as part of the project.	
5.	I understand that my information will remain confidential and will not be revealed in any upcoming reports or publications.	
6.	I understand that the interview result will be published in standard academic outputs, including magazines/newspapers/journals, and that my name will not be mentioned in any documentation or publication.	
7.	I understand that my private information will be handled for the reasons outlined in this notice, and all collected data will be processed and stored safely according to UCL's data protection guide and UK General Data Protection Regulation 2018.	
8.	I understand that I can contact the researcher who conducts the interview at any time using the contact details provided on the information sheet.	

Participant's Name:

Participants Signature: **Date**:

Researcher's Name: Thomas Hartanto

Participants Signature:  **Date**:

Academics, Experts, Non-profit Organisation, Planners

1. Do you think housing development in TOD areas in Jakarta reflects the inclusive neighbourhood, or is it more of the homogenous social class development?
2. Do you know the rough proportion of affordable housing for low- and middle-low-income people in TOD areas in Jakarta?
3. Do you think the Balanced Housing policy is effective and working as expected?
4. What are the barriers for developers in complying with the regulation?
5. What do you think makes the developers want to supply affordable homes on their sites?
6. Do you think the sanctions and incentives are adequate to encourage private developers' participation? What can be improved?
7. What do you think is lacking from the current policy (including the conversion fund) to make it work better?
8. DPRKP representative mentioned the inexistence of the target who benefit from the Balanced Housing scheme in terms of income. Isn't it obvious already from the ratio of 1:2:3?
9. Do you think having flexibility on the percentage would contribute to the policy's success?

Private Developers

1. What is the concept of this development?
1. Is it homogenous or heterogenous development?
2. Whom is it targeting?
3. Are you familiar with the Balanced Housing policy?
4. What are the implications/impacts of that policy on the projects?
5. What are the difficulties in complying with the policy?
6. What are the incentives and disincentives of complying or breaking the policy?
7. What kind of flexibility does the government provide to developers?
8. Is there any suggestion on how the policy should be or what the incentive should be?

Appendix 4. Electronic survey questionnaire

Housing Inequality in Jakarta TOD Areas

INTRODUCTION

You are invited to participate in a study on Housing Inequality in Jakarta TOD areas. It is critical that yo comprehend the study's goals and what participation entails. Please take your time to read the followin information and the Participation Information Sheet thoroughly before deciding whether or not to participate. Thank you for reading this.

PARTICIPANT CONSENT FORM

Research Title
Transit-oriented development and housing inequality: Testing the effectiveness of the balanced housing policy in Jakarta, Indonesia

Department
Housing and City Planning,
Bartlett School of Planning

Name of Researcher
Thomas Hartanto

Contact of Researcher
thomas.hartanto.21@ucl.ac.uk ,
University College London,
London WC1E 6BT,
United Kingdom

1. What is the purpose of this study?

This study aims to examines the extent of housing inequality and the effectiveness of the Balanced Housing policy in Jakarta TOD areas from the end-user perspective.

2. Who is conducting the research?

This research is conducted by Thomas Hartanto as a requirement of completion for the MSc Housing and City Planning at University College London.

3. Why have I been invited?

This research aims to examine the Balanced Housing policy's effectiveness in TOD areas in Jakarta and to produce a policy recommendation for the government that can better accommodate the private developers' concerns in implementing the balanced housing concept in TOD areas in Jakarta. By participating in this research, you are helping to understand better what are the difficulties or concerns

of the developers in implementing the balanced housing concept in the development.

4. Do I have to take part in this study?

No – participation in this study is entirely voluntary. You must read and sign a participant consent form if you wish to participate. You can withdraw from participating at any time without providing a reason.

5. What will happen to me if I take part?

You will be asked some questions regarding your current dwelling location and preferred housing options. This survey takes approximately 10 – 15 minutes to complete.

6. What are the possible disadvantages and risks of taking part?

Taking part in this research is not associated with any substantial risks.

7. Will my taking part in the study be kept confidential?

We will rigorously maintain the confidentiality of every piece of information we gather about you for the study. In any upcoming reports or publications, your identity will not be revealed.

8. What will happen to the results of the research study?

Results will be published in standard academic outputs, including general interest magazines/newspapers/journals. You will not be mentioned by name in any document or publication.

9. Data protection privacy notice

Your private information will be handled for the reasons outlined in this notice. The legal basis for processing your personal data will be for the public's interest. The legal basis for processing special category personal data will be statistical, historical, or research-related objectives. All collected data wi be processed and stored safely according to UCL's data protection guide (https://www.ucl.ac.uk/library/research-support/research-data-management/best-practices/how- guides/handling-sensitive-personal) and UK General Data Protection Regulation 2018 (https://www.legislation.gov.uk/ukpga/2018/12/contents/enacted)

10. Contact for further information

For further inquiries, questions, or information, please contact the researcher through email at thomas.hartanto.21@ucl.ac.uk

* Required

1. I certify that I have read and understood the Participant Consent Form. *

   Mark only one oval.

   - ◯ YES
   - ◯ NO

2. I agree to take part in the study. I understand that my information will be used for the reasons disclosed to me. I understand that under data protection regulations, the 'public interest' will be the basis for processing the data.

   Mark only one oval.

   - ◯ YES
   - ◯ NO

RESPONDENT'S PROFILE

3. Please identify your age group *

   Mark only one oval.

   - ◯ 18 - 24
   - ◯ 25 - 34
   - ◯ 35 - 44
   - ◯ 45 - 54
   - ◯ 55+

4. Please identify your latest educational level *

Mark only one oval.

- ◯ High school
- ◯ Bachelor's degree
- ◯ Master's degree
- ◯ PHD
- ◯ Other: _____

5. Which part of Jakarta are you currently living in? *

Mark only one oval.

- ◯ West Jakarta
- ◯ East Jakarta
- ◯ North Jakarta
- ◯ South Jakarta
- ◯ Central Jakarta

6. Please identify the type of dwelling you are currently living in *

Mark only one oval.

- ◯ Multi-family housing (e.g., apartment, condominium, public housing)
- ◯ Single-family housing (e.g., landed housing)
- ◯ Other: _____

7. Please identify your home ownership status *

Mark only one oval.

- ◯ Owned by parents
- ◯ Personal ownership
- ◯ Renting
- ◯ Other: _____

8. Please identify the total number adults above 18 years old in your current household *

Mark only one oval.

- ◯ 0
- ◯ 1
- ◯ 2
- ◯ 3
- ◯ > 3

9. Please identify the total number adults below 18 years old in your current household *

Mark only one oval.

- ◯ 0
- ◯ 1
- ◯ 2
- ◯ 3
- ◯ > 3

10. Please identify your occupation *

Mark only one oval.

- ◯ Full-time paid employee
- ◯ Part-time paid employee
- ◯ Self-employed
- ◯ Student
- ◯ Unemployed
- ◯ Retired
- ◯ Other: _____

11. Which part of Jakarta is your office or school? *

Mark only one oval.

- ◯ West Jakarta
- ◯ East Jakarta
- ◯ North Jakarta
- ◯ South Jakarta
- ◯ Central Jakarta
- ◯ Other: _____

12. What is your range of income per month? (in Indonesian Rupiah) *

Mark only one oval.

- ◯ < 4,600,000
- ◯ 4,600,000 – 10,000,000
- ◯ 10,000,000 – 20,000,000
- ◯ 20,000,000 – 50,000,000
- ◯ > 50,000,000

HOUSING PREFERENCE

13. Where is your desired place to live in? *

Mark only one oval.

- ◯ West Jakarta
- ◯ East Jakarta
- ◯ North Jakarta
- ◯ South Jakarta
- ◯ Central Jakarta
- ◯ Other: _____

14. What is your preferred type of housing to live in? *

Mark only one oval.

- ◯ Landed house
- ◯ Apartment less than 4 floors
- ◯ Apartment more than 4 floors
- ◯ Other: _____

15. With your current income, are you able to afford to buy or rent houses within 700m fror transportation hubs or stations?

Mark only one oval.

- ◯ YES
- ◯ NO

16. On a scale of 1 to 5, how affordable do you think houses around transportation hubs or stations are?

Mark only one oval.

	1	2	3	4	5	
Extremely unaffordable	◯	◯	◯	◯	◯	Extremely affordable

17. Do your current house expenses (rent + bills + transportation) exceed 45% of your monthly income?

Mark only one oval.

- ◯ YES
- ◯ NO

18. Are the house expenses the main reason for moving out? *

Mark only one oval.

- ◯ YES
- ◯ NO

19. Despite being further from your office or school, would you move out to cheaper or more affordable areas to live in?

Mark only one oval.

- ◯ YES
- ◯ NO

20. On a scale of 1 to 5, how important is it to have transportation hubs or stations within 700m of your house?

Mark only one oval.

	1	2	3	4	5	
Very unimportant	◯	◯	◯	◯	◯	Very important

PUBLIC TRANSPORT FACILITIES

21. Are there any transportation hubs or stations within 700m of your house? *

Mark only one oval.

- ◯ YES
- ◯ NO

22. How many transportation hubs or stations are within 700m of your house? *

Mark only one oval.

- ◯ 0
- ◯ 1
- ◯ 2
- ◯ 3
- ◯ > 3

TRANSPORTATION PREFERENCES

23. How often do you use public transport to work or school in a week? *

Mark only one oval.

- ◯ 0
- ◯ 1
- ◯ 2
- ◯ 3
- ◯ > 3

24. I usually go to school/work/shopping by using *

Mark only one oval.

- ◯ On foot
- ◯ Personal vehicles
- ◯ Public transport
- ◯ Other: _____

VIEW TOWARDS THE BALANCED HOUSING POLICY

25. On a scale of 1 to 5, how familiar are you with the Balanced Housing policy requiring developers to include affordable houses for low-income people with a monthly income of IDR 4,600,000 into their development scheme?

Mark only one oval.

	1	2	3	4	5	
Very unfamiliar	◯	◯	◯	◯	◯	Very familiar

26. On a scale of 1 to 5, how effective do you think the Balanced Housing policy is in creatin affordable homes around TOD areas?

Mark only one oval.

	1	2	3	4	5	
Very ineffective	◯	◯	◯	◯	◯	Very effective

THANK YOU

Thank you for participating on this Housing Inequality in Jakarta TOD areas survey.

Thomas Hartanto (thomas.hartanto.21@ucl.ac.uk)
University College London, London WC1E 6BT, United Kingdom

Appendix 5. Risk assessment

RISK ASSESSMENT FORM
FIELD / LOCATION WORK

DEPARTMENT/SECTION: BARTLETT SCHOOL OF PLANNING
LOCATION(S): JAKARTA, INDONESIA
PERSONS COVERED BY THE RISK ASSESSMENT: THOMAS HARTANTO

BRIEF DESCRIPTION OF FIELDWORK (including geographic location): No field work will be undertaken as part of this research, and all primary data will be collected through online interviews and electronic surveys

COVID-19 RELATED GENERIC RISK ASSESSMENT STATEMENT:

Coronavirus disease (COVID-19) is an infectious disease caused by coronavirus SARS-CoV-2. The virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes. Droplets fall on people in the vicinity and can be directly inhaled or picked up on the hands and transferred when someone touches their face. This risk assessment documents key risks associated fieldwork during a pandemic, but it is not exhaustive and will not be able to cover all known risks, globally. This assessment outlines principles adopted by UCL at an institutional level and it is necessarily general. Please use the open text box 'Other' to indicate any contingent risk factors and control measures you might encounter during the course of your dissertation research and writing.

Please refer to the Dissertation in Planning Guidance Document (available on Moodle) to help you complete this form.

Hazard 1: Risk of Covid -19 infection during research related travel and research related interactions with others (when face-to-face is possible and/or unavoidable)

Risk Level - Medium /Moderate

Existing Advisable Control Measures: Do not travel if you are unwell, particularly if you have COVID-19 symptoms. Self-isolate in line with NHS (or country-specific) guidance.

Avoid travelling and face-to-face interactions; if you need to travel and meet with others:

- If possible, avoid using public transport and cycle or walk instead.
- If you need to use public transport travel in off-peak times and follow transport provider's and governmental guidelines.

- Maintain (2 metre) social distancing where possible and where 2 metre social distancing is not achievable, wear face covering.
- Wear face covering at all times in enclosed or indoor spaces.
- Use hand sanitiser prior to and after journey.
- Avoid consuming food or drinks, if possible, during journey.
- Avoid, if possible, interchanges when travelling - choose direct route.
- Face away from other persons. If you have to face a person ensure
that the duration is as short as possible.
- Do not share any items i.e. stationary, tablets, laptops etc. If items need to be shared use disinfectant wipes to disinfect items prior to and after sharing.
- If meeting in a group for research purposes ensure you are following current country specific guidance on face-to-face meetings (i.e rule of 6 etc.)
- If and when possible meet outside and when not possible meet in venues with good ventilation (e.g. open a window)
- If you feel unwell during or after a meeting with others, inform others you have interacted with, self-isolate and get tested for Covid-19
- Avoid high noise areas as this mean the need to shout which increases risk of aerosol transmission
of the virus.
- Follow one way circulation systems, if in place. Make sure to check before you visit a building.
- Always read and follow the visitors policy for the organisation you will be visiting.
- Flush toilets with toilet lid closed.
-'Other' Control Measures you will take (specify):

NOTE: The hazards and existing control measures above pertain to Covid-19 infection risks only. More generalised health and safety risk may exist due to remote field work activities and these are outlined in your Dissertation in Planning Guidance document. Please consider these as possible 'risk' factors in completing the remainder of this standard form. For more information also see: Guidance Framework for Fieldwork in Taught and MRes Programmes, 2021-22

Consider, in turn, each hazard (white on black). If **NO** hazard exists select **NO** and move to next hazard section.
If a hazard does exist select **YES** and assess the risks that could arise from that hazard in the risk assessment box.

Where risks are identified that are not adequately controlled they must be brought to the attention of your Departmental Management who should put temporary control measures in place or stop the work. Detail such risks in the final section.

ENVIRONMENT	**The environment always represents a safety hazard. Use space below to identify and assess any risks associated with this hazard**
e.g. location, climate, terrain, neighbourhood, in outside organisations, pollution, animals.	Examples of risk: adverse weather, illness, hypothermia, assault, getting lost. Is the risk ~~high / medium / low ?~~ **Not Applicable**

CONTROL MEASURES	**Indicate which procedures are in place to control the identified risk**
	work abroad incorporates Foreign Office advice
	only accredited centres are used for rural field work
	participants will wear appropriate clothing and footwear for the specified environment
	refuge is available
	work in outside organisations is subject to their having satisfactory H&S procedures in place
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

EMERGENCIES	**Where emergencies may arise use space below to identify and assess any risks**
e.g. fire, accidents	Examples of risk: loss of property, loss of life

CONTROL MEASURES	**Indicate which procedures are in place to control the identified risk**
	participants have registered with LOCATE at http://www.fco.gov.uk/en/travel-and-living-abroad/
	contact numbers for emergency services are known to all participants
	participants have means of contacting emergency services
	a plan for rescue has been formulated, all parties understand the procedure

	the plan for rescue /emergency has a reciprocal element
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

EQUIPMENT	**Is equipment used?**	**NO**	**If 'No' move to next hazard** **If 'Yes' use space below to identify and assess any risks**
e.g. clothing, outboard motors.	Examples of risk: inappropriate, failure, insufficient training to use or repair, injury. Is the risk high / medium / low ?		

CONTROL MEASURES	**Indicate which procedures are in place to control the identified risk**
	the departmental written Arrangement for equipment is followed
	participants have been provided with any necessary equipment appropriate for the work
	all equipment has been inspected, before issue, by a competent person
	all users have been advised of correct use
	special equipment is only issued to persons trained in its use by a competent person
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

LONE WORKING	**Is lone working a possibility?**	**NO**	**If 'No' move to next hazard** **If 'Yes' use space below to identify and assess any risks**
e.g. alone or in isolation *lone interviews.*	Examples of risk: difficult to summon help. Is the risk ~~high / medium /~~ low?		

CONTROL MEASURES	Indicate which procedures are in place to control the identified risk
	the departmental written Arrangement for lone/out of hours working for field work is followed
	lone or isolated working is not allowed
	location, route and expected time of return of lone workers is logged daily before work commences
	all workers have the means of raising an alarm in the event of an emergency, e.g. phone, flare, whistle
	all workers are fully familiar with emergency procedures
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

ILL HEALTH	**The possibility of ill health always represents a safety hazard. Use space below to identify and assess any risks associated with this Hazard.**
e.g. accident, illness, personal attack, special personal considerations or vulnerabilities.	Examples of risk: injury, asthma, allergies. Is the risk ~~high / medium~~ / low?

CONTROL MEASURES	Indicate which procedures are in place to control the identified risk
	all participants have had the necessary inoculations/ carry appropriate prophylactics
	participants have been advised of the physical demands of the research and are deemed to be physically suited
	participants have been adequate advice on harmful plants, animals and substances they may encounter
	participants who require medication should carry sufficient medication for their needs

	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

TRANSPORT	**Will transport be required**	**NO**	X	**Move to next hazard**
		YES		**Use space below to identify and assess any risks**
e.g. hired vehicles	Examples of risk: accidents arising from lack of maintenance, suitability or training Is the risk high / medium / low?			

CONTROL MEASURES	**Indicate which procedures are in place to control the identified risk**
	only public transport will be used
	the vehicle will be hired from a reputable supplier
	transport must be properly maintained in compliance with relevant national regulations
	drivers comply with UCL Policy on Drivers http://www.ucl.ac.uk/hr/docs/college_drivers.php
	drivers have been trained and hold the appropriate licence
	there will be more than one driver to prevent driver/operator fatigue, and there will be adequate rest periods
	sufficient spare parts carried to meet foreseeable emergencies
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

DEALING WITH THE PUBLIC	**Will people be dealing with public**	**NO**	**If 'No' move to next hazard** **If 'Yes' use space below to identify and assess any risks**
e.g. interviews, observing	Examples of risk: personal attack, causing offence, being misinterpreted. Is the risk high / medium / low?		

CONTROL MEASURES	**Indicate which procedures are in place to control the identified risk**
	all participants are trained in interviewing techniques
	advice and support from local groups has been sought

	participants do not wear clothes that might cause offence or attract unwanted attention
	interviews are conducted at neutral locations or where neither party could be at risk
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented: use a questionnaire template and explain to the interviewee the reasonings behind each question

FIELDWORK **3** April 2022

WORKING ON OR NEAR WATER	**Will people work on or near water?**	**NO**	**If 'No' move to next hazard** **If 'Yes' use space below to identify and assess any risks**
e.g. rivers, marshland, sea.	Examples of risk: drowning, malaria, hepatitis A, parasites. Is the risk high / medium / low?		

CONTROL MEASURES	**Indicate which procedures are in place to control the identified risk**
	lone working on or near water will not be allowed
	coastguard information is understood; all work takes place outside those times when tides could prove a threat
	all participants are competent swimmers
	participants always wear adequate protective equipment, e.g. buoyancy aids, wellingtons
	boat is operated by a competent person
	all boats are equipped with an alternative means of propulsion e.g. oars
	participants have received any appropriate inoculations
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

MANUAL HANDLING (MH)	Do MH activities take place?	NO	If 'No' move to next hazard If 'Yes' use space below to identify and assess any risks
e.g. lifting, carrying, moving large or heavy equipment, physical unsuitability for the task.	Examples of risk: strain, cuts, broken bones. Is the risk high / medium / low?		

CONTROL MEASURES	Indicate which procedures are in place to control the identified risk
	the departmental written Arrangement for MH is followed
	the supervisor has attended a MH risk assessment course
	all tasks are within reasonable limits, persons physically unsuited to the MH task are prohibited from such activities
	all persons performing MH tasks are adequately trained
	equipment components will be assembled on site
	any MH task outside the competence of staff will be done by contractors
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

SUBSTANCES	Will participants work with substances	NO	If 'No' move to next hazard If 'Yes' use space below to identify and assess any risks
e.g. plants, chemical, biohazard, waste	Examples of risk: ill health - poisoning, infection, illness, burns, cuts. Is the risk high / medium / low?		

CONTROL MEASURES	Indicate which procedures are in place to control the identified risk
	the departmental written Arrangements for dealing with hazardous substances and waste are followed

	all participants are given information, training and protective equipment for hazardous substances they may encounter
	participants who have allergies have advised the leader of this and carry sufficient medication for their needs
	waste is disposed of in a responsible manner
	suitable containers are provided for hazardous waste
	OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

OTHER HAZARDS	**Have you identified any other hazards?**	**NO**	**If 'No' move to next section** **If 'Yes' use space below to identify and assess any risks**
i.e. any other hazards must be noted and assessed here.	Hazard: Risk: is the risk		
CONTROL MEASURES	**Give details of control measures in place to control the identified risks**		

Have you identified any risks that are not adequately controlled?	**NO**	X	**Move to Declaration**
	YES		**Use space below to identify the risk and what action was taken**

DECLARATION	The work will be reassessed whenever there is a significant change and at least annually. Those participating in the work have read the assessment.

Select the appropriate statement:

X	I the undersigned have assessed the activity and associated risks and declare that there is no significant residual risk
X	I the undersigned have assessed the activity and associated risks and declare that the risk will be controlled by

	the method(s) listed above	
NAME OF SUPERVISOR **Dr Marco Dean**		
FIELDWORK	**5**	April 2022

BPLN0039_QPCN3

GRADEMARK REPORT

FINAL GRADE

/100

GENERAL COMMENTS

Instructor

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9

PAGE 10

PAGE 11

PAGE 12

PAGE 13

PAGE 14

PAGE 15

PAGE 16

PAGE 17

PAGE 18

PAGE 19

PAGE 20

PAGE 21

PAGE 22

PAGE 23

PAGE 24

PAGE 25

PAGE 26

PAGE 27

PAGE 28

PAGE 29

PAGE 30

PAGE 31

PAGE 32

PAGE 33

PAGE 34

PAGE 35

PAGE 36

PAGE 37

PAGE 38

PAGE 39

PAGE 40

PAGE 41

PAGE 42

PAGE 43

PAGE 44

PAGE 45

PAGE 46

PAGE 47

PAGE 48

PAGE 49

PAGE 50

PAGE 51

PAGE 52

PAGE 53

PAGE 54

PAGE 55

PAGE 56

PAGE 57

PAGE 58

PAGE 59

PAGE 60

PAGE 61

PAGE 62

PAGE 63

PAGE 64

PAGE 65

PAGE 66

PAGE 67

PAGE 68

PAGE 69

PAGE 70

PAGE 71

PAGE 72

PAGE 73

PAGE 74

PAGE 75

PAGE 76

PAGE 77

PAGE 78

PAGE 79

PAGE 80

PAGE 81

PAGE 82

PAGE 83

PAGE 84

PAGE 85

PAGE 86

PAGE 87

PAGE 88

PAGE 89

PAGE 90

PAGE 91