

URBAN VITALITY IN TOD :

THE CASE OF JAKARTA,

INDONESIA

A Master Thesis By Karina Miatantri

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Urban Vitality in TOD: The Case of Jakarta, Indonesia

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Abstract

Improvement of urban vitality is among the abstract goals that drive the implementation of transit-oriented development (TOD), following the notion that in such an area where mobility flows intersect, opportunities for human interaction is at its highest. This is particularly desirable in many developing countries, specifically in its car-dependent cities. This research focuses on exploring how vital TOD – TOD displaying urban vitality – can be achieved through identifying the influencing factors. This is conducted through an exploration on the implicit links between the two frameworks, which were made explicit by the identification of vital TOD success factors. Subsequently, these factors were applied to evaluate Blok M and Dukuh Atas TOD areas in Jakarta, Indonesia.

Data was collected in Jakarta and Bandung through semi-structured interviews with key actors, sampling survey towards area users and residents and qualitative content analysis. A case report on both case studies was formulated based on the conceptual framework, incorporating the four elements of the vital TOD success factors, namely Actors, Policies, Design and Activity.

The concluding chapter reflects on the level of vitality in TOD projects in Jakarta as well as the bottlenecks in its implementation to achieve vitality. Consequently, generalisation was made to conclude the factors that ensure vitality in TOD and address the main research question on the role of urban vitality in the implementation of TOD. The outcome of this research is expected to contribute to a more comprehensive understanding on what constructs successful TOD.

KEY WORDS: TOD, urban vitality, success factors, case study, actor, policies, design, activity

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List of Abbreviations

| BRT | : | Bus Rapid Transit | |
|------|---|--------------------------------------|--|
| DGR | : | Directorate General of Railways | |
| LRT | : | Light Rail Transit | |
| MRT | : | Mass Rapid Transit | |
| MRTJ | : | Mass Rapid Transit Jakarta | |
| PT | : | Perseroan Terbatas (Limited Company) | |
| TOD | : | Transit-Oriented Development | |
| UDGL | : | Urban Design Guideline | |

CHAPTER 1. INTRODUCTION

Metropolitans and big cities have always fascinated me. They have unique characteristics – their own strengths and weaknesses - and I have always pondered on all the planning and effort required in developing and managing them. What elements constitute a city? Furthermore, what ensures a city to be vibrant? These questions are the starting point of this research. Having been born and raised in Jakarta, Indonesia, I would observe with envy at other vibrant metropolitans in the world with their advanced public transportation systems, pedestrian-friendly environments and lively public interaction. As a city that is often listed as having one of the worst traffic congestions in the world, Jakarta has limited transportation systems, forcing most residents to use private vehicles and those who are not has to resort to crowded buses and trains with inadequate facilities and inefficient routes. Furthermore, this condition is made worse with the lack of public space and pedestrian walkways. In turn, common human interaction in public space is limited. But how can a city that is already densely developed change this condition? Although Jakarta is trying to catch up on public transportation provision, the redevelopment of the station areas is just as important to ensure successful shift from private vehicles to public transportation and accommodate the human flow and interaction resulting from activities in and around the stations. The assurance of urban vitality should be an important goal in these projects. Transit-oriented development or TOD is seen as a concept that can respond to this redevelopment challenge. TOD is an emerging concept in Jakarta and being planned across the city in conjunction with public transportation system development. But urban vitality might not always be a definite impact of TOD areas. Considering the TOD best practices, can we then analyse how urban vitality plays a role in TOD implementation? This is the main question that this research is trying to answer.

This first chapter will introduce the concept of TOD and its impacts on the urban life. A statement of what this research intends to look at will then be clarified in the main research question and sub-questions. To explain the importance of this research, the scientific and societal relevance of this topic will be elaborated. And this chapter is ended with the outline of the research.

1.1 TOD and Human Interaction in Urban Areas

Public transportation is a popular choice for people living in urban areas around the world. Favoured modes of urban public transportation among others are Mass Rapid Transit (MRT) or metro, Light Rail Transit (LRT), Bus Rapid Transit (BRT), trams and cable cars. To increase accessibility and effectiveness of the aforementioned urban transportation modes, a certain pattern of development is built in the vicinity of the transit stations, which is known as transitoriented development (TOD). Transit-oriented development is generally defined as mixed-use residential and commercial developments with sufficient density (preferably graduated from high in the centre and low in the outside perimeter) that are oriented towards and in close proximity (walkable distance) to a public transportation mode (train, metro, tram or bus) (Tan W. , 2013). TOD also refers to projects that achieve five main goals: location efficiency, rich mix of choices, value recapture, place making and resolution of tension between node and place (Dittmar & Poticha, 2004). Common traits in TOD include urban compactness, pedestrianfriendly and cycle-friendly environments, public and civic space near stations, and stations as community hubs (Transit Cooperative Research Program, 2002). The success of TOD implementation can be measured by various indicators; among the most significant are political stability at the national level, regional land use-transportation body, relationships between actors in the region, public participation, interdisciplinary implementation teams, and certainty for developers (Thomas & Bertolini, 2015).

One of the arguments of the importance in pursuing TOD is that it allows, at least potentially, a degree of human interaction in the public domain – or '*urbanity*' – that is difficult, if not impossible to achieve in much more socially segregated car-dependent urban environments (Bertolini, 2000). Improvement of urban vitality and sustainability are among the abstract goals that drive the implementation of TOD strategies, following the notion that in a spatially distributed city where mobility flows intersect, opportunities for human interaction are highest (Bertolini, Curtis, & Renne, 2012). In this context, TOD serve as a place where the still much valued 'face to face' exchanges of the knowledge economy and 'shoulder to shoulder' experiences of the leisure economy can most conveniently take place (Bertolini, 2000). As these driving forces are more abstract than quantitative goals such as value capture and job creation, the study to measure the connection between TOD and urban vitality should be further deepened. Further, the goal of urban vitality will be highly desirable in many developing countries, specifically its car-dependent cities. This research focuses on exploring how successful TOD - one that includes urban vitality – can be achieved in developing countries through identifying the influencing factors. This is conducted through a literature review of urban vitality concept, linking the relevant factors of urban vitality to TOD aspects and finally applying the factors in an evaluation of a case study in a developing country.

1.2 Research Objectives

To put the ideas of TOD and urban vitality as discussed above into focus, the objectives of this research are to:

- 1. Analyse the relationship between TOD and urban vitality;
- 2. Identify the TOD success factors that ensure urban vitality; and
- 3. Evaluate the urban vitality impact on TOD implementation in developing countries.

An analysis on the relationship between TOD and urban vitality will result in an identification of vital TOD success factors, giving a better understanding of a successful TOD. These factors will then be tested in an evaluation of TOD case studies in a developing country to determine its validity and assessing the urban vitality in these cases. The result will provide insight in the development condition of TOD areas in developing countries and whether they need further adjustments to guarantee vitality. The case studies that will be selected in this research are Blok M and Dukuh Atas TOD projects in Jakarta, Indonesia. Upon completion of this research, the result is expected to serve as an example for other TOD projects, particularly in urban areas of developing countries.

1.3 Research Questions

The research aims to identify the link between urban vitality and TOD implementation as well as evaluate how urban vitality is displayed in TOD areas in developing countries. With regard to the research objectives, the main research question that will be addressed is:

"How does urban vitality play a role in the implementation of TOD?"

The main question will explore if and how urban vitality plays a role in the planning and implementation of TOD by looking into the similarities and differences between the two frameworks and how they connect to each other. It will explore both the physical and institutional dimensions of the relationship. During the process of discovering the answers to the main research question, the research will also aim to answer the following questions:

- What are the success factors that ensure urban vitality in TOD implementation?
- In what ways does TOD implementation ensure urban vitality?
- How is urban vitality displayed in TOD projects in the case study of Jakarta?
- What are the bottlenecks in achieving vitality in Jakarta TOD implementation?

1.4 Relevance of Research

1.4.1 Scientific Relevance

This research aims to identify the link between TOD and urban vitality resulting in an identification of relevant factors, and evaluating these factors on the case study of Jakarta, Indonesia. Researches focusing on abstract goals – as opposed to quantitative ones – of TOD implementation such as urban vitality and its practices in developing countries can gain insight in the pursuit of the effort to create a 'place' – a notion which refers to "the intimate human relations between people and their homes, neighbourhoods, cities, lands and countries" (Tuan, 1977; Relph, 1976). Outcome of this research is expected to contribute in enriching TOD studies in Southeast Asia, specifically in Indonesia, as TOD implementation is still viewed as a new concept.

1.4.2 Societal Relevance

TOD area is one of the few places in the contemporary city where the participants in its increasingly diverse 'interest-communities'¹ (Webber, 1964) can still physically meet and interact. As much as it is challenging, this situation also presents potentials for physical, social and economic interaction (Bertolini, 2000). Improvement of this interaction through a vibrant TOD area can benefit local economic development and better environment quality (King & Zamorano, 2014) as well as achievement of wider economic and social goals in a sustainable way for the society in urban areas.

1.5 Report Outline

Taking the research questions into consideration, the second chapter will probe into the related theories that will function as a framework: the concept and implementation of transit-oriented development, and review of the different views on success factors. An explanation on urban vitality and the effect on daily life are also presented, including measurable indicators. Establishing the link between TOD and urban vitality is done by comparing their variables and finding the similar factors that applies to both concepts. These factors, referred as vital TOD success factors will be tested in an evaluation on the case studies. Second chapter will be concluded with a conceptual model of the research.

Research methodology will be discussed in the third chapter, enlightening on interview, sampling survey, and content analysis techniques which will be applied in the research. Additionally, an illustration on the research design strategy is also constructed in this chapter.

The findings of data collection will be presented in chapter four. Based on these findings, a case report on the two case studies in Jakarta will be explained in chapter five. Chapter six analyses the answers to the research questions, drawing conclusions with explicit connection to the theories in chapter two. In the last chapter, a critical reflection on the entire process of the research as well as the contribution that the research offers for planning theory and practice are given.

¹ An interest community is a loosely organized or unorganized group of individuals who share an interest in a particular subject, product, or activity in a common medium (Webber, 1964).

CHAPTER 2. THEORY: BRIDGING TRANSIT-ORIENTED DEVELOPMENT AND URBAN VITALITY

An introduction of the research topic has been presented in the first chapter. A start into the actual research begins with stepping in the world of TOD: an exploration of what TOD is, the general success factors discussed in several academic and professional literatures and the gap found in between different authors. It is also then of course pertinent to discuss the concept of urban vitality and how it affects the city life. Further, the link between TOD and urban vitality will be analysed. The chapter will be closed by constructing a conceptual model that explains the connections between the theories and writings disclosed in this chapter.

2.1 Stepping into the Transit-oriented Development World

The vision in developing integrated public transportation systems does not end in merely planning the transportation infrastructures. The areas in every transit station needs to be developed to increase transit ridership and accommodate the needs of the people around it. In the late 1980s, the concept of Transit-oriented Development (TOD) was coined by Peter Calthorpe (1993) through his work "The Next American Metropolis: Ecology, Community and the American Dream" to describe "mixed-use residential and commercial developments with sufficient density (preferably graduated) that is oriented towards and in close proximity (walkable distance) to a public transportation mode (train, metro, tram or bus)". Few popular definitions include indicators such as walkability, building density or local efficiency, while others include normative concepts such as liveability, vitality, accessibility and diversity (Cervero, 1998; Dittmar & Ohland, 2004; Reconnecting America, 2007; Renne, 2008). As TOD is by nature an extremely complex planning approach embedded in a dynamic institutional context (Pflieger et al., 2009), the implementation opportunities and barriers need to be evaluated on the basis of the specificity of the local context and uniqueness of each case (Bertolini et al., 2012). The factors that influence a successful implementation in a developed country might be different to one in a developing country, due to differences in local context, such as institutions, regulations, political situation and planning system. Figure 1 provides an illustration of how a TOD area is situated in a transit system. It shows how the closest area to the transit station is developed with higher building density. And as it moves further away from the transit station, the lower the density will be.

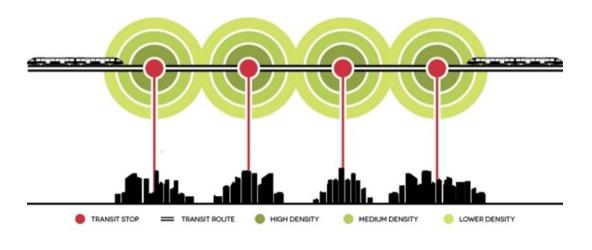


Figure 1. Visual Representation of TOD Area in a Transit System

Source: Pardo, 2013

If TOD aims to be accepted as an alternative to car-oriented urban patterns, it needs to attract a broad market in terms of income levels, interests, household types or regional locations. Local context results in different forms and attributes of TOD depending on the area. For example, in Asian cities such as Hong Kong, Tokyo, Seoul, Taipei, and mainland Chinese cities of Beijing, Shanghai, Guangzhou and Shenzhen, TOD can be generally recognised by the following five attributes:

- 1. Differentiated density between the locations inside and outside of TOD;
- 2. Docksized district where walkways are well integrated with shopping malls, exhibition space or business centers;
- 3. High standards and fine designs in the environmental design of the TOD area;
- 4. Easy access by transit to various urban services and functions corridor and region wide for people living in the TOD area;
- 5. Recapture and redistribution of increased property values between the public and private sector (Reconnecting America, 2009).

2.2 Exposing the Gap in TOD Success Factors

A successful implementation of TOD can be translated as the move of metropolitan areas away from a car-oriented, sprawling development path towards a more transit-oriented and compact development, although success here is more relative and context-specific rather than an absolute measure (Tan, Bertolini, & Janssen-Jansen, 2014). Various case studies have managed to identify the factors that influence successful implementation of TOD. The ability of case study as a methodology to integrate multiple methods makes it particularly useful in planning, which is a multidisciplinary field integrating geography, sociology, public health, psychology and economics, among other disciplines (Thomas & Bertolini, 2014). Thomas and Bertolini (2014) have synthesised critical success factors from 11 completed case studies of TOD implementation, which include Tokyo, Perth, Melbourne, Montreal, Vancouver, Toronto, Naples, Copenhagen, Amsterdam – Utrecht, Rotterdam – The Hague and Arnhem – Nijmegen. The factors which are summaries of similarities and differences across cases that led to successful (or unsuccessful) TOD implementation are stated in the following Table 2.

| No. | Critical Success | Increases Success | Decreases Success | | | |
|-----|--|---|---|--|--|--|
| | Factor Plans and Policies | | | | | |
| - | | | | | | |
| 1 | Policy Consistency | Very consistent over time in planning policy supporting TOD, e.g. specific station areas, transit | Very inconsistent planning policy supporting TOD, major changes | | | |
| | | corridors, and other transit-supportive and non- motorised –supportive land use planning | over time | | | |
| 2 | Vision Stability | Very stable vision, e.g. city-regional vision for land | Very unstable vision, major | | | |
| | | use-transport planning or urban sustainability | changes over time | | | |
| 3 | Government Support | Very good support of higher levels of government, e.g. provincial tax on gasoline to support public transit, national station location or regeneration policy, provincial funding for cycling infrastructure | No support of higher levels of government, no policies or funding | | | |
| 4 | Political Stability (National) | Very stable national political agenda supporting TOD | Very unstable national political agenda supporting TOD, major changes over time | | | |
| 5 | Political Stability (Local) | Very stable local (municipal or regional) political agenda supporting TOD | Very unstable local (municipal or regional) political agenda supporting TOD, major changes over time | | | |
| | | Actors | | | | |
| 6 | Actor Relationships | Very good relationships between municipal actors at a regional scale, e.g. communication, overlap in goals and vision, roles | Poor or no relationships between municipal actors at a regional scale | | | |
| 7 | Regional Land Use – Transportation Body | Presence of a regulatory regional land use – transport planning body | No regional land use – transport planning body (advisory or regulatory) | | | |
| 8 | Inter-municipal Competition | No competition among municipalities for new developments/funding | Very intense competition among municipalities for new developments/funding | | | |
| 9 | Multidisclipinary Implementation Teams | Widespread presence of multidisciplinary teams implementing TOD | Sector-specific teams (e.g. solely planners or engineers) implementing TOD | | | |
| 10 | Public Participation | Very high public participation in land use – transport planning process | No public participation, public not engaged or interested | | | |
| 11 | Public Acceptance | Very high public acceptance of high densities and public transit | No public acceptance of high densities and public transit | | | |
| 12 | Key Visionaries | Many influential key visionaries over time, e.g. elected, citizen or business leaders | No key visionaries over time | | | |
| | Implementation | | | | | |
| 13 | Site-Specific Planning Tools | Widespread use of site-specific planning tools, e.g. FAR bonuses, leasing of air rights, density targets | No use of site-specific tools | | | |

Table 1. Critical Success Factors in TOD Implementation

| No. | Critical Success | Increases Success | Decreases Success |
|-----|-------------------------|---|--------------------------------------|
| | Factor | | |
| 14 | Regional Level TOD | Corridor-level planning, e.g. coordination of land | No corridor-level or station area |
| | Planning | use and transport in widespread transit corridors | planning |
| 15 | Certainty for | High degree of certainty for developers, e.g. plans | Uncertainty; developers are |
| | Developers | and policies supporting higher densities, tools to | unaware of policies, tools and sites |
| | | enable mixed uses at station areas, designation of | encouraging TOD |
| | | areas for development/transit corridors | |
| 16 | Willingness to | Actors are very willing to experiment with new | Actors are unwilling to experiment |
| | Experiment | policies, practices and tools | with new policies, practices and |
| | | | tools |

Source: Thomas & Bertolini, 2014

Despite the major differences in location, social and policy contexts, cross-case patterns in TOD implementation can be pointed out in the form of critical success factors. From these factors, there is an emphasis on the institutional aspect of TOD implementation, as shown by the extensive significance of plans and policies as well as actors among the sixteen factors. Plans and policies include local and regional TOD-supporting policy, vision, government support and national and local political stability. The keywords noted as contributing to successful plans and policies in TOD implementation are stability, consistency, certainty and commitment. If TOD plans and policies are stable, consistent, certain and committed towards common goals, they will have impact on successful TOD implementation. The vision and policies need to be clear and consistent over time, instead of having major changes from one vision to another. Parallel to TOD plans and policies, strong government support should also be carried out in other transportation policies that will have a positive impact on TOD, such as transit subsidy, cycling infrastructure provision, or lowering of gasoline subsidy. Moreover, stable political agenda supporting TOD in the national and local levels are also noted as a factor that will aid success.

Actors that are mentioned in this view are municipal actors, regional land use-transportation body, multidisciplinary implementation teams, public, key visionaries – which can be from the government, private or citizen – and private developers. For actors to cooperate in realising successful TOD, they need to have good relationship, communication, participation and creativity.

Another popular measurement of TOD performance is the "five Ds", consisting of density, diversity, design, destination accessibility and distance to transit (Ewing & Cervero, 2010). *Density* can be defined as the quantity of a variable of interest in a given area, which can be building floor area, employment, population or something else. *Diversity* looks into how many different land uses exist in a given area and the extent of their representation in land area, floor area or employment. *Design* refers to the street characteristics of an area and measured by its average block size, proportion of four-way intersections and number of intersections in a given

area. Other design measurements that are occasionally used include sidewalk coverage, average street width, the number of pedestrian crossings, street trees or other physical variables that distinguish pedestrian- and non-motorised vehicle-oriented environment from auto-oriented ones. Destination accessibility measures how easy it is to access trip attractions, which can be regional or local. Regional accessibility can be exemplified as distance from transit station to central business district, while local accessibility is for example the distance from home to the closest supermarket. Distance to transit typifies the average of the shortest street routes from houses or workplaces in an area to the nearest transit station, whether it is train, tram or bus. Unlike the aforementioned TOD success factors suggested by Thomas and Bertolini, the five Ds suggest that successful TOD lies in the spatial aspect. All the elements of five Ds refer to how the built environment should be altered to accommodate travel demand. Upon further analysis, it can be concluded that the five Ds correspond to the original definition of TOD coined by Peter Calthorpe, which includes the terms mixed-use, density and proximity to transit. These elements in five Ds, though, should be viewed as rough categories, as they can be expanded further to include more variables. This also causes overlapping boundaries in between the elements, for example some destination accessibility variables are similar to diversity.

Redefining Successful TOD

Place-making has been noted as one of the greatest limitations to the current crop of TOD (Dittmar & Poticha, 2004). Not enough attention is given to make TOD areas more attractive and friendly for pedestrians. If transit is combined with an adequate and safe pedestrian environment, then pedestrians can easily become transit riders. However, if transit is not convenient, frequent or linked to the preferred destinations, then the transit-oriented aspect of the development will not be successful. But in developing attractive and pedestrian-friendly environments, the actors and policies also have direct impact on how a place will be developed. Planning is not so much about action as it is about interaction, hence finding ways to improve sustainability and quality of life in general ultimately requires coordination of actors and organizations that are mediated through institutions (Kim, 2011). The institutional aspect is equally an important part of TOD. The two different views on TOD success factors by Thomas and Bertolini (2014) and Ewing and Cervero (2010) that are presented above show complementary views on how TOD can achieve successful implementation, with one focusing on institutional aspect while the other one on spatial. Both institutional and spatial aspects are important in TOD implementation, so only focusing on one of these aspects will not give a complete comprehension on TOD. If these two views can be combined together, a better and fuller understanding on successful TOD can be attained.

2.3 Urban Vitality as the Bridge between TOD Success Factors Gap

Successful TOD needs to have balance on both physical and non-physical aspects. To approach the bridging of these two aspects together, a comparison with another concept that possesses a combination of physical and non-physical aspects of development can be made. Urban vitality appears as the answer for a concept retaining this requirement. It has similarities with the indicators and goals that TOD would like to achieve – combining institutional and spatial aspects. Other urban concepts such as place-making, mixed-use development and creative city were also considered to be the comparison for a better understanding of TOD but they all focus on only one side of either institutional or spatial aspect; lacking the fullness that urban vitality offers. Place making is people-centred and focuses on the value of and attachment to a spot because it is pleasant or appealing (Martin, 2003; Project for Public Spaces, 2009), mixed-use development is related to the spatial aspect which blends residential, commercial, recreational and other functions in an integrated manner, and creative city focuses on how cities can construct the supporting institutions that would allow the people and organisations to think, plan and act with imagination to overcome challenges and seize opportunities (Landry, 2016).

Urban vitality is defined as the life force of the city, shaped by its pre-existing conditions (spatial and otherwise), requiring a critical mass to become viable and strong (Tan & Klaasen, 2007). It is manifested through the interaction between variables across various categories, i.e. physical, social, economic and others. It can be observed in in many cities in Asia and North America, for example Tokyo, Hong Kong, Singapore or New York, where there is a presence of numerous and diverse activities, social interaction, public diversity, creativity, innovations and other functional elements. But this does not seem to apply in many big European cities, such as Amsterdam, Zurich or Copenhagen. Most commercial activities and functions would be restricted to normal working hours and the residents will have limited options of activities at night. Urban vitality is an intangible factor to manipulate in an urban system, but based on a review on related literatures, there are variables that generate and influence urban vitality. They can be classified into four broad categories, which are presented as follows:

- 1. Actors and social conditions
 - Flexible and horizontal governance (Tan & Klaasen, 2007)
 - Public participation (Jacobs, 1961; Salingaros, 2005)
 - Multi-ethnicity (Wood & Landry, 2008; Tan & Klaasen, 2007)
 - Religion (Tan & Klaasen, 2007)
 - Work culture and family unit (Peper & Den Dulk, 2003)
 - Individualism (Tan & Klaasen, 2007)
 - Urban density/critical mass (Jacobs, 1961; Wood & Landry, 2008; Tan & Klaasen, 2007)

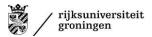


- 2. Plans and policies
 - Clear vision and guideline (Tan & Klaasen, 2007)
 - Mixed land ownership (Comedia, 1991)
- 3. Design
 - Diversity/mixed-use development (Tan & Klaasen, 2007; Comedia, 1991; Jacobs, 1961)
 - Fine-grained economy (Montgomery, 1998)
 - Accessibility (Tan & Klaasen, 2007)
 - Public space (Tan & Klaasen, 2007; Comedia, 1991; Jacobs, 1961; Montgomery, 1998)
- 4. Activity
 - Active street life (Comedia, 1991; Montgomery, 1998)
 - Variety in opening hours (Montgomery, 1998; Comedia, 1991)

Critical Note on Urban Vitality

A vital city is one which successfully allows its residents to have maximum scope for activity (Lynch, 1981). But the studies that discuss how this maximum scope can be achieved have also been met by criticism. Zukin (2010) presented an in-depth and descriptive analysis of decline and revitalisation of "authentic" neighbourhoods in New York City. She argued that authentic places are a product of the capital and culture of the people viewing a place, hence criticising the requirements set in Jacobs' work, namely short building blocks and varying building age and condition. The criticism goes further in noting the lack of attention to how capital and culture shape the inhabited urban space. It is then crucial to have the involvement and acceptance of the community in particular and city public in general when an area is redeveloped. Literatures by Ghasemi, Esfahani and Bisadi (Ghasemi, Esfahani, & Bisadi, 2015) and Nasir, Ahmad and Ahmed (2012) propose another criticism that suggests creation of human comfort zones and features in outdoor space to increase leisure time, activity and interaction level. This opinion offers a solution to how climate determines the amount of usage level of public space (Nikolopoulou, Baker, & Steemers, 2001). Adding design features such as canopy and air circulation will provide suitable urban space in areas with hotter weather or tropical climate.

Based on this critical note, the variables that have been criticised are omitted from the next subchapter that proposes a link between TOD and urban vitality. By establishing this link, the common or similar variables between the two concepts will provide a fuller understanding of how a vital TOD environment can be attained.



2.4 The Link between TOD and Urban Vitality

Improvement of urban vitality and sustainability are among the abstract goals that drive the implementation of TOD strategies, following the notion that in a spatially distributed city where mobility flows intersect, opportunities for human interaction are highest (Bertolini et al., 2012). There are areas that display urban vitality but are not necessarily TOD areas. These areas, like every organism or complex system, evolve as time passes. They have the ability for self-management or self-organization and synergy between the diverse elements that are included in the system. On the other hand, there are also TOD areas that are not vital or do not have urban vitality qualities. In this research, the focus will be on the TOD areas that display urban vitality, or in other words, vital TOD areas (Figure 2).

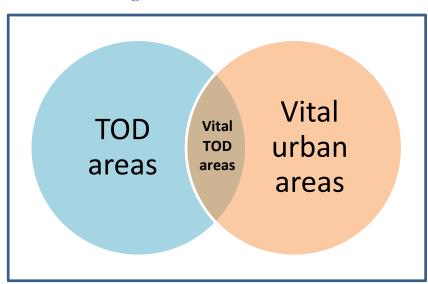


Figure 2. Vital TOD Areas

Source: Author, 2016

A place should be distinguished from a space since there is the attachment of value to it, or in other words, good qualities (Dempsey & Burton, 2012). The outcome of this research is to have a better understanding of the good qualities of successful TOD and the factors that influence it. To identify the good qualities that make up a place, a comparison on the existing TOD success factors to the variables of urban vitality is conducted to look for the similarities between the two frameworks. The expected result of this comparison is identification of factors that will generate vital TOD areas.

Vital TOD Success Factors

TOD and urban vitality have each their own characteristics and factors that mould urban space into conducive and active areas. When the two frameworks are broken down separately, it is apparent that they both have similar qualities that relate to each other. The institutional and spatial aspects that characterise successful TOD according to Thomas and Bertolini (2014) and Ewing and Cervero (2010) are in line with the variables identified from an international literature review on urban vitality (Jacobs, 1961; Comedia, 1991; Tan & Klaasen, 2007; Salingaros, 2005; Montgomery, 1998; Wood & Landry, 2008; Peper & Den Dulk, 2003). Both of these urban development concepts also share a common goal in creating an urban space with maximum scope for activity through different times in day and night time. But to make the connections visible, these implicit links need to be made explicit. Bridging the two frameworks of TOD and urban vitality is conducted by grouping the TOD success factors with the corresponding urban vitality variable. The result is the factors that contribute to the development of vital TOD areas, as shown in Table 2. These factors, described as vital TOD success factors, are presented with the corresponding urban vitality variable, an illustration of their impacts and the measurements that define their higher or lower chance of success.

| Urban Vitality Variable | TOD Success Factor | Example | Increases Success | Decreases Success | |
|--|-----------------------------------|--|--|---|--|
| | Actors | | | | |
| Flexible and horizontal governance | Actor Relationships | Flexible, horizontal and creative collaboration ensures realisation of vision | Very flexible and horizontal governance; good and creative cooperation among actors | Rigid and weak cooperation among actors | |
| Public participation | Public participation | Public participation and acceptance of policies is crucial in developing an ideal public place | Very high public involvement in the land-use transportation planning process | No public involvement; public disinterest | |
| Multi-ethnicity Religion Work culture and family unit Individualism | Social diversity | Diversity in society increases tolerance and opens opportunities for different rhythms in urban life | Diverse ethnicities and religions; strong work culture and high individualist society | Mono-ethnic and singular religious culture; strong family culture | |
| Urban density (critical mass) | Urban density (critical mass) | Interaction and activity level from a viable mass of users contribute to vitality of the area | Dense concentration of urban population, including residents | Low concentration of urban population | |
| | | Polici | | | |
| Clear vision | Vision clarity and consistency | Clarity and consistency in vision and political commitment helps actors to work continuously towards future growth | Very clear and consistent vision with strong political support, e.g. city-regional vision for land use- transport planning or urban sustainability | Very general and inconsistent vision, major changes over time in political support | |
| Clear guideline | Policy clarity and consistency | Clarity and consistency in policy benefits a smooth project implementation and area design | Very clear, specific and consistent TOD-supporting policies, e.g. specific station areas, transit corridors, and other transit- supportive land use planning | Undetailed and very inconsistent planning policy supporting TOD, major changes over time | |
| Mixed land ownership | Government support | Pro-TOD and -vitality government regulations and tools promote self- improvement and small- scale investments | Supporting regulations from higher levels of government, e.g. mixed land ownership | No support of higher levels of government, no policies or funding | |

Table 2. Vital TOD Success Factors

| Urban Vitality | TOD Success | Example | Increases Success | Decreases Success |
|--------------------|------------------|----------------------------|-------------------------------------|-------------------------------|
| Variable | Factor | _ | | |
| | 1 | Desig | | |
| Spatial diversity | Mixed-use | Diversity in functions | More than one primary area | Only one primary area |
| | development | provides synergy | function; preferably more than two | function |
| | | (agglomeration and | | |
| | | symbiotic effects) to the | | |
| | | area | | |
| | Fine-grained | High number of small- | Very high number of small-scale | Low number or no small- |
| | economy | scale businesses boosts | businesses, e.g. shops, street | scale businesses |
| | | local economy and vitality | markets, restaurants, etc. | |
| Public space | Public space | The availability of space | High abundance of well-lit and safe | Low abundance of or unsafe |
| | | provides the community | pedestrian paths, squares, parks | pedestrian paths, squares, |
| | | with a place to interact | and streets | parks and streets |
| | | and do activities safely | | |
| | | during different times of | | |
| | | the day | | |
| Accessibility | Accessibility | Channelling the | Very high connectivity to trip | Very low connectivity to trip |
| | | movement of users easily | attractions, e.g. reaching places | attractions; low ease of |
| | | inside the area and to | inside the area or other | access to places inside the |
| | | other destinations | destinations outside the area | area |
| | | increases user willingness | | |
| | | to use transit | | |
| | | Activ | • | |
| Active street life | Street life | An active street life | High number of people in and | Very low number of people |
| | | indicates successful urban | around the street across different | in and around the street; |
| | | areas | times in day and night | activity limited to certain |
| | | | | times of the day |
| Variety in opening | Extended opening | Availability of extended | Existence of evening and night- | Activity in the area is |
| hours | hours | opening hours | time activities | limited to day time or |
| | | accommodates the needs | | normal opening hours |
| | | of people with differing | | |
| | | activity schedules | | |

Source: Author, 2016

TOD and urban vitality can be viewed as two distinct yet similar frameworks. As shown in Table 2, they both consist of comparable variables and the relationship thereof; a mix of institutional and spatial dimensions that are further classified into four groups of factors, namely actors, policies, design and activity. Institutional dimension is represented by the actors and policies groups, while the spatial dimension is epitomised in design and activity groups. The identified factors reflect an interaction on both institutional and spatial dimensions that results in the achievement of urban vitality in TOD areas when implemented. The four groups in which these factors are categorised have relationships and causality that affect each other, which is further explored to give a better understanding of what creates vital TOD areas.

Actors: Collaboration, Participation and Viability

In the history of planning theory development, various planning experts have discussed whether planners should fully control the development or the community should take a bigger role in the decision making process. As people become more individualistic, planners need to develop new strategies and ways to engage people in participative planning process. Developing comprehensive plans requires more knowledge than any individual can grasp (Altshuler, 1965) so it calls for cooperation of all the actors that are involved in or affected by the TOD area. Referring to Table 2, there are four factors that affect the development of vital TOD areas. The first is flexible and horizontal cooperation between the related actors. A vibrant environment starts with the intersecting cooperation process of every urban actor, whether they are governmental, private or the community to realise the desired outcome. Other types of cooperation may include establishment of regional land use-transportation body and multidisciplinary implementation teams. Existence of key visionaries will also be crucial to lead policies implementation. The efforts of Ken Livingston, the Mayor of Greater London and Bertrand Delanoë, the mayor of Paris in visioning strong vital cities (Rubin, 2006) are some examples related to this factor.

Second, a flexible governance should also be balanced with the involvement of the community or general public in the decision making process. Their participation can range from a bottomup process in which they can provide input for the area development to giving recommendations to master plan draft. By doing so, the desire of the people to achieve a quality that they preferred is maintained and thus public acceptance can be gained. Perth has seen instances of public participation in TOD, through programmes such as Dialogue with the City and TravelSmart.

In the five Ds of TOD, diversity is associated with spatial matters as it delves into the variety in land uses or primary functions in a given area. Although spatial diversity is more concerned with economics and land use, an interesting finding in this set of factors is how there is also another context of diversity that is equally significant, and in fact influences the spatial diversity, that is social diversity. This is the third factor. It refers to the broad range of social conditions that would be fundamental in developing a vital area, among others multi-ethnicity, religious diversity, work culture and the extent of individualism. These social conditions also correspond to the variables of urban vitality as shown in Table 2. The interaction resulting from a diverse society creates a suitable environment for the growth of creativity, a prerequisite for urban vitality (Wood & Landry, 2008).

The last factor related to actors is urban density (critical mass), which is defined as the dense concentration of people including the residents. Having dense concentration of urban population and users means that there will be high levels of interaction and activity which is the measurement of vitality. Highly populated cities such as New York, Tokyo or the case study in this research, Jakarta, provides the proper critical mass to maintain continuous activities.

Policies: Clarity, Consistency and Support

One possible reason for the relative lack of success with TOD might be due to the lack of definitions, outcomes, standards or road maps to follow (Dittmar & Ohland, 2004). By formulating clear and consistent plans and policies, together with successful TOD showcasing urban vitality can be attained. Based on the factors in Table 2, there are three factors that should be achieved with regard to TOD plans and policies. First, the TOD vision should be clear and consistent, meaning that it should define a clear direction which remains constant through different periods of leadership. A vague or inconsistent vision will trickle down into the quality of plans and policies as well as cause dissimilarity among the relevant actors. The importance of a clear and consistent vision is evident in the case of Vancouver and the implementation of its consistent and well-known regional vision, the Livable Region Strategic Plan.

Second, the TOD-supporting plans and policies should be clear, specific and consistent, referring to comprehensive plans and policies that encompass all the institutional and spatial aspects of the area. Similar to vague visions, a lack of clear, specific and consistent plans and policies will also result in poor implementation. Many of the success stories in TOD are attributed to this factor since consistent policies will guide a smooth implementation, as seen in the case of Copenhagen TOD.

Third, a proven support should be provided from the higher levels of government in the form of regulations that will promote TOD performance. With regard to vital TOD areas, mixed land ownership is regarded as a vital TOD prerequisite since it allows self-improvement and small-scale investments in property that will bring diversity in the area (Montgomery, 1998) through opening of small businesses and hence the establishment of a fine-grained economy. Government support should also extend to give developers a sense of certainty when investing in TOD as the evolution of vital areas often comes from private investments (De Bois, 2009). While developing the basic infrastructures of a TOD area can be done by the government, the full extent of the area development requires private participation in the form of Public Private Partnership (PPP), business to business, or other cooperation agreements. Examples of such government support where self-improvement and small-scale investments are evident can be observed in the creation of urban services in the station hall and adjoining space of London Liverpool Street, Paris Nord and Stockholm Central.

Design: Diversity, Comfort and Accessibility

In this context, design pertains to the physical aspects that describe the look and functions of a building, facility or other visible objects in a TOD area. Four factors are considered to be significant in designing vital TOD areas. Two factors can be merged under spatial diversity, i.e.

mixed-use development and fine-grained economy. Mixed-use development implies that the area should serve more than one primary function, preferably more than two. A TOD area that only serves as a transit station without the presence of commercial, business or residential functions will not attract the diverse activities that are substantial for urban vitality. A fine-grained economy, which denotes the number of small-scale businesses, is beneficial as it tends to boost complex variety, creating lively and interesting TOD areas (Montgomery, 1998). Boon Lay and Bugis MRT stations in Singapore display these qualities, as they include an interchange, residential, shopping centres and small businesses.

Third factor accounts provision of safe and comfortable public space as a necessity, where high abundance of well-lit and safe pedestrian paths, squares, parks and streets will create a secure setting for pedestrians to do activities at any time of the day. Major TOD areas in Tokyo such as Shinjuku and Shibuya show just how safe public space ensures active day- and night-time street life.

Fourth, accessibility of the area, which is concerned with how short and easily reachable the trip lengths are, whether they are from the transit station to places within the area or to destinations outside of the area. When transit stations are highly connected to their surroundings, they can provide enough density of users to the area and channel the movement of users in reach of more functions (Tan & Klaasen, 2007). TOD areas that show high accessibility are visible in the case of Amsterdam-Utrecht city-regions.

Spatial diversity, public space and accessibility of a TOD area are design elements that can increase the potential of urban vitality by ensuring comfort, ease and safety for the users in conducting activities. Diversity is the keyword in distinguishing a vital TOD area as a mixture of activities and functions are the key to successful urban places. The availability of cinemas, bars, shops, restaurants, cafés and other cultural and meeting places offering various services at varying degrees of price and quality is important to attract people of various income levels.

Activity: Interaction Level and 24/7 Rhythm

Urban vitality relates the qualities of an area which are lively, active, diverse and attractive. Therefore it requires its own pulse or rhythm – a life force influenced by activities that exist around the clock, 24 hours a day and 7 days a week. The design-related factors mentioned above can have an effect on the type of activities present in a vital TOD area. In Table 2, two factors are mentioned in their relation with the activity level.

First, an active street life is needed. It is indicated by a high number of people in and around the street that are able to do activities across different times of the day, with an accentuation in the

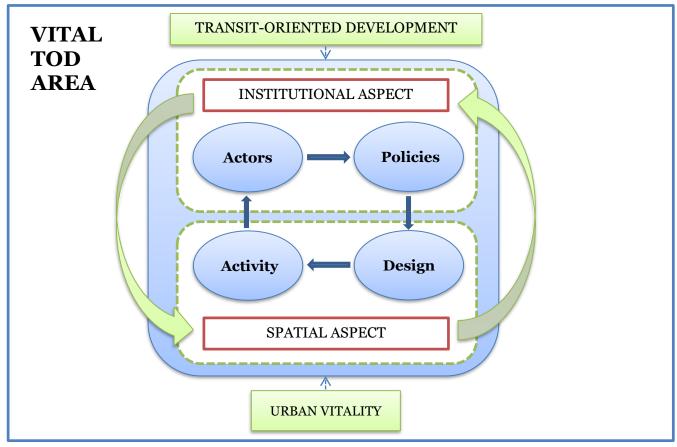
availability of evening and night-time activities. Casual meetings, recreational activities, peoplewatching, cultural events and celebrations are some illustrations of activities that can occur in a vital area. Second, extended opening hours is fundamental in fulfilling the needs of urbanites and their differing schedules. Downtown metro stations in Melbourne, for instance Melbourne Central, Flinders and Parliament, demonstrate a bustling street life during day and night with urban services that have extended opening hours.

Vital TOD areas refer to TOD areas that stimulate activities and cultural confidence. Both TOD success factors that separately focused on institutional and spatial dimensions can be successfully converged to improve a better understanding of what a successful TOD can achieve. Within this frame of reference, urban vitality enhances qualities to a transit-oriented area by opening possibilities for activities and transactions during longer and extended periods of time, which can range from economic, social, cultural, commercial and any types of activities that can take place in urban areas. In the next chapter, these factors and relationships will be the base of how the data collection will be conducted, including the actors that need to be interviewed, which plans and policies need to be analysed and whether the designs and activities fulfil the requirements of a vital TOD area.

2.5 How the Nodes Link Together

The identified factors show that urban vitality can be linked to all the elements of TOD. These vital TOD success factors are also a successful indication in bridging both views on success factors as proposed by Thomas and Bertolini (2014) and Ewing and Cervero (2010). Following the disclosure of related theories, the conceptual model can be formulated for this research. The most important outcome from these theories that have been discussed is to analyse the explicit links between TOD and urban vitality and how this can give a fuller understanding on successful TOD implementation and a more comprehensive measurement of TOD. The conceptual model recognises the elements involved in vital TOD areas and the interaction cycle in between them. Values in the interaction between the elements should be examined and appreciated, as it reveals how the institutional and spatial aspects interact with each other to ensure fruition of vital TOD.

Figure 3. Conceptual Model



Source: Author, 2016

Figure 3 shows the conceptual model of this research. It shows the interaction of elements which results in vital TOD areas. Vital TOD area can be simply described as a TOD area that displays urban vitality. It is the convergence of both frameworks – TOD and urban vitality – which can be divided into an institutional aspect and spatial aspect. Institutional aspect consists of the two elements of actors and policies, while spatial aspect consists of design and activity. The key actors in a project cooperate to formulate policies. Key visionaries and presence of strong leadership with political commitment will also help steer the direction of development to the preferred goal. The type of actors and how they cooperate will then affect the quality of the vision and policies. Clear, consistent vision and policies as well as regulation support from higher level of government are the ideals that should be present in terms of TOD policies. When this is achieved, policies will influence what type of design is developed in the TOD area. The design should include multiple functions in land use, a high number of small-scale businesses to boost diversity, safe and comfortable public space and ease of access, whether to points inside the area or to other destinations. These details in design will encourage the activity level of the area, signified by the high volume of people and variety in opening hours. When an area provides maximum scope for activity, the residents should have alternatives to do their preferred activities during different times in the day. There should also be adequate activities at night time, to accommodate people



with different daily schedules. Urban vitality is in large part about opening up possibilities for activities in longer and more extended segments of time (Montgomery, 1998) so when a TOD area has this feature for its users, vitality is considered to be evident in the area. Finally, the type of activities in the TOD area will influence the actors and users involved. And so, the cycle repeats.

As the conceptual model has been constructed, the process to find the answers to the research questions continues to the next phase, defining the methods and research design. Evaluating case studies will be a way to explore the urban vitality in TOD areas. Jakarta is chosen as the case study for this research since TOD is viewed as a new and emerging redevelopment concept to be implemented in the city. Two TOD areas are selected to be evaluated based on the vital TOD success factors. The next chapter will lay out the methods used in evaluating the Jakarta TOD areas in relation to the research questions.

CHAPTER 3. METHODOLOGY

Subsequent to making the explicit links which resulted in vital TOD success factors and constructing the conceptual model to define the relationship between each element, it is essential to formulate a plan on how the research will take place and find the answers to the research questions. This chapter consists of explanation and reasoning on qualitative approach along with the involved techniques, which are semi-structured interviews, sampling survey and content analysis. Each technique will address which research question or sub-question that will be answered. To sum the method up, a research design strategy that describes the whole process will be added.

3.1 Methodology and Introduction on Case Studies

The main method used in the research data collection will be of qualitative approach. This is chosen due to the nature of the research questions that explores the connection between TOD and urban vitality. A quantitative approach will be appropriate if the research looks into how TOD affects modal share change or job creation. Although the main research question is on the identification of vital TOD success factors which might imply a measurable indicator of sorts, but the whole concepts of TOD and urban vitality cannot be only captured by quantitative approach. This research explores *how* TOD implementation influences the tangible and intangible conditions in urban life. Hence, a qualitative approach is chosen.

The evaluation of TOD areas in the case study of Jakarta using the identified vital TOD success factors is expected to describe the urban life force displayed in the area and assess the role of vitality in TOD implementation. This research will also explore whether the case studies have indeed achieved urban vitality based on these factors. The method that will be applied in this research is the case study methodology. Case study is a logical choice and approach to *"capture the circumstances and conditions"* by reconstructing processes leading to successful implementation in TODs (Yin, 2003). It provides a way for a comprehensively explore social elements in 'bounded systems' through in-depth examination of certain individuals, institutions, instances or occurrences by means of surveys, interviews, document analysis and observation (O'leary, 2004). This methodology is chosen for this research as it can comprehensively evaluate the urban vitality in the case studies as well as verify the identified vital TOD success factors.

Jakarta is selected as the city where the case studies are selected as TOD is an emerging urban development concept in the city that is very dependent on automobiles for mobility. There has not been any successful example of its implementation. The case studies in this research are naturally TOD areas which are selected based on two criteria: 1) functions as primary or secondary activity centres; and 2) serves as an intermodal transportation hub. These two criteria resulted in the selection of Blok M and Dukuh Atas TOD areas as case studies. Blok M is an early attempt of TOD area in South Jakarta, consisting of mixed-use development and an integrated transportation hub. Dukuh Atas is a pilot project for the TOD areas that will be developed in conjunction with the development of the first MRT Jakarta corridor. An extensive case report on both areas will be presented in Chapter 5, which includes the evaluation of Blok M and Dukuh Atas based on the vital TOD success factors.

The primary source of data is acquired from key stakeholders or actors involved in or affected by the planning and development of the TOD focus areas, including national and local governments, government-owned enterprises, developer, business owners, residents and transit users. Moreover, policy documents from national and local governments, planning documents from state enterprises, researches, professional and news articles as well as field observation will also be considered as additional data source to provide more insight on the topic.

3.2 Data Collection Techniques

3.2.1 Semi-Structured Interviews

Semi-structured format of interview with key actors is chosen due to its flexible nature in responding to how the interviewees answer the questions and possibly adjusting the emphases in the research as a result of significant issues that emerge in the course of interviews (Bryman, 2012). There is a much greater interest in the interviewee's point of view; this is needed as there might be other factors that determine urban vitality that are not yet included in the identified factors. A structured interview is viewed as an unsuitable option as it will limit or standardise the response of the interviewees.

Representatives from each of the related actors are chosen based on two criteria: 1) involvement in planning and development process of one or both of the cases; and 2) directly affected by one or both of the cases. These actors cover the government, private and community sectors that are involved in the cases, as shown below in Table 3. In total, 7 interviews were conducted, with 6 interviews done directly or face-to-face and due to the interviewee's busy work schedule, the interview with the Head of Public Relations of the Directorate General of Railways – Ministry of Transportation was carried out via mobile messenger application. These interviews were conducted during the period of 10-16 November 2016 in various places in Jakarta and Bandung, Indonesia. In Chapter 4 and 5, the interviewees will be mentioned using their reference code, where G represents government, SE represents state Enterprise, P represents private sector and A for academics.

| Sector | Institution | Reference Code | Position | Place/Date |
|------------|----------------------|-------------------|---------------------------------|---------------|
| Government | Ministry of | G1 | Head of Public Relations – | Jakarta, |
| | Transportation | | Directorate General of Railways | 18 November |
| | | | | 2016 |
| | Jakarta Capital City | G2 | Head of Transportation Affairs | Jakarta, 14 |
| | Government | | Sub-Division – Regional | November 2016 |
| | | | Development Planning Agency | |
| State | MRT Jakarta | SE | Property Specialist – Business | Jakarta, 14 |
| Enterprise | | | Development Division | November 2016 |
| Private | Developer – PT. | P1 | Project Manager | Jakarta, 15 |
| | Jakarta Propertindo | | | November 2016 |
| | Small Business | P2 | Owner – Puji Handphone & | Jakarta, 11 |
| | Owner – Blok M | | Mobile Services | November 2016 |
| | Small Business | P3 | Owner – Tri Dharma Cafeteria | Jakarta, 10 |
| | Owner – Dukuh | | | November 2016 |
| | Atas | | | |
| Academics | Bandung Institute | Α | Academics | Bandung, 16 |
| | of Technology | | | November 2016 |

Table 3. Categorisation of Interviewees

Source: Author, 2016

Interview questions were tailored based on the interviewee but all of them followed the general interview guide. The interview guide was formulated according to the thirteen vital TOD success factors in Chapter 2 and presented in the table below. The product of this technique is interview transcripts that can be found in the appendix, while findings are accessible in Chapter 4.

| Vital TOD Success Factor | Guiding Question | Follow-up Question |
|-----------------------------|--|---|
| Actor Relationships | Who are the key actors and what is the state of cooperation among them in the development of Blok M and Dukuh Atas? | • What are the advantages and challenges in the cooperation for the development of these areas? |
| | and Dukun Alas: | • What can be improved from the current state of cooperation? |
| Public participation | What type of public participation is available in the development of Blok M and Dukuh Atas? | Is the public interested in being involved in the planning process? Is there a high level of public acceptance on the policies? What types of public participation do the |
| Social diversity | Does Jakarta have adequate | If yes, what types of social conditions |
| | diversity in its society and social conditions? | diversity exist in its society?What are the views on working late in Indonesian society? |
| | | Are the majority of Jakarta citizens individualistic? |

Table 4. Interview Guide

| Vital TOD Success Factor | Guiding Question | Follow-up Question |
|---|--|--|
| Urban density (critical mass) | Is the population density in Blok M and Dukuh Atas high enough to create a viable TOD environment? | - |
| Vision clarity and consistency | How clear and consistent are the development vision in Blok M and Dukuh Atas? | Have there been any vision changes over the course of time? How has the political commitment of the leaders been for TOD policies? Are there any issues that need improvement regarding the vision of the areas? |
| Policy clarity and consistency | How clear and consistent are the development policies in Blok M and Dukuh Atas? | Have there been any policy changes over the course of time? Are there any issues that need improvement regarding the vision of the areas? |
| Government support | What supporting regulations or funding are provided for the development of Blok M and Dukuh Atas? | Is there any effort to introduce mixed land ownership in both areas to boost investments? What future plans are available for better support in developing TOD areas? |
| Mixed-use development | What functions are evident in Blok M and Dukuh Atas (e.g. transportation, residential, commercial, business, etc.)? | Are these functions in line with the development policies? Are there any functions that grow organically and is not a part of the policies? |
| Fine-grained economy | What types of economic activities are planned in Blok M and Dukuh Atas? | Is there a fair representation of small businesses in the areas? Will the economic activity policies address the needs of the diverse community with different income levels in the city? |
| Public space | What is the condition of the public space provision in Blok M and Dukuh Atas? | What measurements have been taken to provide safety and comfort in the public areas of Blok M and Dukuh Atas? |
| Accessibility | How accessible is Blok M and Dukuh Atas, whether inside the areas or to other destinations outside of them, by walking, biking or public transportation? What future plans are in hand for accessibility improvement in the areas? | What future plans are in hand for accessibility improvement in the areas? |
| Street life | How active and busy do you find the street life during day and night in Blok M and Dukuh Atas? | What are the popular attractions or activities in the areas (restaurants, cafes, squares, people-watching, festivals, etc.) ? |
| Extended opening hours Source: Author, 2016 | Are there adequate activities during night time in Blok M and Dukuh Atas? | What kinds of activities are available at night time? Do these activities have enough users to continue operating? |

This technique is intended to gather information which will answer the main research question "How does urban vitality play a role in the implementation of TOD?" and the following research sub-questions:

- In what ways does TOD implementation ensure urban vitality?
- How is urban vitality displayed in TOD projects in the case study of Jakarta?
- What are the bottlenecks in achieving vitality in Jakarta TOD implementation?

3.2.2 Sampling Survey

Since this research takes a qualitative approach, the sampling survey conducted in this context is of a purposive sampling technique. Different from a quantitative approach where probability and random sampling are important, purposive sampling emphasises the importance of the research questions in defining sampling considerations. It does not sample the participants on a random basis. The goal of purposive sampling is to sample cases or participants in a strategic way, so that those sampled are relevant to the research questions that are being posed (Bryman, 2012). In this purposive sampling, a unit of analysis is selected, one that is relevant to the the research questions. Blok M and Dukuh Atas as the case studies will be the geographical unit of analysis where the survey is conducted.

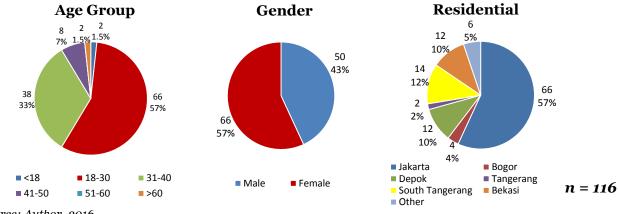
The target respondents are residents and key users of the Blok M and Dukuh Atas areas such as transit users, shoppers and pedestrians. Their opinions are taken into account in the study to have an objective insight of everyday users. The survey questions are similar to the interview guide disclosed in Table 4. Responses were collected through 2 channels:

- 1. Field survey at Blok M and Dukuh Atas TOD areas on 9-11 November 2016
- 2. Online questionnaire shared through social media on 9-23 November 2016

Since the respondents do not only include residents but also key users that come from other parts of the metropolitan, deciding the sample size becomes a delicate matter. The size of sample that is able to support convincing conclusions differ from one case to another but generally it should not be so small that it is difficult to reach data saturation or informational redundancy; on the other hand, it should not be so large to undertake a thorough case-oriented analysis (Onwuegbuzie & Collins, 2007). Furthermore, since there are also semi-structured interviews and content analysis utilised as data collection tools, the triangulation of these three tools can minimise the weaknesses of each tool (Bryman, 2012). Hence, the survey gathered responses from a total of 100 area users and 16 residents, which consists of 50 area users and 8 residents in each area of the case studies. Since the result of this sampling survey will also be analysed together with the result of the semi-focused interviews, a sampling size of 50 area users and 8 residents for each area is considered adequate to achieve generalising conclusions. Figure 4 provides background information on the respondents.

The end product of this technique is a survey report that is available in Chapter 4. As the survey questions are similar to the interview guide, the aim of the sampling survey is correspondingly comparable to the aim of the semi-structured interviews, which is to address the main research question "How does urban vitality play a role in the implementation of TOD ?" and the following sub-questions:

- In what ways does TOD implementation ensure urban vitality?
- How is urban vitality displayed in TOD projects in the case study of Jakarta? Figure 4. Background Information on Survey Samples



Source: Author, 2016

3.2.3 Qualitative Content Analysis

Aside from primary sources of data, namely semi-structured interviews and sampling survey, an analysis on multiple documents are also conducted to add comprehensiveness and verify the findings from the two previous techniques. The three possible qualitative approaches in extracting information from documents are qualitative content analysis, semiotics and hermeneutics (Bryman, 2012). Considering the document analysis in this research is to enrich the analysis and validate the findings of interviews and sampling survey, content analysis is chosen as the suitable technique. Qualitative content analysis is defined as a qualitative approach of document analysis done by searching out underlying themes in the materials being analysed (Bryman, 2012). The aim of the content analysis is to be systematic and analytic but not rigid, as it allows pre-defined categories and variables to initially guide the study, but others are allowed and expected to emerge during the study. The analysis is carried out during the period of October – December 2016, which encompassed the following documents:

- 1. Jakarta Long-Term Regional Development Plan 2005-2025
- 2. Jakarta Medium-Term Regional Development Plan 2013-2017
- 3. Jakarta Spatial Master Plan 2012-2030
- 4. Jakarta Detailed Spatial Plan and Zoning Regulation
- 5. Urban Design Guideline for the MRT Jakarta Phase I Corridor Development (UDGL)

- 6. Jakarta Transportation Agency in Figures 2014
- 7. Various newspaper articles

The above list of documents was selected as they collectively contain comprehensive and detailed planning on both case studies. Document 1-6 are official planning regulation documents and were formulated by Jakarta Capital City Government as the regulator in the whole development stages of TOD. Newspaper articles function as an additional information source for details that are not sufficiently found in the official planning documents. Extracted information is illustrated with brief quotations from the document. For example, an illustration on how Dukuh Atas TOD has TOD-supporting design features is indicated by the quote:

"the Urban Design Guideline for the MRT Jakarta Corridor Development Phase I included TOD design features such as: 1) Implementation of mixed land use development; 2) Redistribution and enhancement of intensity values; 3) Management of building mass regulations; 4) Efficiency of pedestrian movement patterns; 5) Integration of the link system with transit facilities and parking limitation through introduction of a special parking in the radius of 350 m from the MRT station point; 6) Creation of attractive and interesting MRT station area design with selling value (Jakarta Capital City Government, 2012).

Product of this technique is extracted information that can be found in Chapter 4 and 5. The qualitative content analysis aims to dig out underlying themes in multiple documents that will address the following research sub-questions:

- What are the success factors that ensure urban vitality in TOD implementation?
- How is urban vitality displayed in TOD projects in the case study of Jakarta?

| ~ 1 1 | | | |
|------------------|---------------|----------------|---|
| Technique | Product | Duration | Relevant research question |
| Semi-structured | Interview | 10-16 November | • How does urban vitality play a role in TOD |
| interview | transcripts | 2016 | implementation?" |
| | | | • In what ways does TOD implementation ensure |
| | | | urban vitality? |
| | | | How is urban vitality displayed in TOD projects |
| | | | in the case study of Jakarta? |
| | | | • What are the bottlenecks in achieving vitality in |
| | | | Jakarta TOD implementation? |
| Sampling survey | Survey report | 9-23 November | • How does urban vitality play a role in TOD |
| | | 2016 | implementation?" |
| | | | • In what ways does TOD implementation ensure |
| | | | urban vitality? |
| | | | • How is urban vitality displayed in TOD projects |
| | | | in the case study of Jakarta? |
| Qualitative | Extracted | October – | • What are the success factors that ensure urban |
| content analysis | information | December 2016 | vitality in TOD implementation? |
| | | | How is urban vitality displayed in TOD projects |
| | | | in the case study of Jakarta? |

Table 5. Summary of Data Collection Techniques

Source: Author, 2016

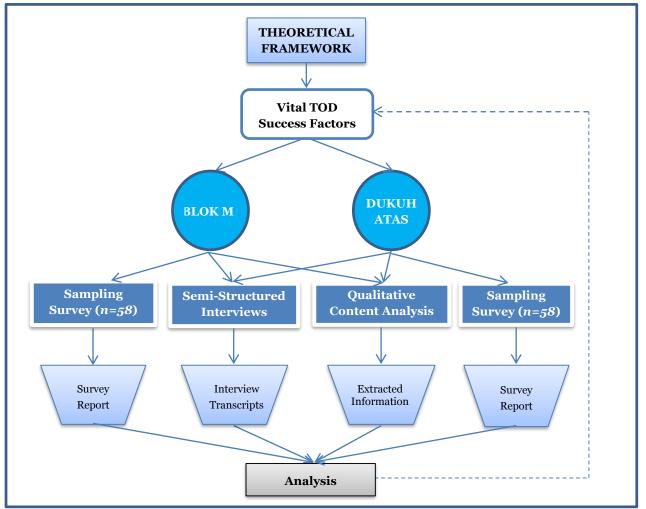


3.3 Research Design

The three streams of information, namely interview transcripts, survey report and extracted information collectively addressed the research questions. To execute the three techniques in an effective manner, a research design strategy needs to be constructed.

TOD is a new urban development concept in Jakarta and with limited experience, an evaluation on the existing case studies can analyse whether they are on track towards urban vitality. Blok M serves as a preliminary case study in testing whether the identified vital TOD success factors are applicable in Jakarta urban conditions and master plans. It can be assumed that since other TOD projects or areas in Jakarta are developed under the same urban settings and policies, then the factors will also be applicable to other projects and areas. This sets the base for an evaluation of Dukuh Atas, a pilot project for TOD areas in Jakarta. Dukuh Atas TOD project is the biggest in the city, incorporating the most number of transportation modes with a strategic location in the center of Jakarta. An evaluation of this TOD project will determine how current TOD policies influence urban vitality of the area.





Source: Author, 2016

Figure 5 breaks down the research design strategy that was taken. It starts with deriving the theoretical framework in Chapter 2 – visualised in the conceptual model (Figure 3) – into vital TOD success factors. These factors were then applied to both case studies, Blok M and Dukuh Atas. The semi-structured interviews and qualitative content analysis were performed to the same interviewees and documents for both case studies but the sampling survey were performed to two different set of respondents, residents and users of Blok M as well as residents and users of Dukuh Atas. Interview transcripts, survey reports and extracted information as products of data collection will serve as an input for the analysis. The conclusions drawn from the analysis will provide an insight on how the frameworks of urban vitality and TOD interact with each other, how urban vitality can be measured in TOD implementation and the condition of urban vitality in both case studies.

CHAPTER 4. CASE STUDY: BLOK M AND DUKUH ATAS TOD AREAS, JAKARTA, INDONESIA

This chapter presents an illustration on the case studies that will be further analysed in the subsequent chapters. The chapter will therefore be started with an introduction of Jakarta as the city where the case studies are chosen, relevance of the case studies, and then continued with the with an illustration of the two case studies, providing a brief description of their existing condition prior to data collection.

4.1 Jakarta, Indonesia

The capital city of Indonesia, Jakarta, is located in the north western coast of Java Island, the most populated island in Indonesia. By the end of 2014, the city population was estimated to be 10 million (Statistics Indonesia, 2016). The metropolitan area, popularly referred to as Jabodetabek, consists of Jakarta and the eight surrounding cities and municipalities of West Java and Banten Provinces (Figure 6). This agglomeration is estimated to be inhabited by about 28 million people in 2016 (World Population Review, 2016), placing it as one of the biggest metropolitan areas in the world. Aside from its status as the Special Capital Region, Jakarta is also centre for national, regional and international economic activities, ASEAN (Association of Southeast Asian Nation) secretariat, and the main gate to the international world.



Figure 6. Jakarta Metropolitan Area

Source: Jakarta Capital City Government, 2012



Relevance of Blok M and Dukuh Atas TOD as Case Studies

Jakarta has developed a number of urban transportation systems, namely Transjakarta – the longest Bus Rapid Transit System in the world of about 209.35 km with an average daily ridership of about 350,000 - and the commuter train system with a daily ridership of about 900,000 (Jakarta Transport Agency, 2014). But with the high number of population and commuters, the existing transportation systems are not enough to accommodate the mobility demand. To address this challenge, Jakarta is currently developing various transportation projects, such as Mass Rapid Transit (MRT) Jakarta, Light Rail Transit (LRT) and Railink. In a bid to rejuvenate the city, the government is also planning to redevelop the areas along the first MRT corridor. The policy formulated by the Jakarta Capital City Government is described in the Jakarta Governor Regulation Number 182/2012 on the Urban Design Guideline for MRT Jakarta Phase I Corridor Development. It states that the MRT corridor will be developed with a regional and/or urban scale approach, transit-oriented, positioning public facilities with mixed-use development, triggering the surrounding areas, pedestrian-oriented and focusing on the open and green public space. This redevelopment is also expected to increase accessibility and ridership of the MRT. As TOD is an emerging development concept in Jakarta that will be implemented in other city areas, it is important to learn how to develop a successful TOD area, one that will revitalise and return the city to its people. Currently, there are limited examples of TOD implementation in Jakarta. Urban development tends to be car-oriented with low accessibility for pedestrians and disabled people.

To have more in-depth case-oriented analysis, specific case studies should be selected in the city. Case selection criteria were formulated to filter TOD areas that are planned as major destination points in the city according to the Jakarta Spatial Master Plan. The case selection is based on the following two criteria:

- 1. Functions as primary or secondary activity centres; and
- 2. Serves as an intermodal transportation hub.

Based on these two criteria, Blok M and Dukuh Atas are chosen as case studies. Blok M is an example of an existing TOD area in South Jakarta, while Dukuh Atas is the pilot project as well as the biggest TOD area in Central Jakarta, located in the middle of the office buildings and commercial activities. At present, the transportation projects that will be interconnected in Dukuh Atas TOD are MRT Jakarta, Transjakarta BRT, LRT, commuter train lines, and airport express. Figure 7 presents how Blok M and Dukuh Atas TOD are situated in Jakarta.





Source: Author, 2016

4.2 Blok M TOD Area

Blok M is a part of Melawai Sub-District, South Jakarta. As a major activity centre, it accommodates mixed functions, such as transit, bus terminal, commercial and business (Jakarta Capital City Government, 2012). Figure 8 is a non-scale bird's eye view of the area. An MRT station is being developed in the area between the bus terminal entrance and Blok M Plaza. It is situated near the South Jakarta Mayor's Office and the Ministry of Public Works and Public Housing. It borders with Trunojoyo Street (north), Iskandarsyah Street (east), Melawai Street (south), and Bulungan Street (west). A summary of the area according to the categories of vital TOD areas provides insight on the area condition.



Figure 8. Blok M TOD Area and the Surroundings

Source: Google Maps, 2015

Actors

There is no single authority handling the area management. The area largely consists of the city bus terminal, managed by the city government, which accommodates various routes in the city, metropolitan area, and the airport, a BRT (Bus Rapid Transit) station and an integrated underground shopping centre (Mal Blok M, 2013). Furthermore, the area houses multiple shopping centres such as Pasaraya, Blok M Plaza, Blok M Square and other commercial and business buildings which are run by multiple private sectors. An MRT station is being developed in between Blok M Plaza and the bus terminal, which will be managed by MRTJ. Residential area can be found in the western, southern and eastern part of the main commercial and transit part.

Policies

In the 2030 Jakarta Spatial Master Plan, Blok M is designated as a secondary activity centre that shapes the provincial spatial structure (Jakarta Capital City Government, 2012). The Detailed Spatial Plan and Zoning Regulation has further detailed this by adding development of integrated multimodal transit hub with TOD principles (Jakarta Capital City Government, 2014). The 2017 Regional Medium-Term Development Plan also included transit-oriented resources such as park and ride facilities as one of the general policies (Jakarta Capital City Government, 2013). With the development of an MRT station, the area will undergo renovation to improve its accessibility and facilities. Policies that regulate this development are formulated by the national and local governments.

Design

In the Urban Design Guideline for the MRT Jakarta Corridor Development Phase I, Blok M has multiple primary functions, which include commercial, businesses, governmental, residential, public facilities and green open space (Jakarta Capital City Government, 2012). With the development of an MRT station in the area, Blok M will be improved as an integrated station and intermodal transit hub with TOD concept. This TOD approach includes design features such as:

- 1. Implementation of mixed land use development;
- 2. Redistribution and enhancement of intensity values;
- 3. Management of building mass regulations;
- 4. Efficiency of pedestrian movement patterns;
- 5. Integration of the link system with transit facilities and parking limitation through introduction of a special parking in the radius of 350 m from the MRT station point; and
- 6. Creation of attractive and interesting MRT station area design with selling value (Jakarta Capital City Government, 2012)

The 2030 Spatial Master Plan also consists of development plans for supporting infrastructures, including park and ride facilities, pedestrian and commercial facilities improvement, public space and business centres that take into account accessibility and environmental carrying capacity (Jakarta Capital City Government, 2012).

Activity

Main attractions in the area include the transit hub, shopping centres, restaurants and bars. The bus terminal connects the area to every part of Jakarta, metropolitan area and the airport. Activities related to entertainment are available beyond the normal opening hours. After the shopping centres close, the area is still bustling with leisure activities such as restaurants, eateries and bars. Every year, the popular Ennichisai Festival draws thousands of people to the area, showcasing Japanese culture performances.

4.3 Dukuh Atas TOD Area

Dukuh Atas is situated in between 4 sub-districts, i.e. Setiabudi, Menteng, Kebon Melati and Karet Tengsin. It is also located between Jenderal Sudirman Street as one of the main business centres and Bundaran HI, where there are many shopping centres and international hotels. Figure 9 is a non-scale bird's eye view of the area. Currently, the area consists of a train station, 2 BRT stations, bars, restaurants, hotels, office buildings and a wet market that is being renovated into a mixed-use development. MRT and Railink stations are undergoing development in the north-western part. The areas adjacent to Dukuh Atas are Bundaran HI (north), Menteng (east), Jenderal Sudirman and Setiabudi Street (south) and Kebon Melati Reservoir (west). A summary



of the area according to the four categories of vital TOD areas provides insight on the area condition.





Source: Google Maps, 2015

Actors

Majority of land ownership is held by private entities, which include office buildings, banks, hotels, restaurants, and bars. A local state enterprise owns a market building in the area which is being redeveloped to incorporate mixed functions. The transit modes that are and will operate in the area include commuter railway, MRT, LRT, BRT, and Railink, with each of them managed by a different operator. Few shuttle bus services to Bandung is also available daily from early in the morning until late at night. Similar to Blok M, there is a lack of leading sector in Dukuh Atas development.

Policies

In the 2030 Jakarta Spatial Master Plan (Jakarta Capital City Government, 2012), Dukuh Atas is designed to be a primary activity centre through the development of a mass transportation hub with TOD approach. The Detailed Spatial Plan and Zoning Regulation also regulated the area to accommodate integrated residential and transit facilities (Jakarta Capital City Government, 2014). The 2017 Regional Medium-Term Development Plan included transit-oriented resources such as park and ride facilities as one of the general policies (Jakarta Capital City Government, 2013). It is now planned to be an economic strategic area for various high density trade and services functions with national and international scope.

Design

In the UDGL, Dukuh Atas the area has multiple primary functions, namely commercial, business, governmental, recreational, residential, heritage and green open space (Jakarta Capital City Government, 2012). The development of the transit hub will also include TOD design features such as:

- 1. Implementation of mixed land use development;
- 2. Redistribution and enhancement of intensity values;
- 3. Management of building mass regulations;
- 4. Efficiency of pedestrian movement patterns;
- 5. Integration of the link system with transit facilities and parking limitation through introduction of a special parking in the radius of 350 m from the MRT station point; and
- 6. Creation of attractive and interesting MRT station area design with selling value (Jakarta Capital City Government, 2012).

Supporting infrastructure that will be developed in the area include park and ride facilities, and improvement of polders and water pumps in the West Flood Canal.

Activity

Based on an analysis by the Jakarta Transportation Council, the area will have to accommodate at least 25,000 people in any given point of the day (Berita Satu, 2015). With the transit users as the life force of the area and adjacent business and shopping centres, Dukuh Atas retains a high activity level in the public space with presence of evening and night-time activities. Main attractions in the area include shuttle bus services to Bandung, hotels, restaurants, and business and commercial activities.

CHAPTER 5. DATA

The chapters leading to this point have disclosed the introduction to the topic, the theories used, methodology, research design of the study and the cases that will be analysed. As data collection has been completed according to the research design strategy, this chapter presents all the empirical findings of the research. To get a thorough understanding of urban vitality in TOD implementation, it is important to understand the links in between its elements which were elaborated in vital TOD success factors. Findings will be constructed based on the four groups of vital TOD success factors, namely Actors, Policies, Design and Activity and subsequently each of the said factors. As mentioned in Methodology Table 3, the interviewees are referred by their codes – G, SE, P and A.

5.1 Blok M TOD Area

The results offered in this sub-chapter will be analysed further in Chapter 5 to address the main research question: "How does urban vitality play a role in the implementation of TOD ?" as well as the research sub-questions of:

- What are the success factors that ensure urban vitality in TOD implementation?
- In what ways does TOD implementation ensure urban vitality?
- How is urban vitality displayed in TOD projects in the case study of Jakarta?
- What are the bottlenecks in achieving vitality in Jakarta TOD implementation?

The presentation of all the factors is classified based on every interviewee category and survey respondent type.

5.1.1 Actors

Actor Relationships

<u>Government and Actor Relationships</u>

Since the MRT is still under development, the government viewed that the current focus is still on the MRT construction and the cooperation related to TOD has not been commenced yet. "Blok M is indeed developed, but that is not the TOD we want. There are some existing functions but we want a complete one, including housing, economic and health activities, basically everything will be available." (G2, 16 November). Although the government realised that the TOD development should supposedly be parallel with the MRT construction, there is a major issue in terms of leadership: "The Governor has not yet established who will lead the planning, implementation, monitoring and other phases. Maybe it's because the perception on TOD is not yet the same. We have a Governor Regulation drafted by the City Planning Bureau which regulates the principles on TOD development. Because it is still not yet declared, everyone is now doing their own business." (G2, 16 November).



<u>State Enterprise and Actor Relationships</u>

As the operator of MRT Jakarta, PT. MRT Jakarta – hereafter referred as MRTJ – shared the same opinion as the government. "...what is lacking in this process is the leading sector. The leading sector in TOD planning should be the City Planning Agency, since area planning should be the responsibility of the government." (SE, 14 November). Since there have been major institutional changes in permit issuance with the establishment of One Stop Integrated Service in Jakarta in 2015, MRT Jakarta as one of the state enterprises owned by Jakarta Capital City Government would like to start more initiatives in planning, but they also do not have the authority to plan (SE, 14 November).

<u>Private Sector and Actor Relationships</u>

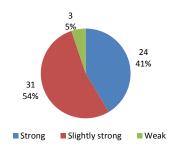
A different opinion on actor relationship is given by the small business owner in Blok M TOD, as he viewed that "...*they're doing a great job. It can be seen from the security, cleanliness, general condition and human flow. It's up to standards.*" (P2, 11 November). The area management has been attentive to the needs of passengers and business owners.

Another private sector involved in the cooperation is developers, as they can boost area development with their investments. But they agreed that there should be a leading role that oversees the entire planning and development process: *"I think there is a difference between cooperating and working together. What we are doing now is working together but on our own. So I don't think currently there is no cooperation yet. There needs to be a leader first."* (P1, 15 November).

• Academics and Actor Relationships

The advantage gained from the actor relationship is that all the involved actors including developers rated TOD positively (A, 16 November). They understood its importance and benefits for a sustainable development, and willing to support it. Major challenge in this issue is shown as "...the relationship between the actors is not too harmonious, in this case MRTJ and the government." (A, 16 November).

• Area Users, Residents and Actor Relationships Figure 10 shows the survey result on how the users and residents perceive the cooperation between related actors in Blok M TOD. A majority of 54% think that the cooperation is slightly strong, because there are still drawbacks, such as slow progress, weak coordination, fragmented area management, lack of order, low public participation, area image, cleanliness, crowdedness, low accessibility, crime level and low infrastructure quality. Figure 10. Opinion on Actor Relationships in Blok M TOD Development



It can be concluded that generally the area users and residents viewed that the actor relationships in Blok M TOD is not very strong and flexible.

Public Participation

<u>Government and Public Participation</u>

The local government admitted that although there is a channel, it is still not clear yet since they didn't lead the public participation process. Involvement of public and area users is regarded as important, since the public needs to have a similar understanding on the TOD concept. If the government develops a safe, comfortable, pedestrian-oriented area with good accessibility, the public should logically accept the idea without any resistance (G2, 16 November).

• State Enterprise and Public Participation

There are channels for the private land and building owners to be involved in the planning process. MRTJ invited the owners to participate in the formulation of the area master plan by providing input and cooperating to provide better accessibility in the area. These owners have also shown support as they understand the added values that MRT brings to the area (SE, 14 November).

• Private Sector and Public Participation

As the business owners viewed that the area is well managed, there is a feeling of content and disinterest in participating in the planning process. *"I'd rather follow the proposed plan and regulations. For me personally, the arrangements, construction and other aspects of the area are appropriate and suitable."* (P2, 11 November).

Developers on the other hand acknowledge the opinion of business owners by stating that the public participation should have a limited extent. "...*if public wants to be involved in this, to what extent? Usually before a project starts, they will do an environmental impact assessment (EIA). In this process there will usually be public hearing and socialisation to gather the public input. Honestly, almost all their input will already be included. So maybe it will change up to 1% of the original design." (P1, 15 November). Long-term projects will require public hearings and these will be met with enthusiasm by the public.*

<u>Academics and Public Participation</u>

The existing public participation channel has not been able to guarantee the rights of the area residents, especially from the marginal or lower income level. Lessons can be drawn from Australia and USA case studies, where the public is housed in a type of non-profit organisation so that their rights can still be accommodated (A, 16 November).

• Area Users, Residents and Public Participation

Figure 11 shows the survey result on various indicators regarding public participation. 78% of the respondents expressed their interest to participate in the planning process, but 98% of them have never had the chance to participate. This shows a gap in how the government is providing the channel for public participation. As 60% of the respondents are only slightly satisfied with the development of the area, the government can address this by providing preferred channels, such as online media, public discussion, mobile application, field surveys and site exhibition. It can be concluded that in general the area users and residents viewed that there is not a high involvement in public participation although there is high interest to participate.

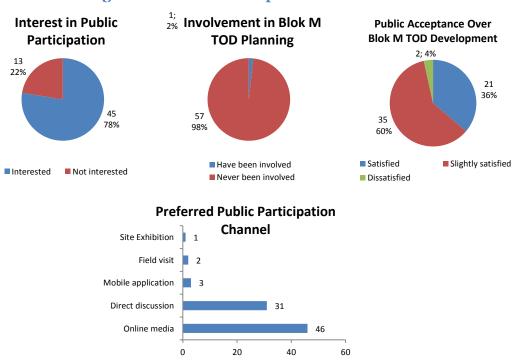


Figure 11. Public Participation in Blok M TOD

Social Diversity

<u>Government and Social Diversity</u>

A city with socially diverse society would increase the tolerance level and openness towards new and different urban rhythms. Jakarta houses people of all economic levels that come from Sabang, the westernmost point in Indonesia, to Merauke, the easternmost point. Additionally, the strength of family unit has seen a decrease, prompting a sense of individualism among the society (G2, 16 November).

<u>State Enterprise and Social Diversity</u>

A densely populated city, Jakarta is a multi-ethnical and religiously diverse place. Night shift would gain positive response, as there are offices that implement the policy so that the employees can come in later in the day because of daily traffic congestion (SE, 14 November). The high number of young people in the city will also strengthen public acceptance towards late night work.

• <u>Private Sector and Social Diversity</u>

Jakarta is a metropolitan city where people of all backgrounds from every part of Indonesia and other nationalities live together. Both business owners and developers have the same views on the diversity and work ethics of Jakartans, in that they are ethnically and religiously diverse with strong work ethics. Business owners agree with late night shift work, as long as there are enough customers. They also compensate late night shift with not opening the shops very early, with opening hours ranging between 12.00 at noon until 21.00 (P2, 11 November).

• Academics and Social Diversity

Diversity and work ethics are considered strong in Jakarta, while sense of family unit is veering towards an individualistic society compared to other cities (A, 16 November). Related to working late night shifts, an initial explanation of the classification of TOD in Jakarta into 3 types was made, namely urban centre, regional centre and suburban centre. She added that although in general Jakartans wouldn't mind working late night shifts, there is a possibility that the potential for late night work shifts in the suburban centre TOD will be low.

• Area Users, Residents and Social Diversity

Figure 12 shows the survey result on how diverse the social conditions in the city are. A unanimous view of 100% on the social diversity is achieved, signifying how all the respondents agree that Jakarta is a multi-ethnic and religiously diverse place. 50% of the respondents also agree on night work shifts and a high percentage of 74% think that Jakarta society can be classified as individualists. It can be concluded that generally the area users and residents view that Jakarta is a socially diverse city with strong work ethics.

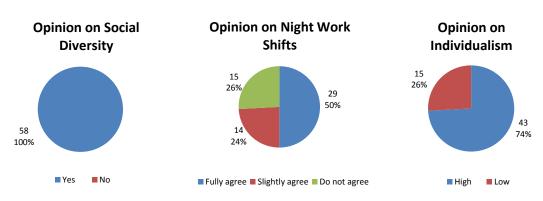
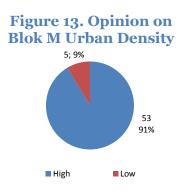


Figure 12. Opionion on Social Diversity in Blok M TOD

Urban Density (Critical Mass)

• <u>Government, State Enterprise, Private Sector, Academics and Urban Density (Critical Mass)</u> Blok M is a part of Melawai Sub-District in Kebayoran Baru, South Jakarta. It is inhabited by about 3,495 residents with population density of 2,774 per km² (Statistics Jakarta, 2016) and busy with shopping and transit activities. So it comes to no surprise that all the interviewees stated that Blok M has high population density to create a viable mass of area users. Users crowd the area in day or night time (A, 16 November) due to its transit function: "...*it is busy and dense since it is a transportation hub.*" (P2, 11 November). This is also echoed in MRTJ's forecast research: *"The density is high, we have the highest passenger demand forecast in Blok M, Lebak Bulus, and Fatmawati.*" (SE, 14 November).

• <u>Area Users, Residents and Urban Density (Critical Mass)</u> Figure 13 shows the survey result on the urban density in Blok M. Almost all of the respondents (91%) think that Blok M has sufficient population density to create a vital environment. It can be concluded that in general the area users and residents agree that Blok M has viable urban density.



5.1.2 Policies

Vision Clarity and Consistency

<u>Government and Vision Clarity and Consistency</u>

A political vision can be manifested in various types of legal documents. When democratically-elected governors take seat every 5 years in Jakarta, they formulate 5-year planning guideline that was based on their campaign programmes. *"The Long-Term and Medium-Term Regional Development Plan (RPJP and RPJMD) as our Regional Regulations are actually political products. As long as TOD is included in these plans, it can be considered as a political commitment among the executive and legislatives. [...] But in our Spatial Master Plan (RTRW), it is included and it is also a Regional Regulation and signed by the Governor. That means that politically there is a common understanding on the future of Jakarta." (G2, 16 November). Clear, consistent vision and political commitment from the governor's seat.*

• State Enterprise and Vision Clarity and Consistency

Vision can also be translated as a development guideline, which has been addressed in the UDGL for the MRT corridor. UDGL is considered to be clear and consistent, providing the actors with a legal base to go forward together (SE, 14 November). MRTJ added that local leaders have also been supportive in TOD issues.

<u>Private Sector and Vision Clarity and Consistency</u>
 As developers, clarity and consistency in vision and political commitment are important to identify possible business opportunities. Related to TOD, there is a clear vision and commitment shown by the governors (P1, 15 November). There have been various changes in the area condition. But these changes are more of an improvement rather than a decline. Inside the area itself, a business owner in Blok M Mall, see continuous progress from the

governors and other government institutions in making the area more comfortable for the users and businesses (11 November).

<u>Academics and Vision Clarity and Consistency</u>

A critical observation on the political will of the local leaders was made, as the legal documents were assessed to potentially cause delay in the development process: *"From the Regional Regulation aspect, it is stated that the development of TOD can only be conducted after the development of the transit system is finished. This shows that the political leaders or the policy makers do not fully comprehend the connection between TOD and mass transit system. There should be cross subsidy between the two and should be developed in parallel. Similarly, the mechanism of land acquisition is still handed over to the market mechanism. This also reflects that the political commitment is still not ideal to realise an optimum TOD." (A, 16 November). However, Jakarta is indeed more advanced than other regions due to the number of supporting regulations, such as UDGL and inclusion of TOD in the Spatial Master Plan.*

• <u>Area Users, Residents and Vision Clarity and Consistency</u> The survey result on consistency of political commitment is shown in Figure 14, where 59% of the respondents think that there has been strong commitment, but only from few leaders. Respondents noted how strong commitment have been shown since 2000, with governors such as Sutiyoso, Joko Widodo and Basuki Purnama or popularly referred as Ahok showing visible progress in TOD and public transportation development. It can be concluded that

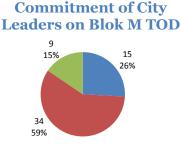
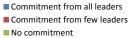


Figure 14. Political



generally the area users and residents view that there is moderate clarity and consistency in Blok M TOD vision.

Policy Clarity and Consistency

<u>Government and Policy Clarity and Consistency</u>

At the level of decision makers, there is an agreement on realising TOD in station areas. But it is still facing challenges in clarity within the implementation level: *"The staff level should have a strong initiative that can come up, analyse and present what we have to do. So once again, at the strategic level, it's agreed on. But the lower level, this is what is lacking."* (G2, 16 November).

• <u>State Enterprise and Policy Clarity and Consistency</u>

MRTJ is committed to referring and being as consistent as possible to the UDGL, the main guideline in TOD planning. The policies have so far been consistent and it will be detailed in the area master plans for Blok M, Dukuh Atas and Cipete Raya that will be started on February 2017 (SE, 14 November). Blok M is chosen as one of the first master plans due to its significance of having a bus terminal and commercial area.

- <u>Private Sector and Policy Clarity and Consistency</u> Developers identified some changes in the cooperation scheme plan regarding private parties providing access to MRT stations. Buildings in the station area can now increase their Floor Area Ratio (P1, 15 November). On the other hand, small business owners have limited knowledge of the detail development policies of the area. But in terms of area management, there has been an improvement in area management, such as sanitation and provision of facilities for users and businesses (P2, 11 November).
- <u>Academics and Policy Clarity and Consistency</u> The interviewee could not comment on the clarity and consistency of development policies regarding Blok M TOD since she was not familiar with the policy history. However, Jakarta is already a step ahead in developing TOD based on the number of supporting policies and regulations.
- <u>Area Users, Residents and Policy Clarity and Consistency</u> Figure 15 shows that a high percentage of the respondents (59%) are unaware whether there have been any changes in TOD policy in Blok M. 24% that do notice change, mostly note the improvement of the development, where there are more policies that support transit-oriented environments. Hence, it can be concluded that generally the area users and residents are unaware on the policy clarity and consistency in Blok M TOD policies.

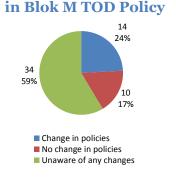


Figure 15. Opinion on Change

Government Support

- <u>Government and Government Support</u>
 Directorate General of Railways (DGR) is responsible for the basic design of the MRT Phase
 I in Jakarta. This includes only the MRT stations, but not the surrounding area, since that
 will be the responsibility of the city government (G1, 18 November 2016).
- <u>State Enterprise and Government Support</u> In the development of TOD in Jakarta, DGR has been involved in the MRT basic design but not the surrounding area. Since there is no railway in Blok M, there is no direct involvement of the national government in this area (SE, 14 November).
- <u>Private Sector and Government Support</u>
 The national government has been supportive in providing regulations that improve the facilities and operation in the area (P1, 15 November). Developers as profit-oriented organisations noted that the government needs to have bigger involvement in the projects if

TOD wants to involve small and medium scale businesses, since if private sector is involved, they will want to make as much profit as possible (P1, 15 November).

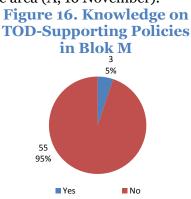
<u>Academics and Government Support</u>

The national government has also been providing TOD-supporting policies. Several national regulations can be applied for TOD, as they were not exclusively meant for a certain type of development. They aim to develop an inclusive area where everybody can perform all their activities inside the area. These regulations among others are:

- 1. Regulation of Minister of Public Works and Public Housing No. 17/2009 on the Guideline for Formulation of City Spatial Master Plan: It stated that when developing a commercial area, the developer is obliged to provide green public space and area for informal activities.
- 2. Regulation of Minister of Domestic Affairs No. 41/2012 on the Guideline for Street Vendor Regulation and Empowerment: It stated that the private sector needs to empower the informal sector through CSR.
- 3. Regulation of Minister of Public Works and Public Housing No. 10/2012 on Development of Housing and Residential Area with Balanced Residential: It stated that the proportion of housing for upper, middle and lower class in a given area should be 3:2:1.

At the time of the data collection, the Ministry of Agrarian Affairs and Spatial Planning is formulating a guideline for development of TOD that would include the related points from the aforementioned regulations as TOD should be an inclusive area (A, 16 November).

• <u>Area Users, Residents and Government Support</u> Figure 16 shows that 95% of the respondents do not know any of the national TOD-supporting policies. The 5% who knows identified state laws on city and metropolitan area spatial planning as well as economic acceleration as TODsupporting policies. The respondents urge the government to increase socialisation on policies as they have high interest on urban development in Jakarta. It can then be



concluded that the area users and residents are unaware of the government support.

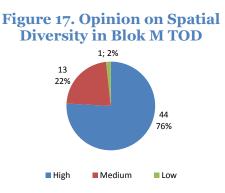
5.1.3 Design

Mixed-Use Development

- <u>Government and Mixed-Use Development</u> UDGL listed the multiple land uses in Blok M, which are: commercial, governmental, residential, and green open space (G2, 16 November).
- <u>State Enterprise and Mixed-Use Development</u>

All the land uses that are developed in the area have been mentioned in the UDGL. They have all complied with the spatial master plan and there are no functions that grew organically or are not in line with the master plan (SE, 14 November).

- <u>Private Sector and Mixed-Use Development</u>
 As Jakarta is a metropolitan city that needs to accommodate diverse activities in any given area, the activities that exist in Blok M were considered compliant with the regulations (P2, 11 November)
- <u>Academics and Mixed-Use Development</u> The functions are planned for the future development in the area include vertical and landed housings, transportation hub, train station, Transjakarta stop, commercial and business buildings. In the UDGL, there is still not detail yet on what type of businesses that will be included in the stations (A, 16 November).
- <u>Area Users, Residents and Mixed-Use Development</u> In Figure 17, 76% of the respondents viewed that Blok M has diverse land uses and functions. This signifies the high spatial diversity in Blok M, with multiple functions that cater to diverse needs. It can be concluded that the area users and residents generally view that Blok M has a high spatial diversity.



Fine-Grained Economy

<u>Government and Fine-Grained Economy</u>

Generally, the possibility of having a large number of small businesses in Jakarta TOD will not be high, as "...*if we depend on these small and medium businesses, they will not be able to develop the area in a bigger scale, like adding 70 storeys to a building or building a mall.*" (G2, 16 November). But by field observation, Blok M already has a high representation of thriving small businesses.

<u>State Enterprise and Fine-Grained Economy</u>

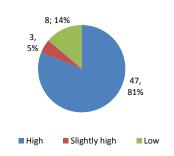
The first MRT in Jakarta identified its target users as middle-high income level residents. However, small businesses will still be supported in Blok M. "In the UDGL, we have also included a guideline to include the street vendors and their placement in the area. TOD should be considered case by case. We live in Jakarta, so we can't ignore their existence and have to adjust our planning." (SE, 14 November).

<u>Private Sector and Fine-Grained Economy</u>
 Blok M is well known for the various types of small businesses, but a need for more small and medium vendors was expressed, as they will attract even more customers (P2, 11 November).
 Developers, however, noted that this will make it difficult to attract people coming from every

income level. The task then is in the hands of the government to assure a TOD that will be available for everyone (P1, 15 November).

- <u>Academics and Fine-Grained Economy</u> As mentioned in the previous factor regarding Government Support, the interviewee (16 November) mentioned that there are regulations supporting fair representation of small- and medium-scale businesses in Blok M.
- <u>Area Users, Residents and Fine-Grained Economy</u> Figure 18 presents the survey result on the representation of small businesses in Blok M. A majority of the respondents (81%) viewed that there is a high number of small businesses in Blok M. This represents that the area users and residents view that there is an existence of fine-grained economy.





Public Space

<u>Government and Public Space</u>

Referring to State Law No. 26/2007 on Spatial Planning, the proportion between open green space and built area should be 30:70. As UDGL is formulated based on this requirement (G2, 16 November), so it is sufficient.

• <u>State Enterprise and Public Space</u>

Blok M already has a few parks. The development of an MRT station will also be followed by the development of an elevated concourse from the station that connects to Blok M Plaza, the bus terminal and Pasaraya with the aim to separate human and traffic flow (SE, 14 November).

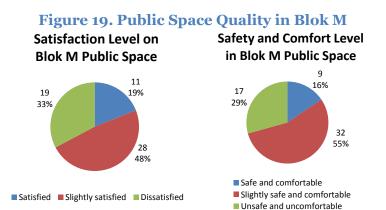
<u>Private Sector and Public Space</u>

The adequacy, safety and comfort of public space in Blok M were regarded as satisfactory by the interviewee. Regular security patrols are conducted and no more street hustlers that used to ask money to the business owners (P2, 11 November).

- <u>Academics and Public Space</u> Existing condition is considered inadequate, particularly due to the conflict between motorised vehicles and pedestrians. Parks and plazas should also be added as areas connecting the different activities (A, 16 November).
- Area Users, Residents and Public Space



Figure 19 shows how the respondents feel satisfied, safe and comfort in the public space of Blok M. Almost half of the respondents (48%) are only slightly satisfied in the area public space, noting that the existing pedestrian



path, parks and public facilities are of poor quantity and quality and then made worse with poor maintenance. Furthermore, they are often filled by illegal street vendors and parking. It can be concluded that the area users and residents view that the public space is of moderate quality.

Accessibility

• Government and Accessibility

Accessibility can be viewed as internal, which is the ease of reaching the different points within a given area, and external, which is the ease of getting to the different destinations outside the area. Good internal and external accessibility is found in Blok M, due to the effort of the operator in providing adequate access to reach all the modes and facilities in the area (G2, 16 November).

• <u>State Enterprise and Accessibility</u>

The difficulty in Jakarta TOD planning is due to the land ownership system which is mostly private-owned and not leased (SE, 14 November). MRTJ has drafted a Governor Regulation draft that will regulate compensation for access provision by private land owners. Yet, the current view of the government is that for a private owner to get compensation for access provision to MRT station, they need to hand over the land.

<u>Private Sector and Accessibility</u>

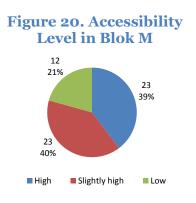
A distinction between ease and comfort was made when discussing about accessibility: *"If we talk about easy, yes it's easy. But if we talk about comfort, it's still not comfortable, because people would want to walk in a wide path and cool air. Maybe the concept was already good, but the implementation needs to be improved."* (P1, 15 November). This sentiment was echoed by the business owner, as it is easy to reach everywhere with the availability of buses and abundance of facilities in the area (P2, 11 November).

<u>Academics and Accessibility</u>

Blok M has a good external accessibility to reach different destinations throughout the city with the variety of bus routes. Yet the walkability in the area is not good (A, 16 November).

• Area Users, Residents and Accessibility

Figure 20 shows the survey result on accessibility level in Blok M. There are two similar opinions, with equally 23 people viewing Blok M having high and slightly high accessibility. Respondents who answered slightly high think that there should be improvements on pedestrian access, such as pedestrian path width, canopy along the path, signage, and separation between pedestrian and motorised vehicles. It can be concluded that generally the area users



and residents view that there is a high external accessibility yet moderate internal accessibility.

5.1.4 Activity

Street Life

<u>Government and Street Life</u>

Blok M has an active street life throughout the day due to the shopping centres and public transportation passengers. When TOD also develops housing complex and other facilities, it will certainly increase the activity level in the area (G2, 16 November).

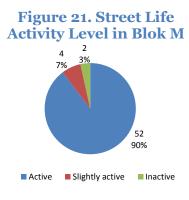
• <u>State Enterprise and Street Life</u>

As MRT will operate until midnight, the businesses in TOD will be able to open until midnight and active during different times throughout the day. The activities in Jakarta TOD are envisioned to be "...*comparable to the ones in Japan, Singapore and other big cities in Asia.*" (SE, 14 November).

<u>Private Sector and Street Life</u>

The bus terminal is viewed as the main activity pull. But all the other activities such as shopping centres, offices and restaurants are equally as popular. The area is always busy all throughout the day, from the morning when people leave for work, lunch time, afternoon and night time, weekdays and weekends, Blok M is always crowded with people (P2, 11 November).

- <u>Academics and Street Life</u> Blok M is considered to be busier than Dukuh Atas and quite busy even at night time (A, 16 November).
- <u>Area Users, Residents and Street Life</u> Figure 21 shows the survey result on street life activity level in Blok M. Almost all of the respondents (90%) viewed that there is a high level of activity in the public space area throughout different times in the day. This signifies that the

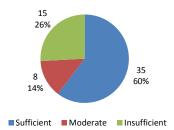


area users and residents view that there is active street life and denotes a display of urban vitality in the area.

Extended Opening Hours

- <u>Government and Extended Opening Hours</u> Blok M houses several shopping malls that open until 20.00-22.00. This is continued by restaurants and other entertainment activities that open late, some until early in the morning.
- <u>State Enterprise and Extended Opening Hours</u> As stated in the previous factor on Street Life, the businesses in Blok M are able to open until midnight following the operating hours of MRT. This shows that activities in Blok M have extended opening hours.
- <u>Private Sector and Extended Opening Hours</u> The bus terminal and shopping centres are mainly active until 21.00 but there are other activities in the area such as restaurants, bars and entertainment centres that are also active until the early hours in the morning (P2, 11 November).
- <u>Academics and Extended Opening Hours</u> According to the interviewee (16 November), there are adequate evening and night-time activities found in Blok M.
- <u>Area Users, Residents and Extended Opening Hours</u> In Figure 22, more than half of the respondents (60%) think that there is sufficient evening and night-time activities in Blok M. This includes eateries, shops, bars and a unique *lesehan* dining experience, where

Figure 22. Availability of Evening and Night-Time Activities in Blok M



you sit on the mat-covered ground with low tables. It can be concluded that generally the area users and residents view that there is sufficient availability of evening and night-time activities.

5.2 Dukuh Atas TOD Area

The results offered in this sub-chapter will be analysed further in Chapter 5 to address the main research question: "How does urban vitality play a role in the implementation of TOD ?" as well as the research sub-questions of:

- What are the success factors that ensure urban vitality in TOD implementation?
- In what ways does TOD implementation ensure urban vitality?
- How is urban vitality displayed in TOD projects in the case study of Jakarta?
- What are the bottlenecks in achieving vitality in Jakarta TOD implementation?

The presentation of all the factors is classified based on every interviewee category and survey respondent type.

5.2.1 Actors

Actor Relationships

<u>Government and Actor Relationships</u>

As there is a lack of leading figure and major institutional change in the Jakarta Capital City Government, strong initiatives should be proposed and maintained by the Regional Development Planning Board. *"If we expect Ministry of Transportation or the City Planning Agency to lead TOD, TOD is not only a spatial issue."* (G2, 16 November). Ministry of Transportation also found that the public private partnership in TOD development has not been running well (G1, 18 November). Currently, the key actors are doing their own business, which is not optimal to realise a successful TOD.

<u>State Enterprise and Actor Relationships</u>

MRTJ identified several of the key actors in Dukuh Atas TOD, namely Jakarta Government as the authoritative figure, MRTJ as the operator, land owners such as PT. KAI, Transjakarta and private buildings. Similar to the opinion on Blok M, the lack of leading sector is recognised as a major challenge in the planning process (SE, 14 November). To keep up with the development deadlines and adjust to the institutional changes in permit issuance with Jakarta Government, MRTJ has proposed a Governor Regulation draft to detail the Regional Regulation No. 3/2008 stating that the management and utilisation of the stations and TOD areas are under MRTJ authority as long as the design is approved by the City Planning Agency. There has been no progress on the establishment of this draft after it was submitted at the end of 2015, even though TOD planning is crucial. *"The City Planning Agency has started to show more initiatives (related to TOD planning) […] even though it's quite late in the development process."* (SE, 14 November).

<u>Private Sector and Actor Relationships</u>

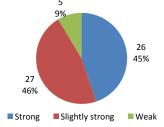
Regarding an active effort from the government to cooperate with existing small business owners, there has not been any action taken from the government's side to discuss TOD with small business entities in the area (P3, 11 November). This is due to the lack of a coordinated action from the government or operator. Developers in the area suggested that *"The government needs to take the lead and hire a special consultant to do a study on the area, make the concept and then delegate the tasks to each actor. Honestly, now Company A says I have this TOD plan, Company B says I have this TOD plan. The government would tell both of them to discuss the plan together. I think this is not very appropriate. The government should take lead, hire a consultant, gather the data and come up with the* *concept.*" (P1, 15 November). Before cooperation can be started, the government needs to agree on a concept that for all the key actors.

<u>Academics and Actor Relationships</u>

All the involved actors regard TOD as an important and beneficial development for a sustainable city (A, 16 November). However, the major challenges for actor cooperation in Dukuh Atas still lie in the following factors (A, 16 November):

- Inharmonious relationship between the actors
 "…the relationship between the actors is not too harmonious, in this case MRTJ and the government."
- The authority that MRTJ has to develop MRT
 "A problem of coordination is also apparent since the design of station entrances will be under MRTJ but the development will be by Bina Marga (the City Public Works Agency) because the land still belongs to the city."
- Difficulty in permit issuance by Jakarta Government
 "They (MRTJ) are treated like any other business entity even though they are the enterprise of Jakarta Government. So the procedures are still the same without any simplicity."
- <u>Area Users, Residents and Actor Relationships</u> In Figure 23, the survey result shows two similar opinions, with 45% of the respondents noting a strong cooperation between key actors and 46% noting only moderate cooperation. Respondents expressed dissatisfaction in the slow development progress and lack of coordination between the transportation mode operators. It can be concluded that generally the area





users and residents view that there is a high-moderate level of cooperation with room for improvement in progress and coordination.

Public Participation

<u>Government and Public Participation</u>

Involvement of public and area users is regarded as important, since the public needs to have a similar understanding on the TOD concept. If the government wants to develop a safe, comfortable, pedestrian-oriented area with good accessibility, the public should logically accept the idea without any resistance (G2, 16 November).

• <u>State Enterprise and Public Participation</u> MRTJ invited the land owners in Dukuh Atas and up to the time of the interview has established 34 gentlemen's agreements with land and building owners in the area related to TOD development. They will also provide input during the TOD planning process that will commence in February 2017. (SE, 14 November).

<u>Private Sector and Public Participation</u>

The business owners are interested to engage in the development planning, for example via direct discussion. Businesses in the area are cooperative with the development as long as they can still stay in the area (P3, 11 November). The government and operator also conducted public hearings in local government offices which are required in long-term projects and acknowledge the high interest from the public to participate (P1, 15 November).

• Academics and Public Participation

Public participation exists, but it has not been able to guarantee the rights of the area residents, especially from the marginal or lower income level. Suggestions for lesson-drawing is to observe Australia and USA case studies (A, 16 November), where the public is gathered in a non-profit organisation so that their rights can still be accommodated and they will also receive the proper public facilities.

<u>Area Users, Residents and Public Participation</u>

Figure 24 shows that more than half of the respondents (53%) are interested to be involved in the planning process, but only 2% of them have been involved in the process through a coordination meeting. This then affects their acceptance over the area plan, with only 38% of them feeling satisfied with how the area is developed. They suggested that the government should be more active in online media and internet to gain development input, and there is also high interest in public discussions. It can be concluded that the area users and residents generally view that there is low involvement of public participation although there is high interest to participate.

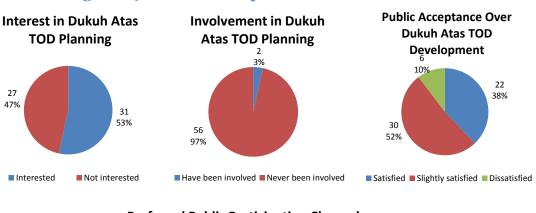
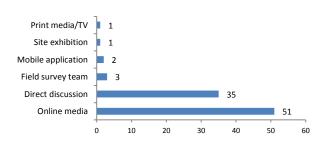


Figure 24. Public Participation in Dukuh Atas TOD

Preferred Public Participation Channel



Social Diversity

<u>Government and Social Diversity</u>

Jakarta houses people of all economic levels coming from every part of the country and other nationalities. Additionally, the strength of family unit has seen a decrease, prompting a sense of individualism among the society (G2, 16 November).

- <u>State Enterprise and Social Diversity</u>
 A densely populated city, Jakarta is a multi-ethnical and religiously diverse place. Working late would gain positive response, as there are especially offices that implement the policy so that the employees can come in later in the day because of daily traffic congestion (SE, 14 November). The high number of young people in the city will also strengthen public acceptance towards late night work.
- <u>Private Sector and Social Diversity</u>

Both business owners and developers have the same views on the diversity and work ethics of Jakartans, in that they are ethnically and religiously diverse with strong work ethics. Business owners agree with late night shift work, as the late operating hours of the shuttle buses in Dukuh Atas also profit their business (P3, 11 November).

<u>Academics and Social Diversity</u>

Diversity and work ethics are considered strong in Jakarta, while sense of family unit is veering towards an individualistic society compared to other cities (A, 16 November).

• Area Users, Residents and Social Diversity

Figure 25 presents the survey result on social diversity in Jakarta. A unanimous view of 100% on the social diversity is achieved, signifying how all the respondents agree that Jakarta is a multi-ethnic and religiously diverse place. 54% of the respondents also agree on night work shifts and a majority of 81% thinks that Jakarta society can be classified as individualists. It can be concluded that generally the area users and residents view that Jakarta is a socially diverse city with strong work ethics.

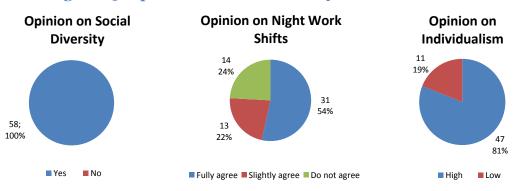


Figure 25. Opinion on Social Diversity in Dukuh Atas TOD

• <u>Government, State Enterprise, Private Sector, Academics and Urban Density (Critical Mass)</u> Dukuh Atas is situated in between 4 sub-districts, i.e. Setiabudi, Menteng, Kebon Melati and Karet Tengsin. Their respective population and density is presented in the table below.

| Sub-District | 2015 Population | Area | Population Density (per km²) |
|---------------|-----------------|------|---------------------------------|
| Setiabudi | 3,510 | 0.74 | 4,743 |
| Menteng | 24,342 | 2.44 | 11,911 |
| Kebon Melati | 33,382 | 1.26 | 26,493 |
| Karet Tengsin | 23,326 | 1.53 | 15,245 |

Table 6. Dukuh Atas Population Density Year 2015

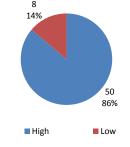
Source: Jakarta Statistics, 2016

All the interviewees stated that Dukuh Atas has high population density to create a vibrant environment. It is especially busy due to the transit users, with trains going to Depok, Bekasi and Serpong (P3, 11 November). But it would still need to increase the density to increase the

vibrancy at night time (A, 16 November). The potential has been calculated and the area will be adjusted to accommodate the increase (SE, 14 November).

• <u>Area Users, Residents and Urban Density (Critical Mass)</u> Figure 26 presents the opinion of respondents on urban density in Dukuh Atas. 86% of the respondents viewed that Dukuh Atas has a high population density to create a vibrant environment. It can be concluded that the area users and residents agree that Dukuh Atas has a high urban density.

Figure 26. Opinion on Dukuh Atas Urban Density



5.2.2 Policies

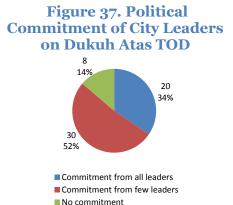
Vision Clarity and Consistency

<u>Government and Vision Clarity and Consistency</u>

A political vision can be manifested in various types of legal documents. When democratically-elected governors take seat every 5 years in Jakarta, they formulate 5-year planning guideline that was based on their campaign programmes. *"The Long-Term and Medium-Term Regional Development Plan (RPJP and RPJMD) as our Regional Regulations are actually political products. As long as TOD is included in these plans, it can be considered as a political commitment among the executive and legislatives. [...] But in our Spatial Master Plan (RTRW), it is included and it is also a Regional Regulation and signed by the Governor. That means that politically there is a common understanding on*

the future of Jakarta." (G2, 16 November). Clear, consistent vision and political commitment from the governors have been ongoing, even with change in the governor's seat.

- <u>State Enterprise and Vision Clarity and Consistency</u> Vision can also be translated as a development guideline, which has been addressed in the UDGL for the MRT corridor. UDGL is considered to be clear and consistent, providing the actors with a legal base to go forward together (SE, 14 November). MRTJ added that local leaders have also been supportive in TOD issues.
- <u>Private Sector and Vision Clarity and Consistency</u>
 Clear vision and commitment from the governors on TOD are evident (P1, 15 November).
 Although there has been change in the area, but it is towards a better condition, particularly regarding safety, facilities and cooperation of the small business owners (P3, 11 November).
- <u>Academics and Vision Clarity and Consistency</u> Jakarta is indeed committed on TOD. But a critical observation on the political will of the local leaders was made, as the legal documents were assessed to potentially cause delay in the development process: *"From the Regional Regulation aspect, it is stated that the development of TOD can only be conducted after the development of the transit system is finished. This shows that the political leaders or the policy makers do not fully comprehend the connection between TOD and mass transit system. There should be cross subsidy between the two and should be developed in parallel. Similarly, the mechanism of land acquisition is still handed over to the market mechanism. This also reflects that the political commitment is still not ideal to realise an optimum TOD."* (A, 16 November).
- <u>Area Users, Residents and Vision Clarity and Consistency</u> Vision clarity and consistency is measured by respondent's opinion on the political commitment of city leaders on Dukuh Atas TOD. Figure 27 shows the survey result where 52% of the respondents answered that they notice commitment from few leaders and 34% answered that there is commitment from all the leaders. This is more positive than what is acquired in Blok M, as Dukuh Atas is a new project. So, the respondents agree that there is better clarity and consistency in Dukuh Atas vision, but still with room for improvement.



Policy Clarity and Consistency

<u>Government and Policy Clarity and Consistency</u>

At the level of decision makers, there is an agreement on realising TOD in station areas. But it is still facing challenges in clarity within the implementation level: *"Essentially, there has never been a comprehensive and well thought-out planning regarding TOD or modal*



integration." (G1, 18 November). There needs to be strong initiatives to formulate clear regulations from the government, especially at the staff level, as the leaders have divided attention on other development issues (G2, 16 November).

<u>State Enterprise and Policy Clarity and Consistency</u>

MRTJ is committed to referring and being as consistent as possible to the UDGL, the main guideline in TOD planning. The policies have so far been consistent and it will be detailed in the area master plans for Blok M, Dukuh Atas and Cipete Raya which will start on February 2017 (SE, 14 November). Dukuh Atas is chosen as one of the first master plans due to its connection with Railink, the airport train.

<u>Private Sector and Policy Clarity and Consistency</u>

Developers identified some changes in the cooperation scheme plan regarding private building owners providing access to MRT stations. Buildings in the station area can now apply to increase their Floor Area Ratio (P1, 15 November). On the other hand, small business owners have limited knowledge of the detail development policies of the area. They do notice improvements in safety and facilities in the area (P3, 11 November).

<u>Academics and Policy Clarity and Consistency</u>

The interviewee could not comment on the clarity and consistency of development policies regarding Dukuh Atas TOD since she was not familiar with the policy history. However, Jakarta is already a step ahead compared to other Indonesian cities in TOD issues based on the number of supporting policies and regulations.

• <u>Area Users, Residents and Policy Clarity and Consistency</u> Figure 28 shows the opinion on change in Dukuh Atas TOD policy. A high percentage of 60% answered that they do not know if there are any changes in the policies as they are not aware of the policies themselves. It can be concluded that in general the area users and residents have no knowledge on the policy clarity and consistency.

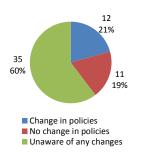


Figure 38. Opinion on Change in Dukuh Atas TOD Policy

Government Support

<u>Government and Government Support</u>

As a national institution, DGR is responsible for the basic design of the MRT Phase I in Jakarta, which includes only the MRT stations. The surrounding area is the responsibility of the city government (G1, 18 November). However, the national government should act as a coordinator to integrate all the different actors which are under the governance of the national government, such as Railink, flood canal and commuter line (G2, 16 November), whether it is Ministry of Transportation, Coordinating Ministry for Economic Affairs or Ministry of State Enterprises. It depends on the matter that needs to be coordinated.



<u>State Enterprise and Government Support</u>

In the development of TOD in Jakarta, DGR has been involved in the MRT basic design but not the surrounding area and further plays a role in forwarding the development loan. Nevertheless, TOD-specific policies such as land consolidation are implemented in Dukuh Atas by MRTJ. "...when there are many small land owners, we gather them and try to consolidate them to develop something that they will co-own." (SE, 14 November).

• <u>Private Sector and Government Support</u> Government needs to have bigger involvement in the projects if TOD wants to involve small and medium scale businesses, since if private sector is involved, they will want to make as much profit as possible (P1, 15 November). Up until the interview, the central government also have not shown any involvement in the area (P3, 11 November).

<u>Academics and Government Support</u>

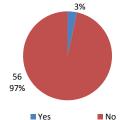
The national government has been providing TOD-supporting policies. Several national regulations can be applied for TOD, as they aim to develop inclusive areas where everybody can perform all their activities inside the area. These regulations among others are:

- 1. Regulation of Minister of Public Works and Public Housing No. 17/2009 on the Guideline for Formulation of City Spatial Master Plan: It stated that when developing a commercial area, the developer is obliged to provide green public space and area for informal activities.
- 2. Regulation of Minister of Domestic Affairs No. 41/2012 on the Guideline for Street Vendor Regulation and Empowerment: It stated that the private sector needs to empower the informal sector through CSR.
- 3. Regulation of Minister of Public Works and Public Housing No. 10/2012 on Development of Housing and Residential Area with Balanced Residential: It stated that the proportion of housing for upper, middle and lower class in a given area should be 3:2:1.

At the time of interview, the Ministry of Agrarian Affairs and Spatial Planning is formulating a guideline for development of TOD that would include the related points from the aforementioned regulations as TOD should be an inclusive area (A, 16 November).

• <u>Area Users, Residents and Government Support</u> Figure 29 presents the knowledge of respondents on TODsupporting policies in Dukuh Atas. This indicator is expected to explore how the area users and residents understand the government support in Dukuh Atas. Almost all of the respondents (97%) answered that they do not know any policies related to TOD. It can be concluded that





area users and residents are not aware on the level of government support regarding TOD.

5.2.3 Design

Mixed-Use Development

- <u>Government and Mixed-Use Development</u> According to UDGL, Dukuh Atas has diverse land uses, which are: commercial, governmental, recreational, residential, heritage and green open space (G2, 16 November).
- <u>State Enterprise and Mixed-Use Development</u>

All the land uses that are developed in the area have been mentioned in the UDGL and they have all complied with the spatial master plan and there are no functions that grew organically or are not in line with the master plan (SE, 14 November). A detailed plan of the land uses is in The Detailed Spatial Plan (DSP), which is being revised by the City Planning Agency because of the addition of LRT in Dukuh Atas. MRTJ has been invited to give land use input in this revision.

- <u>Private Sector and Mixed-Use Development</u>
 Other than the transit station, Dukuh Atas houses offices, hotels, modern market, bars, banks, shuttle bus services and restaurants (P3, 11 November).
- <u>Academics and Mixed-Use Development</u> The functions are planned for the future development in the area include vertical and landed housings, transportation hub, train station, Transjakarta stop, commercial and business buildings. In the UDGL, there is still not detail yet on what type of businesses that will be included in the stations (A, 16 November).
- <u>Area Users, Residents and Mixed-Use Development</u> Figure 30 presents the opinion on spatial diversity in Dukuh Atas TOD. Half of the respondents (50%) think that there is only a moderate diversity of functions in Dukuh Atas. The respondents expressed that the area needs more public space, vertical housing, eateries, parking space, sports facilities and arts and culture facilities. It can be concluded that the area users and

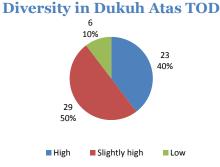


Figure 30. Opinion on Spatial

residents think that the spatial diversity in Dukuh Atas is not very high.

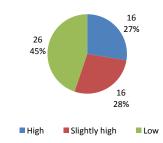
Fine-Grained Economy

<u>Government and Fine-Grained Economy</u>

A scheme to include small businesses needs to be agreed on with developers, because "...*if we depend on these small and medium businesses, they will not be able to develop the area in a bigger scale, like adding 70 storeys to a building or building a mall.*" (G2, 16 November).

- <u>State Enterprise and Fine-Grained Economy</u> Small businesses will be supported in Dukuh Atas, even though the identified target users of the MRT are middle-high income level residents. *"In the UDGL, we have also included a guideline to include the street vendors and their placement in the area. TOD should be considered case by case. We live in Jakarta, so we can't ignore their existence and have to adjust our planning."* (SE, 14 November).
- <u>Private Sector and Fine-Grained Economy</u> The private sector noted that for Dukuh Atas to have a fine-grained economy, the government needs to take over the project (P1, 15 November). Private developers will want to make as much profit as possible. The area houses a lot of informal businesses, but not a fair representation of small and medium businesses (P3, 11 November).
- <u>Academics and Fine-Grained Economy</u>
 As stated in the Regulation of Minister of Public Works and Public Housing No. 17/2009 and Regulation of Minister of Domestic Affairs No. 41/2012, the private sector is obliged to provide area for informal activities (A, 16 November).
- <u>Area Users, Residents and Fine-Grained Economy</u> In Figure 31, the survey result on representation of small businesses in Dukuh Atas is presented. Almost half of the respondents (45%) think that there is low representation of small businesses in Dukuh Atas. There is however a fair representation of street vendors, which are occupying pedestrian paths illegally, so the respondents hope that they can be relocated to an





appropriate area. It can be concluded that according to the respondents, there is not a vibrant fine-grained economy in Dukuh Atas.

Public Space

<u>Government and Public Space</u>

The State Law No. 26/2007 on Spatial Planning stated that the proportion between open green space and built area should be 30:70. As UDGL is formulated based on this requirement (G2, 16 November), the public space should be sufficient.

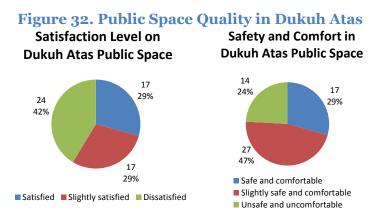
- <u>State Enterprise and Public Space</u> The land above the station will be returned as a park. And in MRTJ's vision, Tanjung Karang Street in the west side of the MRT station will be turned into a pedestrian path or a transit plaza (SE, 14 November).
- <u>Private Sector and Public Space</u>

Generally, public space area is considered inadequate by business owners. However, street lightings and pedestrian paths are sufficient for pedestrian safety (P3, 11 November).

<u>Academics and Public Space</u>

The pedestrian walk in the main roads is good, but it is inadequate in other parts of the area. Parks, plazas and other public facilities should be added to connect the different activities in the area (A, 16 November).

• <u>Area Users, Residents and Public Space</u> Figure 32 presents the opinion on public space quality in Dukuh Atas. There are divided opinions on the satisfaction level, although the highest percentage (42%) expressed their dissatisfaction in the public space quality, mainly concerning the inadequate pedestrian paths and lack of



smooth integration between the transportation modes. Almost half of the respondents (47%) also expressed that they feel slightly safe and comfortable in the area, because there is insufficient protection from heat and rain, badly-lit streets, and insufficient width of pedestrian paths. It can be concluded that the area users and residents are generally dissatisfied with public space in Dukuh Atas.

Accessibility

• <u>Government and Accessibility</u>

Good internal and external accessibility is found in Dukuh Atas, due to the effort of the operator in providing adequate access to reach all the modes and facilities in the area (G2, 16 November).

<u>State Enterprise and Accessibility</u>
 Accessibility in Dukuh Atas will be limited as me

Accessibility in Dukuh Atas will be limited as most of the land is private-owned and not leased (SE, 14 November). MRTJ has drafted a Governor Regulation draft that will regulate compensation for access provision by private land owners in order to improve accessibility. Yet, the current view of the government is that for a private owner to get compensation for access provision to MRT station, they need to hand over the land.

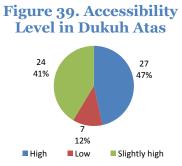
• <u>Private Sector and Accessibility</u>

Even though the area concept is good, there needs to be better implementation of accessibility-related facilities. *"If we talk about easy, yes it's easy. But if we talk about comfort, it's still not comfortable, because people would want to walk in a wide path and*



cool air." (P1, 15 November). On the other hand, the business owners think that the street lighting and pedestrian paths are adequate for the users (P3, 11 November).

- <u>Academics and Accessibility</u> In general, the internal accessibility of the area is not good as pedestrian paths in the area are insufficient (A, 16 November).
- <u>Area Users, Residents and Accessibility</u> Figure 33 presents the perception on accessibility in Dukuh Atas. Although the highest percentage of respondents (47%) claimed that there is high accessibility, but there is 41% that answered slightly high. Upon further questioning, the respondents that answered high referred to the external accessibility, since it is easy to reach other destinations in the



city using the existing transportation modes. And the respondents that answered slightly high stated that the internal accessibility, especially concerning modal integration and pedestrian access, needs improvement. It can be concluded that generally Dukuh Atas has high external accessibility and low internal accessibility.

5.2.4 Activity

Street Life

• <u>Government and Street Life</u>

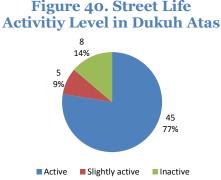
Dukuh Atas is particularly active during the operating hours of public transportation. When TOD also develops housing complex and other facilities, it will certainly increase the activity level in the area (G2, 16 November).

• <u>State Enterprise and Street Life</u>

Businesses in Dukuh Atas will be able to open until midnight and active during different times throughout the day as MRT operates until midnight. The activities in Jakarta TOD are envisioned to be "...*comparable to the ones in Japan, Singapore and other big cities in Asia.*" (SE, 14 November).

- <u>Private Sector and Street Life</u> Restaurant and shuttle buses services to Bandung are viewed as the main activity pull. The area is also still very busy at night time (P3, 11 November).
- <u>Academics and Street Life</u> Dukuh Atas is not as vibrant as Blok M but even though most buildings in the area are inwardoriented, the restaurants and cafes are still attractive (A, 16 November).
- Area Users, Residents and Street Life

Figure 34 shows the survey result on street life activity level in Dukuh Atas. Majority of the respondents (77%) agreed that there is a high level of street life in Dukuh Atas throughout different times in the day. It can be concluded that in general the area users and residents viewed that there is an active street life in Dukuh Atas, despite its limitations in public space quality.



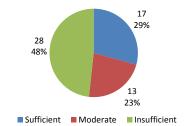
Extended Opening Hours

<u>Government and Extended Opening Hours</u>

With the area being busy when there are public transportation passengers (G2, 16 November) and nearby shopping centres such as Grand Indonesia, Dukuh Atas has evening and night-time activities.

- <u>State Enterprise and Extended Opening Hours</u> As stated in the previous factor on Street Life, the businesses in Dukuh Atas are able to open until midnight following the operating hours of MRT. This shows that activities in Dukuh Atas have extended opening hours.
- <u>Private Sector and Extended Opening Hours</u> Although the area is not as busy in the evening as it is in day time, there are hotels and restaurants that open 24 hours (P3, 11 November).
 - <u>Academics and Extended Opening Hours</u> The core area surrounding the MRT station will not have adequate night-time activities. But outside the radius of 400 m, there are more activities with extended opening hours (A, 16 November).
- <u>Area Users, Residents and Extended Opening Hours</u> Figure 35 shows the survey result on the availability of evening and night-time activities in Dukuh Atas. Although the previous factor concluded that there is an active street life, but 48% of the respondents viewed that there is insufficient evening and night-time activities in Dukuh Atas.





CHAPTER 6. ANALYSIS AND CROSS-CASE COMPARISON

Findings from interviews, survey and content analysis are drawn into a report over the two case studies in this chapter. Blok M and Dukuh Atas as two significant TOD areas in Jakarta were evaluated to explore how the planning and development processes take place and whether they result in vital TOD areas. In the report, reflection on answering the research questions and related theories is also included. Consequently, a cross-case comparison to examine the similarities and differences between the two is presented. Lessons drawn from these case studies will be a reference for ensuring urban vitality in similar future TOD developments in the city.

6.1 Blok M TOD Area

6.1.1.1 Actors

Blok M retains a high social diversity which reacts positively to the idea of late night work shifts (G2, SE, P2, A, Area Users and Residents). The range of actors involved in the development and management of Blok M is broad, but the dynamics mainly consist of the city government, transit operators, private land and building owners, developers, pedestrians, transport users, and residents (G2, SE, P1, P2, A). Although there is a high interest from the residents and users to participate in the planning process, public participation is currently limited to the private land and building owners in the business and commercial area (SE, A, Area Users and Residents).

6.1.1.2 Actor Relationships

All the key actors understood the importance and benefit of TOD for a sustainable development, and willing to support it. But the current state of relationship between the main actors in Blok M is not very flexible or good (P1, A, Area Users and Residents). Slow progress, weak coordination, fragmented area management and low public participation are among the condition described regarding the cooperation (A, Area Users and Residents). A lack of leading sector is regarded as the biggest barrier in the cooperation between key actors (G2, SE, P1). As the operator, MRTJ understands the major institutional change occurring in Jakarta Capital City Government during the governance of Joko Widodo – Basuki Purnama and started more initiatives in planning, but they also do not have the authority to plan (SE, A).

6.1.1.3 Public Participation

There are channels to participate in the TOD planning, but not for the general public. MRTJ invited land and building owners to participate in the formulation of the area master plan by providing input and cooperating to provide better accessibility in the area (SE, P1). This existing channel has not been able to guarantee the rights of residents, especially from the marginal or

lower income level (A). Area users and residents expressed that they are only slightly satisfied with the policies, as almost none of them (98%) have been involved in the planning process. Majority of the users and residents (78%) are interested to participate. This signifies that there is a gap between the public's high interest and the availability of the participation channels. The government should bridge this concern in order to create a space that is meaningful and beneficial for every user, not only land and building owners. Suggestions to improve public participation channels are by utilising online media, public discussions, mobile applications, field surveys and site exhibitions. To draw a conclusion, there is a high interest from the public, but low public involvement.

6.1.1.4 Social Diversity

Since the area attracts users from every part of the city and other cities in the metropolitan area, there was an undisputed opinion that Jakarta is a socially diverse city with multiple ethnicities and religions (G2, SE, P2, A, Area Users and Residents). As a city with high number of young people, work ethics is also considered strong (SE, P2, A) as late night work shifts are widely accepted, although there are concerns on health and safety reasons (Area Users and Residents). With this in mind, the general opening hours of economic activities such as restaurants and supermarkets are until 21.00 - 22.00. Buses run until midnight and some Transjakarta BRT routes operate until 05.00 in the morning. The society in Jakarta has also turned more individualistic (G2, A, Area Users and Residents), causing for the demand of different services during various times in a day.

6.1.1.5 Urban Density (Critical Mass)

With population density of 2,774 per km² (Statistics Jakarta, 2016) and high traffic of transit passengers and area users, Blok M is considered to have a dense concentration of urban population (G2, SE, P2, A, Area Users and Residents).

6.1.2 Policies

The national government has shown strong support on the development of TOD (G1, G2, SE, P1, A). The vision of Blok M TOD has been incorporated in the development master plans of Jakarta. Over the recent two decades, there has also been strong political commitment from the governors to redevelop areas surrounding the transit stations (G2, SE, P1, P2, A, Area Users and Residents). Yet the policies still lack in the level of detail and clarity, which needs improvement in the initiatives of the policy makers in the Jakarta Capital City Government (G2, P1).

6.1.2.1 Vision Clarity and Consistency

Vision can be manifested in legal documents, as the planning documents were formulated as products of the commitment of democratically-elected government leaders based on their campaign programmes (G2, SE). These documents include The Long-Term and Medium-Term Regional Development Plan and UDGL. There is clarity and consistency on TOD found in these documents and visible political commitment from the governors (G2, SE, P1, P2, A, Area Users and Residents). It is further noted that there has been strong commitment from the recent governors such as Sutiyoso, Joko Widodo and Basuki Purnama (Area Users and Residents). However, a critical view was given since the political commitment might be not ideal to realise an optimum TOD.

"From the Regional Regulation aspect, it is stated that the development of TOD can only be conducted after the development of the transit system is finished. This shows that the political leaders or the policy makers do not fully comprehend the connection between TOD and mass transit system. There should be cross subsidy between the two and should be developed in parallel. Similarly, the mechanism of land acquisition is still handed over to the market mechanism. This also reflects that the political commitment is still not ideal to realise an optimum TOD." (A)

6.1.2.2 Policy Clarity and Consistency

Subsequent to having a strong and clear vision, the government needs to formulate clear, specific and consistent policies that support TOD development. Jakarta is indeed more advanced than other regions in the country due to the number of TOD policies such as the UDGL and inclusion of TOD in the Jakarta Spatial Master Plan (A). The new area master plan for Blok M will also be formulated in February 2017 (SE). The policies have so far been consistent, although there needs to be major improvements in clarity and level of detail (G2, P1). *"The staff level should have a strong initiative that can come up, analyse and present what we have to do. So once again, at the strategic level, it's agreed on. But the lower level, this is what is lacking."* (G2)

6.1.2.3 Government Support

Pro-TOD regulations by the higher levels of the government promote a supportive atmosphere for TOD development. Strong support from the national government and ministries are evident (G1, G2, SE, P1, A), as shown in the existing policies such as:

- 1. State Law No. 26/2007 on Spatial Planning
- 2. State Law No. 23/2007 on Railways
- 3. Regulation of Minister of Public Works and Public Housing No. 17/2009 on the Guideline for Formulation of City Spatial Master Plan
- 4. Regulation of Minister of Domestic Affairs No. 41/2012 on the Guideline for Street Vendor Regulation and Empowerment
- 5. Regulation of Minister of Public Works and Public Housing No. 10/2012 on Development of Housing and Residential Area with Balanced Residential

Up until the data collection period, The Ministry of Agrarian Affairs and Spatial Planning are formulating the national regulation on the development of TOD as there has been no national regulation serving as a legal basis and guideline for TOD development in Indonesia.

6.1.3 Design

The area serves multiple primary functions with a strong presence of fine-grained economy (G₂, SE, P₁, P₂, A, Area Users and Residents). The view on the quantity and quality of public space is varied, but the majority of users and residents are only moderately satisfied as they think the pedestrian paths, parks and plazas need to be safer and more comfortable (Area Users and Residents). Although there is a high connectivity to other destinations, but as stated previously the walkability is not very high and signage is insufficient (Area Users and Residents).

6.1.3.1 Mixed-Use Development

Blok M has diverse primary functions which comply with the land uses established in the UDGL (G2, SE, P2, A, Area Users and Residents). Aside from the main attraction force that is the transportation hub, the functions in the area are commercial, businesses, governmental, residential, public facilities and green open space (Jakarta Capital City Government, 2012). The number of primary functions in Blok M denotes the spatial diversity of the area, which is one of the significant factors contributing to urban vitality.

6.1.3.2 Fine-Grained Economy

A fine-grained economy is described as an economy with businesses that do not take a lot of upfront capital. An indicator for this type of economy is the high number of small-scale businesses. Generally, the possibility of having a high number of small businesses in Jakarta TOD is not high (G2, P1), but including the existing street vendors is regulated in the UDGL (SE). Based on existing condition and the opinions of area users and residents, Blok M TOD does



Source: Author, 2016

have a high number of small businesses, particularly in Blok M Square and Blok M Mall, as shown in Figure 36 (Area Users and Residents).

6.1.3.3 Public Space

Figure 42. Interior of Blok M Mall

There are contradicting opinions regarding the public space in Blok M, with the positive view stating that it is sufficient and satisfactory (G2, SE, P2) and the moderate view stating that the public space is not very satisfactory and quite unsafe and uncomfortable (A, Area Users and Residents). The moderate view notes that the public space are of moderate quality and quantity, made worse by poor maintenance. They are also often filled by illegal street vendors and parking. There is an emphasis on the need for clean pedestrian paths, squares, parks and streets with addition of facilities such as garbage bins, wireless internet and benches as well as improvement in security.

6.1.3.4 Accessibility

Blok M has a high connectivity to other destinations in the city and metropolitan area with the abundance of public transportation (G2, P2, A, Area Users and Residents). Yet, the walkability in the area is not very high (SE, P1, A, Area Users and Residents). Suggestions for improvements in walkability are addition on pedestrian path width, canopy along the paths and clear signage and information system on routes.

6.1.4 Activity

An active street life is observed, with the bus terminal and shopping centres as the main attractions (P2, Area Users and Residents). But even as these activities close at night time, there are other attractions such as restaurants, eateries and bars that draw a high number of visitors until early in the morning (SE, P2, A, Area Users and Residents).

6.1.4.1 Street Life

Despite its limitations in public space, there is an active street life in the area throughout different times in the day and night (G2, SE, P2, A, Area Users and Residents). Bus terminal and shopping centres are considered to be the main attractions (P2, Area Users Residents). annual and An festival called Japanese Ennichisai would draw high number of visitors, with Japanese Figure 43. Ennichisai Festival, Blok M



Source: Akiba Nation, 2015

culture performances, food stalls and other Japanese popular culture (Figure 37). As MRT will be operating until midnight, the businesses in Blok M will also be able to open until midnight

(SE). The activities in Jakarta TOD are envisioned to be "...comparable to the ones in Japan, Singapore and other big cities in Asia." (SE)

6.1.4.2 Extended Opening Hours

There is a strong presence of evening and night-time activities in Blok M (SE, P2, A, Area Users and Residents). The area is mainly busy until 21.00 due to the traffic volume in the terminal. But other activities open until early in the morning, such as bars, karaoke centres, and a unique *lesehan* dining experience, where you sit on the ground with low-rise tables. It involves tens of food sellers and opens from 20.00-02.00, providing enough users to be active throughout the night.

6.2 Dukuh Atas

6.2.1 Actors

Key actors in Dukuh Atas consist of the city government, transit operators, private land and building owners, developers, pedestrians, transport users, and residents (G2, SE, P1, P3, A, Area Users and Residents). There is a higher number of transit modes than Blok M, including MRT, BRT, LRT, Railink and commuter railway. Public participation only involves land and building owners in the area, yet there is a high interest from the users and residents to participate in the transportation-land use planning process.

6.2.1.1 Actor Relationships

The key actors all agree on the importance and urgency of TOD and its benefits for a sustainable city (G1, G2, SE, A), however the cooperation between the actors have been weak with slow progress (G1, SE, P1, A). The lack of leading sector is recognised as a major challenge in the planning process, and strong initiatives should be proposed and maintained by the Jakarta Regional Development Planning Board (G2, SE, P1, A). *"If we expect Ministry of Transportation or the City Planning Agency to lead TOD, TOD is not only a spatial issue."* (G2). TOD principles have never been fully applied in the city, hence there were no previous experience in developing such areas.

6.2.1.2 Public Participation

In general, there is a low level of public participation, although there is a high interest to participate (P1, Area Users and Residents). In turn, this has made the general public not very satisfied in the area development. Participation channel, however, is available for the private sector in the area. Up until the data collection period, MRTJ has signed 34 agreements with private land and building owners regarding cooperation to provide access to the MRT station (SE). Online media, public discussions and mobile applications were popular mentions on preferable channel of communication with the government

6.2.1.3 Social diversity

There is a unanimous opinion that Jakarta is a socially and religiously diverse city with a balanced opinion on working late and have experienced a rise in individualism (G2, SE, P3, A, Area Users and Residents).

6.2.1.4 Urban Density (Critical Mass)

Dukuh Atas is located in the intersection of 4 sub-districts, namely Setiabudi, Menteng, Kebon Melati and Karet Tengsin, with a total population of 84,560 and an average density of 14,164 per km² in 2015 (Jakarta Statistics, 2016). A collective agreement on the urban density of the area was acquired, wherein Dukuh Atas possesses the critical mass to be viable (SE, P3, A, Area Users and Residents). The transit users in this area are the life force that keeps the area busy, and with the addition of new transit modes such as Railink, LRT and MRT, it will highly increase the density.

6.2.2 Policies

The national government has shown strong support for the development of TOD in Jakarta, proven by the number of pro-TOD policies (G1, G2, SE, P1, A). Recent Jakarta governors such as Sutiyoso, Joko Widodo and Basuki Purnama has also shown visible commitment in transit development (Area Users and Residents), with a strong vision to realise transit-oriented environments. The lack of clarity and level of detail is also evident in Dukuh Atas policies, as there should be stronger initiatives to formulate clear, detailed and specific regulations (G2).

6.2.2.1 Vision Clarity and Consistency

Clear and consistent vision on development of TOD has been established in the Medium-Term Regional Development Plan and UDGL as products of the political commitment of the local leaders (G2, SE, P1). The public has also noticed improved transit development during the tenure of recent governors such as Sutiyoso, Joko Widodo and Basuki Purnama (Area Users and Residents).

6.2.2.2 Policy Clarity and Consistency

Essentially, the policies in Dukuh Atas TOD are comparable to Blok M policies considering they are formulated by the same policy makers and government with similar urban conditions. Among the decision makers, there is consistency in the commitment to realise TOD in station areas through various pro-TOD policies (G1, G2, SE, P1). But the policies require further clarity. *"Essentially, there has never been a comprehensive and well thought-out planning regarding TOD or modal integration."* (G1). Strong initiatives to formulate clear, detailed and specific regulations should be increased, especially at the staff level of the government (G2).

6.2.2.3 Government Support

Strong support from national ministries and institutions such as DGR, Ministry of Public Works and Public Housing, Ministry of Domestic Affairs, Ministry of Public Works and Housing and Ministry of Agrarian Affairs and Spatial Planning are shown in their regulations which promote TOD characteristics, among others transit system planning, mixed-use development, representation of small businesses, land co-ownership and provision of adequate public space (G1, G2, SE, P1, A). Additionally, there is a need for the national government to act as a coordinator to integrate all the different transit operators which are under the governance of the national government, such as Railink and the commuter railway (G2).

6.2.3 Design

Although the area has multiple primary functions, the level of spatial diversity in Dukuh Atas is considered only moderate (G2, SE, P3, A, Area Users and Residents) with a weak presence of fine-grained economy (G2, P1, P3, Area Users and Residents).

6.2.3.1 Mixed-Use Development

Spatial diversity is considered moderate in Dukuh Atas (G2, SE, P3, A, Area Users and Residents), which also complies with the land uses listed in the UDGL, namely commercial, business, governmental, recreational, residential, heritage and green open space (Jakarta Capital City Government, 2012). There is a need for more public space, vertical housing, eateries, sports facilities and arts and culture facilities (Area Users and Residents).

6.2.3.2 Fine-Grained Economy

The identified target users of MRT are middle-high income level residents, expected to shift from private vehicles to transit (SE). Thus, the commercial tenants are suited for their needs and it will be difficult to have a fine-grained economy (G2, P1, P3, Area Users and Residents). There is a high number of street vendors occupying the public space (Area Users and Residents), and there is already a guideline to include them in TOD areas (SE, A). But generally, the area does not have a high representation of small businesses to form a fine-grained economy.

6.2.3.3 Public Space

There has been an improvement in safety as there are no street hustlers anymore in the area (P3, Area Users and Residents), but generally public space is considered inadequate and not very safe or comfortable (P3, A, Area Users and Residents). Suggestions for improvement include more parks, plazas and other public facilities as well as adequate protection from heat and rain, street

lighting and wider pedestrian paths (A, Area Users and Residents). Figure 38 provides an illustration on one section of the pedestrian path that has a protective canopy.

6.2.3.4 Accessibility

High connectivity to other destinations is achieved in Dukuh Atas, considering there are transit modes covering routes to other areas in Jakarta and metropolitan area (G2, P1, P3, Area Users and Residents). Yet, there is a low walkability inside the area, especially concerning pedestrian access and modal integration (P1, A, Area Users and Residents). Accessibility in Dukuh Atas is limited as most of the land is private-owned and not leased (SE). Figure 44. Pedestrian Path in Jend. Sudirman Street – Dukuh



Source: Author, 2016

MRTJ has drafted a Governor Regulation that will regulate compensation for access provision by private land owners in order to improve accessibility. Yet, the current view of the government is that for a private owner to get compensation for access provision to MRT station, they need to hand over the land. This will result in high acquisition cost.

6.2.4 Activity

The level of spatial diversity and existence of fine-grained economy have affected the level of street life in the area. There is only a moderate level of activity level in the public space throughout day and night (G2, P3, A, Area Users and Residents). There are also insufficient activities during night time (A, Area Users and Residents), especially in the core radius of 400 metres.

6.2.4.1 Street Life

The area has a lower activity level of street life compared to Blok M and is predominantly affected by the transit users that go to work in the adjacent office buildings (G2, P3, A, Area Users and Residents). Therefore, the area loses its vitality during weekends. However, when MRT begins its operation, the business operating hours can also be extended until midnight (SE).

6.2.4.2 Extended Opening Hours

A number of minimarkets, hotels, and restaurants are open for 24 hours (P3, Area Users and Residents), and there are also shopping centres outside the core area radius of 400 metres (A). But in general, there are insufficient evening and night-time activities in the area (A, Area Users and Residents). Preferred recreational activities such as restaurants, cafes, cinemas and shops are in demand by the area users and residents.

6.3 Cross-Case Comparison

After presenting the case report on both case studies, the similarities and differences between the two can be analysed. Generally, both TOD areas are similar as they are major multimodal interchange stations. They are also activity centres with strategic locations, housing various primary functions ranging from commercial, business, governmental and residential. The development of an MRT station in both areas prompts plans for urban redevelopment with a TOD approach. Further, they do boast their own characteristics as urban places. Blok M is popular as leisure or recreational area, with shopping centres, bars and restaurants that open until late at night. Meanwhile, Dukuh Atas is more known to its proximity with business and shopping centres. A summary of both cases is presented below for clarity.

| Vital TOD Success Factor | Blok M | Dukuh Atas |
|-----------------------------------|--|--|
| Actors | | |
| Actor Relationships | Weak coordination Slow progress Lack of leading figure/sector Key actors agree on the importance of TOD | Weak coordination Slow progress Lack of leading figure/sector Key actors agree on the importance of TOD |
| Public participation | Very low public involvement High interest from public Moderate public acceptance Involvement of private land and building owners | Very low public involvement High interest from public Moderate public acceptance Involvement of private land and building owners |
| Social diversity | Socially and religiously diverse society Strong work culture A rise in individualism | Socially and religiously diverse society Strong work culture A rise in individualism |
| Urban density (critical mass) | Dense concentration of urban population | Dense concentration of urban population |
| Policies | | |
| Vision clarity and consistency | Clear, consistent vision Political commitment from recent leaders Need for better comprehension on the connection between land use and transit systems | Clear, consistent vision Political commitment from recent leaders Need for better comprehension on the connection between land use and transit systems |
| Policy clarity and consistency | Consistent policies Existing policies require improvements in clarity and level of detail | Consistent policies Existing policies require improvements in clarity and level of detail |
| Government support | Strong national government support in providing pro-TOD regulations Design | Strong national government support in providing pro-TOD regulations |

Table 7. Summary of Case Studies

| Vital TOD Success Factor | Blok M | Dukuh Atas |
|-----------------------------|--|---|
| Mixed-use development | High level of spatial diversity | Moderate level of spatial diversity |
| Fine-grained economy | Compliant with regulations High number of small-scale businesses | Compliant with regulations Low number of small-scale businesses |
| Public space | Moderate quantity and qualityNot very safe and comfortable | Low quantity and qualityNot very safe and comfortable |
| Accessibility | Very high connectivity to other destinations | Very high connectivity to other destinations |
| | Moderate walkability Need for addition of wider pedestrian paths, protection from heat and rain, clear signage and information system | Low walkability Need for wider pedestrian paths, protection from heat and rain, and smooth modal integration |
| Activity | | |
| Street life | Active street lifeYearly festivals | • Slightly active street life |
| Extended opening hours | Strong presence of evening and night-time activities Unique <i>lesehan</i> dining experience | Insufficient evening and night- time activities Need for restaurants, cafes, cinema and shops |
| Courses Author 201 | | |

Source: Author, 2017

Similarities

Both cases have similar actors and policies condition. There is a lack of leading sector and coordination, resulting in a weak and rigid cooperation between the key actors. Although there is strong political commitment and support from the national government and governors, there is weak initiative from the lower level of government to oversee the process and formulate clear and detailed policies. Jakarta Regional Development Planning Agency as the regulator and organisation responsible for the coordination of the TOD projects is viewed as the appropriate actor to lead the planning and implementation process. As the main planning agency in Jakarta Capital City Government, The Regional Development Planning Agency needs to encourage and maintain more initiatives to generate TOD policies for all the existing projects and strengthen the leading role in TOD planning and implementation. Public participation in both cases also only involve private land and building owners, omitting the area users and residents and their high interest to contribute in the planning process. Another resemblance is the general social condition, wherein both cases are ethnically and religiously diverse. The users and residents in both cases also react positively to strong work ethics and a rise in individualism is observed. These conditions are a prerequisite to vitality, as socially diverse areas is open to variety in urban life rhythms.

Furthermore, both cases also comply with the master plans, since the land uses in the areas adhere to the existing regulations. They are also highly connected to other destinations inside and outside of Jakarta, offering various routes with the diverse available transit modes. The high connectivity and attractions in the areas bring in high level of activities and interaction between users, resulting in vitality. There is, however, differences in the activity level and availability of evening activities, which is further explained in the following section.

Differences

Differences between both cases are evident in their design and activity levels. Based on the survey result, Blok M is considered to have high spatial diversity, compared to the moderate level that Dukuh Atas has. Blok M possesses more appealing activities, which draws constant flow of visitors throughout day and night time. There is also a strong presence of fine-grained economy in Blok M, whereas there is a weak one in Dukuh Atas. Most land and building owners in Dukuh Atas do not accommodate small businesses. Public space and walkability in Blok M were also of better condition than Dukuh Atas, and the availability of pedestrian paths, parks and plazas were viewed as more adequate in Blok M. Nevertheless, there is a similar need in both cases for safe and comfortable public space, in the form of wider pedestrian paths with protection from heat and rain, clear signage and information system, smooth modal interchange and disabled facilities. In turn, all these differences also show how both cases have different activity levels and availability of evening activities.

Constant flow of visitors throughout day and night time in Blok M is not limited to weekdays. The area also draws people in weekends, due to its commercial and leisure attractions. The condition is different in Dukuh Atas, where the majority of transit users are office workers in the surrounding area and the street life in public space is limited to working and rush hours. Insufficient night time activities also cause less vitality after evening rush hours. Survey respondents noted that there needs to be more options for leisure activities during night time, such as restaurants, cafes, cinema and shops to maintain the night activity level.

Based on these findings, it can be observed that factors such as number of primary functions, existence of fine-grained economy, quantity and quality of public space, accessibility level, and available activities during day and night time play a significant role in influencing the activity level of the areas. Without the presence of economic diversity, physical safety and comfort and spatial accessibility, the display of urban vitality in the area weakens and activity level declines. Providing the aforementioned factors leads to maximum scope of activities and comfort for the users to interact in the area.

CHAPTER 7. DISCUSSION AND CONCLUSION

The link between urban vitality and TOD implementation has been the fundamental focus of this research. In this chapter, findings on both case studies are summarised according to the conceptual model which will be the basis to analysing the display of urban vitality in TOD case studies in Jakarta and the link between urban vitality and TOD. The research questions on urban vitality in both case studies will be answered first, continued by addressing ways to ensure urban vitality in TOD implementation and the main research question on the role of urban vitality in the implementation of TOD.

7.1 Urban Vitality in Blok M and Dukuh Atas TOD Areas

Urban vitality can be described as the life force of the city, shaped by its pre-existing conditions (spatial and otherwise), requiring a critical mass to become viable and strong (Tan & Klaasen, 2007). By summarising the case report based on the conceptual model, the display of urban vitality within both case studies can be analysed to answer the research questions of

- How is urban vitality displayed in TOD projects in the case study of Jakarta?
- What are the bottlenecks in achieving vitality in Jakarta TOD implementation?

7.1.1 Urban Vitality in Blok M TOD Area

The area retains a dense urban density with high social diversity and strong work culture, providing a viable environment that boosts tolerance and openness to varying activities with diverse operating hours. Key actors, namely the Jakarta government, transit operators and land and building owners also have a common understanding on the importance of TOD for urban sustainability, and willing to support its realisation. This common understanding unfortunately did not result in a flexible and strong cooperation. Weak cooperation, signified by the fragmented area management and the absence of leading sector led to slow development progress. High interest to participate in the planning process from the area users and residents were also not captured and public participation were limited to the private land and building owners in the area. Jakarta Regional Development Planning Agency, the institution within Jakarta Capital City Government responsible for the city development planning, coordination and monitoring, is considered to be the appropriate institution to lead the planning and development process. Strong initiatives to regulate TOD planning, especially at the staff level, should be encouraged and maintained until they are established in the form of policies and implemented by the relevant sector.

Weak actor relationships due to lack of leading figure and government initiatives in turn affects the clarity of plans and policies. Since TOD is an emerging development concept in Jakarta, the

government has no prior experience in developing transit-oriented environments. When combined with weak initiatives from the local government, a result of inadequate TOD-specific policies is generated. Although these policies have been consistent, but they require improvements in clarity and level of detail. Support from the national government and political commitment from Jakarta governors should be able to function as foundations for detailed and consistent policies that will benefit horizontal cooperation and optimal area design.

Land and buildings in the area are predominantly owned by private entities or individuals. The advantage of this private ownership is the high diversity of primary functions and high representation of small businesses, establishing a fine-grained economy in the area. These primary functions also comply with the land uses stated in the regulations. High connectivity to other destinations is present due to the availability of public transportation. But the lack of leading sector in area planning has affected the public space and walkability in the area, which are not optimally developed. Users and residents noted the absence of comfortable pedestrian paths, clear information system and signage.

The availability of diverse activities, existence of a fine-grained economy and high connectivity to other destinations lead to agglomerative and symbiotic effects that enhances vitality. This is further proven by the active street life, where there is a high number of people during different times in day and night. Robust existence of evening and night-time activities also increase the time span during which there are possibilities for interaction and transaction.

7.1.2 Urban Vitality in Dukuh Atas TOD Area

The area is characterised as possessing high urban density and social diversity, some of the prerequisites to achieving vitality (Jacobs, 1961; Wood & Landry, 2008; Tan & Klaasen, 2007). Willingness of key actors to have a flexible and creative cooperation has not been realised, as there is yet a leading sector overseeing the whole planning and implementation process. As a result, each transit company is working on their own instead of following an area master plan. The area users and residents also expressed their dissatisfaction in the limited access to public participation, although they are concerned with the issue of urban development.

The agreement of key actors to realise TOD was evident by the support and commitment from the higher levels of government. Multiple related national ministries continued to provide pro-TOD policies and recent Jakarta governors have constantly committed to redevelop areas around transit stations to meet TOD principles. The Jakarta Regional Development Planning Agency is viewed to not formulating clear and detailed policies to sustain smooth implementation and taking the leading role in the development process. On the other hand, the Agency viewed that the national government should act as a coordinator as there are state enterprises involved in the area, namely Railink, PT. Kereta Api Indonesia and PT. Adhi Karya.

This ambiguity of leading role resulted in fragmented area development and thus shortcomings in area design. Diverse primary functions is not balanced out with presence of a fine-grained economy. Low number of small businesses exist in the area, hence decreases the area attractiveness for the users. High connectivity to other trip destinations brings about high number of daily users, but they are met by narrow unprotected pedestrian paths and absence of parks or plazas to gather and stay.

At a glance, these shortcomings in area design should greatly influence the activity level. Yet, an active street life is found in the area. The high number of people comes from the transit users which then proceeds to the nearby shopping centres or office buildings. The aforementioned design shortcomings however led to insufficient evening and night-time activities, and the area is generally not vibrant at night. Users and residents expressed that there are inadequate activities to ensure extended economic activities over the conventional working hours.

Display of Urban Vitality in Jakarta TOD Areas

Both case studies have comparable intrinsic characteristics and external influence, particularly the factors related to Actors and Policies. The areas have dense urban population, high social diversity and high public participation interest, but weak cooperation and low public involvement. They are also supported by national government regulations and political will of the city leaders, but lack the clarity and detailed policies needed to warrant smooth TOD implementation. The two differ in design, where Blok M has higher number of small businesses, better public space quality and walkability compared to Dukuh Atas and resulted in Blok M providing higher possibilities for multiple urban rhythms and multiple activities to coexist and interact within a given area, considering that Blok M has an active street life and strong presence of evening and night-time activities.

Therefore, to answer the research question of **"How is urban vitality displayed in TOD projects in the case study of Jakarta?"**, the case studies display urban vitality by ways of the levels of activities and interaction in their public space and streets. Attractive activities in both areas include shops, restaurants, services and businesses. Additionally, both case studies offer activities with extended opening hours, which involve among others eateries, bars and karaoke centres. The more active the street life in a certain area is and the stronger the presence of evening and night-time activities is, display of urban vitality will be more robust. A notable finding is that although there are limitations in area design, both case studies still displayed urban vitality. Users are still inclined to interact in the area even though the areas are not fully safe and comfortable. This shows that the area retains the critical mass needed to achieve vitality and there are diverse attractions in the area.

Moving onto analysing the bottlenecks in achieving vitality, based on the interviews there are considerable concern given to the actor relationships, public participation and policy clarity in both cases. Cooperation between actors were described as weak, an overall low public involvement participated in the planning process and policies need improvements in clarity and level of detail. In these case studies, the government and MRTJ only involved the land and building owners in the area. Moreover, the area design in both cases also indicated that there are drawbacks in the representation of small businesses, public space and walkability. Hence, the answer to the question of **"What are the bottlenecks in achieving vitality in Jakarta TOD implementation?"** is weak cooperation of key actors, low public involvement, policy clarity, representation of small businesses, public space and walkability.

Jakarta is a dense metropolitan crippled by regular heavy traffic congestion, and its citizens yearn for an efficient transportation system and pedestrian-oriented areas, as observed in the two TOD case studies. Hence, drawbacks in area design such as existence of fine-grained economy, public space and accessibility might not vastly influence the activity level in a city as dense as Jakarta. In addition to retaining critical mass and diverse attractions, a sense of resilience and adaptation is shown as users manage to adjust to the available public facilities.

7.2 Ensuring Urban Vitality in TOD Implementation

Evaluation of the case studies indicates that although major improvements are needed in actor relationships and policy clarity, TOD in Jakarta will generally be embraced by the people and display urban vitality. TOD implementation can ensure urban vitality by providing certain attractions, opportunities and facilities. The implementation does not need to achieve all the vital TOD success factors, as it is not a situation of 'all or nothing': even though the cases have fragmented area management and low public involvement, attractive areas and high number of users could still be achieved. Based on the findings of these case studies, the answer to the following research questions can be distilled:

- In what ways does TOD implementation ensure urban vitality?
- What are the success factors that ensure urban vitality in TOD implementation?

The case studies show that TOD ensures urban vitality by providing the necessary attractions, opportunities and facilities, referring to the multiple primary functions and activities, number of small businesses, public space and ease of accessibility. The higher the quantity and quality of

these attractions, opportunities and facilities are, the stronger the vitality will be. These area characteristics are related to the Design element in vital TOD success factors. When the two case studies are compared, the design factors that affect the activity level are: mixed-use development, fine-grained economy, public space and accessibility. In Dukuh Atas, the low number of small businesses, unsafe and uncomfortable public space and low walkability in turn affected the street activity level and availability of activities with extended opening hours. This answers the question of **"In what ways does TOD implementation ensure urban vitality?"**. TOD implementation can guarantee the display of urban vitality by providing an area design that consists of economic diversity, physical safety and comfort and spatial accessibility, with the corresponding vital TOD success factors of mixed-use development, fine-grained economy, public space and accessibility.

In chapter 2, vital TOD success factors were identified to ensure successful TOD areas that displays urban vitality. Based on the case report, it is apparent that to create a vital TOD area, not all thirteen factors need to achieve success. Drawbacks in several factors, as seen in weak finegrained economy and low quality and quantity of public space in Dukuh Atas, could still result in a certain degree of vitality. Decision makers can thus benefit from this by treating the success factors as a variety of possibilities that can be chosen depending on the strength and weaknesses of a specific case. These success factors can also be utilised to identify and ease bottlenecks or barriers in TOD implementation. For clarity and to answer the question of **"What are the success factors that ensure urban vitality in TOD implementation?"**, the vital TOD success factors are:

- Actor relationships
- Public participation
- Social diversity
- Urban density (critical mass)
- Vision clarity and consistency
- Policy clarity and consistency
- National government support
- Mixed-use development
- Fine-grained economy
- Public space
- Accessibility
- Street life
- Extended opening hours

7.3 The Role of Urban Vitality in the Implementation of TOD

All the research sub-questions have so far been addressed to lead to the main research question on the role of urban vitality in TOD implementation. Referring back to the identification of vital TOD success factors, urban vitality acts as a framework that successfully and comprehensively linked the two different TOD success factors proposed by Thomas and Bertolini (2014) and Ewing and Cervero (2010), each focusing on the institutional and spatial aspects of TOD. By making these implicit links explicit, a comprehensive understanding on successful TOD is constructed, which is consequently referred as vital TOD. Vital TOD denotes transit-oriented environment that displays urban vitality, an urban space with maximum scope for activity through different times in day and night time.

When the two case studies in Jakarta were evaluated based on these factors, urban vitality can be observed in various forms. There is economic vitality, which can be measured by for example levels of retail performance and annual number of visitors, shown by the street life and high number of people in the area. There is social vitality, which concerns for example good communications and mobility between different social strata and tolerance of different lifestyles, shown by the diverse social ethnicities and religions. And environmental vitality which can be measured by variables such as green space, pollution, safety and comfort. Similar to vital TOD success factors, as there is a vast range of vitality forms, policy makers can choose which form to achieve based on the conditions of each TOD area. Hence, every element of TOD – Actors, Policies, Design and Activity – account for the achievement of vitality.

To summarise and respond to the main research question of **"How does urban vitality play a role in the implementation of TOD?"**, urban vitality serves as a comprehensive concept that embodies the different TOD performance indicators, resulting in the attainment of a comprehensive measurement of TOD performance, one that ensures a transit-oriented environment with optimal scope for activities, creativity, tolerance, safety and comfort. It also relates to the same elements that TOD has, namely actors, policies, design and activity.

7.4 Theoretical Reflection

Reflecting back on the utilised theories, urban vitality has proven to be a valuable framework in exposing the implicit links between the two different TOD success factors. Although initially the literature review showed differences in the terms of the success factors of TOD and urban vitality and combining the two frameworks seem unfeasible, when explored further, they can essentially be grouped into similar factors. For example, 'flexible and horizontal governance' (Tan & Klaasen, 2007) as one of the influencing factors of urban vitality initally did not seem to apply to any of the TOD success factors. But upon further analysis, it can be classified as a part of the 'actor

relationships' (Thomas & Bertolini, 2014). Urban vitality has the similar goal and characteristics that cover both institutional and spatial aspects of TOD. The vital TOD success factors were subsequently generated as a result of successful combination between the complementary TOD performance indicators, identifying the four similar elements of urban vitality and TOD, namely actors, policies, design and safety as well as tying in the goal of realising urban vitality in TOD implementation.

There are several urban vitality influencing factors that were excluded from the vital TOD success factors, which were explained in the critical note in Chapter 2. These factors include short building blocks, varying building age and condition (Jacobs, 1961) and climate (Nikolopoulou, Baker, & Steemers, 2001). Generally, the learning process in the exploration of the role of urban vitality in the implementation of TOD has revealed the possibility of achieving more comprehensive understanding on what constructs successful TOD and how TOD can contribute to revitalisation of the city through provision of vital areas.

7.5 Conclusion

This research began with the objectives to analyse the link between TOD and urban vitality, identify the factors that would ensure vitality in TOD implementation and evaluate the vitality in TOD case studies in Jakarta. Theories on TOD and urban vitality as well as the gap between the different TOD success factors have been explored and resulted in the identification of vital TOD success factors. These vital TOD success factors were further used to evaluate Blok M and Dukuh Atas TOD areas in Jakarta. The results of this research potentially introduce new range of factors that can be used by policy makers and planners to improve the planning and implementation of TOD. Furthermore, an insight on the planning and implementation process of TOD in Jakarta is gained, which can initiate discussions on the strengths and drawbacks of TOD implementation, and what can be accomplished to improve the existing condition. It is also interesting to note that even with less favourable conditions, among others on actor relationships and policy clarity, high level of activity can still be achieved. This shows that there is a sense of resilience and adapatation demonstrated by the users and residents towards the limitations of the TOD areas.

Blok M displayed strong urban vitality, particularly related to the active street life in day and night time, whether it is weekdays or weekends, and high social diversity of the users and residents. The area retains adequate activities to maintain high activity level, but improvements can be done to increase safety and comfort of the pedestrian paths, parks and plazas inside the area. On the other hand, due to lower level of spatial diversity, weaker existence of fine-grained economy, and low quality of public space and accessibility, Dukuh Atas displayed moderate urban vitality and lower activity level during night time and weekends. Therefore, it is necessary to increase the number of activities based on the needs of users and residents along with safe and comfortable pedestrian paths, parks and connecting areas.

To ensure urban vitality in TOD implementation, policy makers can choose from a few options of policy recommendation for Jakarta TOD development, as there is a variety of possibilities based on the vital TOD success factors, that can be chosen depending on the strength and weaknesses of a specific case. These success factors can also be utilised to identify and ease bottlenecks or barriers in TOD implementation. In both case studies, it was apparent that there are setbacks on actor relationships, public participation and policy clarity and consistency. These factors can serve as starting points to formulate policies that regulate creative, flexible and horizontal cooperation between the government, operator, private and public. Another recommendation is to formulate a guideline that will gather planning input from the users and residents of TOD areas, preferably from online platform or direct discussion, to ensure that the areas will accommodate their needs. And lastly to produce clear and consistent development policies, policy makers can maximise the strength of each case while at the same time improve the weaknesses, particularly related to spatial diversity, public space and accessibility.

The exploration on TOD and urban vitality theories have proven to be valid and valuable in providing the foundation to establish the link between the two frameworks. Despite the fundamental differences in the two TOD performance indicators, urban vitality arose as a framework that covers both the institutional and spatial aspects of indicators. With the construction of the conceptual model, a causal relationship between the factors and similarities between TOD and urban vitality were also determined.

CHAPTER 8. REFLECTION

Strength and Weaknesses

Analysing the link between TOD and urban vitality was the ground of this research, and in the process of doing so, formulated the vital TOD success factors that ensures implementation of vital TOD areas. Establishment of the link between urban vitality and TOD has never been conducted in previous studies. Hence, this serves to provide a better and more comprehensive understanding on what makes a successful TOD area and becomes a highly valuable contribution for the planning theory and practice of TOD, in Jakarta and other cities in developing countries. During the process of data collection, enthusiasm and eagerness to contribute towards the realisation of vital TOD areas were shown by the interviewees and their respective institutions, area users and residents in both case studies, which would be beneficial for future researches in a similar area of study.

Although interviewees were predominantly supportive, the interviewee from DGR was unavailable for a face-to-face interview and could only be contacted via mobile messenger application. This condition has led to communication difficulties and limited responses on the interview questions.

Possible Improvements

Evaluation on the case studies has displayed similar result on the state of cooperation and policy clarity. But if the evaluation were performed towards a higher number of case studies with varying display of vitality, the research might yield improved generalisation and output. For example, TOD areas with low activity level. Another proposal to increase the output quality of this research is by adding focus group discussions between the key actors to fully grasp the actor relationship dynamics in Jakarta TOD projects. The roles, responsibilities, advantages and flaws can be discussed openly and generalisation can be generated in a convenient manner.

Reflection on Outcomes

Recognition of the vital TOD success factors could indeed benefit the land use-transportation planning process in Indonesia and other applicable TOD projects. However, the evaluation on Jakarta TOD projects could generate more compelling output should it incorporate more TOD areas with varying degrees of activity level. Having said this, some factors did show convincing outcome, such as weak initiatives from the Jakarta Capital City Government in overseeing the development process. This leads to suggestions on possible future research on ensuring contextspecific, creative and flexible cooperation between key actors in urban infrastructure development, particularly TOD projects.

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