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Multi-level tensions in transport policy and planning: bus-rapid transit (BRT) in Indonesia

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Abstract

International development agencies, supporting climate change sensitive transport policies in Low-Income Asian (LIA) cities, promote Bus Rapid Transit (BRT). However, these policies create tensions at the local level. Using a multi-level governance lens (MLG), this research examines the relations between and distribution of power among actors in BRT investment decisions in the two medium-sized Indonesian cities of Bandung and Surabaya. Analysis of policy and planning documents, and interviews with key stakeholders at central, provincial and city government levels highlighted financial-institutional, socio-political and discursive tensions at multiple levels in BRT projects in these cities. The financial-institutional tensions resulted from city government funding dependency on central government and international development agencies that promoted BRT projects as low-cost ‘green’ solutions to traffic congestion and greenhouse gas emissions. Their “Go-green” campaign made it possible for Bandung and Surabaya governments to privilege BRT over traditional minibuses (*angkot*) and regular bus modes. The BRT projects were advanced through the low-cost, environmentally friendly and modern public transport discourses that did not get attention due to the absence of site-specific narrative. Open communication and proactive public participation were also missing when undertaking BRT projects in Bandung and Surabaya so that the projects were opposed by social and political actors in both cities. As a result, national and provincial policies were modified in Bandung limiting BRT to two peri-urban corridors that do not meet local needs. In contrast, Surabaya accepted a BRT project, but then turned it down due to political and social pressure that developed during the process. This research identified the importance horizontal and vertical relationships in the BRT projects’ planning and implementation. While vertical alignment is important for translating national transport policy to local transport planning, horizontal integration and communication is crucial for transport project implementation. The mismatch between horizontal and vertical actors resulted in delays and ultimately rejection of BRT project in Surabaya and distortion of the BRT project in Bandung. This research identifies a need for integrated policy packages to help develop site-specific BRT projects for LIA cities. The evidence suggests a refinement for MLG theory in the context of LIA countries by taking into account the role of power and communication within the emerging economic, social and political pressures at the local level and the need to take into account the vital role of individual actors, institutions and planning process as they respond to and shape policies imposed by higher levels. It also identifies the important role of international level non-government organisations play in setting, or at least, influencing national and local policy agenda.

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List of Abbreviations

ADB	Asian Development Bank
BAPPENAS	Ministry of National Development Planning
BPJT	Badan Pengatur Jalan Tol (Indonesian Toll-Road Authority)
BRT	Bus Rapid Transit
BLU	<i>Badan Layanan Umum</i> , Public Service Authority
BUMD	<i>Badan Usaha Milik Daerah</i> , Local Government Owned Enterprise
CMEA	Coordinating Ministry of Economic Affairs
CMSA	Coordinating Ministry of Social Affairs
CNG	Compresses Natural Gases
CPS	Country Partnership Strategy
DAK	Special Allocation Fund
DAMRI	<i>Djawatan Angkoetan Motor Repoeblik Indoenesia</i> , the state-owned bus operator
DAU	<i>Dana Alokasi Umum</i> , General Allocation Fund
DED	Detail Engineering Design
EU	European Union
GIZ	Germany Technical Development Agency
ICLEI	International Council for Local Environment Initiatives
IGES	Institute for Global Environmental Strategies
IndII	Indonesia Infrastructure Initiative, Australian Government funded project
ITDP	Institute for Transportation and Development Policy
JICA	Japan International Cooperation Agency
KAI	<i>Kereta Api Indonesia</i> , Indonesian railway company
KITA	Kitakyushu International Techno-cooperative Association
KPU	<i>Koordinator Pengawas Unit</i> , Unit Control Coordinator
LIA	Low-income Asian cities
MEMR	Ministry of Energy and Mineral Resources
MERR	Middle Eastern Ring Road
MLG	Multi-level governance
MoE	Ministry of Environment
MoF	Ministry of Finance
MoHA	Ministry of Home Affairs

MoT	Ministry of Transport
MoPW	Ministry of Public Works
MSOE	Ministry of State-Owned Enterprise
MUHEC	Massey University Human Ethic Committee
NGO	Non-Government Organisation
ORGANDA	<i>Organisasi Pengusaha Angkutan Darat</i> , Land Transport Owners Association
Paratransit	Transport service owned and operated by individuals and the private sector
PKN	<i>Pusat Kegiatan Nasional</i> , Centre of national activity
PPP	Public-Private Partnerships
PROPEDA	<i>Pola Dasar Pembangunan Daerah</i> , Local development fundamental patterns
REPETADA	<i>Rencana Pembangunan Tahunan Daerah</i> , Annual urban development plan
RKP	<i>Rencana Kerja Pemerintah</i> , Annual national development work plan (1-year plan)
RKPD	<i>Rencana Kerja Pemerintah Daerah</i> , Annual provincial/city development work plan (1-year plan)
RPJMD	<i>Rencana Pembangunan Jangka Menengah Daerah</i> , Provincial/City medium-term development plan (5-year plan)
RPJMN	<i>Rencana Pembangunan Jangka Menengah Nasional</i> , National Medium-Term Development Plan (5-year plan)
RPJPD	<i>Rencana Pembangunan Jangka Panjang Daerah</i> , Provincial/City long-term development plan (20-year plan)
RPJPN	<i>Rencana Pembangunan Jangka Panjang Nasional</i> , National long-term development plan (20-year plan)
RTRW	<i>Rencana Tata Ruang Wilayah</i> , Spatial development plan (30-year plan)
SERR	Surabaya Eastern Ring Road
SUTIP	Sustainable Urban Transport Improvement Project

Indonesian terms

<i>Angkot</i>	A popular local transport service in Bandung that owned and operated by individuals and the private sector
<i>Becak</i>	Non-motorised three-wheeler vehicles (cycle rickshaw)
<i>Kampung</i>	Informal housing/settlements in urban and rural areas
<i>Lyn</i>	Local minibuses in Surabaya own by individual and private with 9-12 passengers seat
<i>Musrenbang</i>	<i>Musyawah Perencanaan Pembangunan</i> , public consultation for development planning at village, sub-district, city, provincial and national government levels
<i>Ojek</i>	Motorcycle taxi uses as informal public transport services provided by individual owners

Introduction

The sun shines hazily onto streets already crowded with pedestrians and clogged with cars. Everywhere *becaks*, Indonesia's cycle-rickshaws, weave through gaps in the traffic and people hail *angkots*, the local minibuses with open windows, for a ride to work. *Ojeks*, motorcycle taxis, are also available to take people to their destinations for activities during the day. But at the road's far end, a few people are waiting for the gleaming clean Bus Rapid Transit (BRT) buses, running to timetable to and from various part of the city. Claimed to reduce traffic congestion and emissions and built with technical and financial assistance from international development agencies, BRT's decision making and related contested stories in many Indonesian cities need to be explored.

I live in Indonesia and travel to other cities quite often. I had experienced many problems in using urban public transport system in my own country. I had to spend more money to pay for travel and the quality of service is always poor. Like other people, I have a very high expectation to develop good quality public transport systems in Indonesian cities; cities which are facing many challenges among them institutional challenges are the hardest one.

Historically, transport policies in Low Income Asian Countries (LIA) focus mainly on building high speed roads and totally neglect the higher use of walking, cycling, and low-quality public transport (Bakker, Zuidgeest, de Coninck, & Huizenga, 2014; Dahiya, 2012; Mateo-Babiano, 2016; Wright, 2004b). These policies encouraged the use of cars and motorcycles among middle-class population and made it difficult for low-income people to travel and contribute in economic growth (Dahiya, 2012; Jaeger, Nugroho, Zusman, Nakano, & Daggy, 2015; Wright, 2004b). The compact nature of LIA cities are not specifically designed for private vehicles and increasing levels of motorisation mean there are dangerous levels of air pollution, including carbon emissions that contribute to climate change (Bakker et al., 2014). The response to climate change was made by improving dysfunctional public transport systems especially in mega cities such as Manila, Jakarta, Beijing, Ho Chi Minh City, Mumbai, Chennai, Guangzhou, and Shanghai. However, there is a little concern for improving public transport in small and medium-sized cities, despite these cities growing economic role in urban development

while facing challenges of a demographic nature, economics, poverty, and environment (Buluran, Fillone, Fukuda, & Jaensirisak, 2013; Dahiya, 2012; Dimitriou, 2006).

The success story of BRT in Curitiba and Bogota has convinced the international development agencies to promote BRT as a solution to urban transport problems in LIA. However, the social, political and land use innovation of Curitiba's successful implementation and continuation of BRT is considered in the case of LIA and will be explored. BRT is seen as a global policy for transforming LIA cities into sustainable cities by accessing environmental funds (ADB, 2009). Therefore, international experts advocate the building of BRT systems in LIA cities (Rahman, Fujiwara, Zhang, Nugroho, & Silaban, 2012; Wright, 2004b). This study investigates how the Curitiba and Bogota models of BRT were transferred to two medium-sized cities of Indonesia, Bandung, and Surabaya by higher level actors and how BRT projects were received and resisted by local level actors. The gaps between different levels of policy development and implementation are also analysed. This global policy for BRT as a low-carbon development that integrates transport, development, and climate concerns (Bakker et al., 2014; Zusman & Sutomo, 2010) may collide with local public transport policy and cause policy tensions. This research seeks to identify these policy tensions in medium-sized LIA cities in general and Indonesian cities.

The theory of multi-level governance (MLG) is useful to explain the complexities of intergovernmental relations and decision making in the planning and implementation of urban transport projects. MLG helps to examine the relationships among different levels of actors – various levels of government, international development agencies, national and international NGOs - involved in BRT planning, policies, and implementation. It is also helps to identify their goals and interests in BRT development. MLG explains the power of different actors and communication patterns during BRT decision making in Bandung and Surabaya. Originally, the concept of MLG was derived in the context of the European Union, with well-established rules, regulations, and the role of super national organisations, in policy and planning. In this research, MLG provides a useful tool to treat the international development agencies as a supranational entity, operating outside the boundary of central government, but having influence on setting up national policy agendas and the implementation process. This research focuses on how BRT has been advanced by multi-level actors in their development policies in Indonesia. This research

uses and extends the boundaries of MLG theory to analyse the case of BRT in two medium-sized Indonesian cities, Bandung and Surabaya.

The research question is:

How to identify the multi-level policy tensions in public transport planning in medium-sized Indonesian cities.

The aim of this research is to identify public transport policy tensions in medium-sized Indonesian cities by using the multi-level governance (MLG) theory.

To achieve this aim, the objectives of the research are to:

1. draw on the literature on MLG theory to conceptualise and develop a framework for identifying tensions in LIA transport policy and planning,
2. apply this framework to identify types of policy tensions in conducting an institutional analysis of Bus Rapid Transit (BRT) system in Bandung and Surabaya, two medium-sized Indonesian cities,
3. refine the concept of MLG in the context of LIA cities based on the experiences of these two cities.

This research contributes to both theory and practice in the intersection of urban planning, development studies, and transport planning disciplinary areas. It added value in MLG theory by extending its boundaries into four dimensions of financial-institutional, socio-political, discursive and communication of power and legitimacy. This extension of MLG shed lights on the gaps between BRT planning and implementation. In practice, this research contributes to inform planning practices that city specific details and contextual factors are part of important elements for analysis before transport projects implementation. The international development agencies work on BRT at the local level needs to concern with local transport systems, before promoting BRT as global concern for climate change issues. The central government needs to provide soft and hard infrastructures in transferring the BRT systems to local government level. The provincial government can develop a planning process that connect city government with wide range of actors. The city government should identify needs of their people and related politics before accepting solution from higher level of government, focusing on the existing

livelihood of public transport operators. The civil society actors can make a difference at the local level when their voices have been accommodated in the planning processes. Media has an important role in influencing public opinion and should be taken on board in the beginning of the process. This research concludes that there are prerequisite for making successful BRT systems in LIA cities which should not be ignore.

The structure of the thesis is as follows:

Chapter 1 explains the complexities of urban transport in LIA cities and policy responses to address these complexities. Chapter 2 conceptualises MLG theories by focusing on power, communication, and participation in policy development. This chapter develops a theoretical framework to analyse transport planning and policies in Indonesian cities. Chapter 3 explains the rational for the selection of the case studies and describes data collection and analysis methods, used to address the research question. Chapter 4 explores transport decision making in Indonesia and critically reviews transport, environmental and climate change, national development planning, urban development planning, spatial planning, energy, and economic policies to identify the perceived role of BRT in development. Chapter 5 explores planning and implementation of the BRT project in Bandung, West Java Province. The chapter identifies four dimensions of policy tensions generated by an imbalance in the power structure among hierarchical actor's relationships and a gap in communication patterns. This chapter provides important insights and reasons for implementation failure in the BRT project in Bandung. Chapter 6 explores planning and implementation of the BRT project in Surabaya, East Java Province. The chapter critically reviews planning and policy documents to shed lights on reasons for planning failure in this BRT project. Chapter 7 discusses the evidence for explaining the dynamics of transport policies and multi-level policy tensions in creating sustainable urban transport for medium-sized Indonesian cities. It also highlights the importance of MLG theory to capture different types of power and communication gaps existed in urban transport policy formulation and implementation. The last chapter draws conclusions and presents some directions for future research.

Chapter 1 Complexities of urban transport in low-income Asian cities

1.1. Introduction

This chapter identifies complexities of urban transport in low-income Asian (LIA) cities by presenting issues and problems in governing the transport systems. The first section identifies issues of urban transport and climate change concerns, followed by the features and characteristics of medium-sized LIA cities. The next section describes the challenges of multi-level governance in Indonesia and finally, the last section focuses on the multi-level planning policy issues and responses in Indonesia. This chapter provides a background to analyse the development of Bus Rapid Transit (BRT) project as part of a popular solution in solving urban transport and climate change problems in LIA cities.

1.2. Urban transport and climate change issues

LIA cities are a focus of the climate change debate because of their high population density and their vulnerability to impacts of climate change, such as rises in sea level, flooding, intensified storms and storm surges (Fuchs, Conran, & Louis, 2011; UN-HABITAT, 2008, 2011). This is because of inadequate urban and transport planning that has not responded adequately to these risks (Fuchs et al., 2011). The growing dependence on fossil fuels for the energy, industry, and transport sectors in LIA cities contributes to the amount of greenhouse gas emissions. The growing number of medium-sized LIA cities are at a very high risk of climate change impacts.

Emissions from the transport sector in the Indonesian cities of Bandung and Surabaya, like those in many other medium-sized LIA cities, are increasing due to a sharp rise in the number of private vehicles and urbanisation. This has been compounded by a lack of urban transport planning and inappropriate urban transport policy responses that favour building roads and state of the art of public transport such as Bus Rapid Transit (BRT) (Barter, Kenworthy, & Laube, 2003; Matsumoto, King, & Mori, 2007; Timilsina & Shrestha, 2009). In Indonesia, urban transport policy is made at central, provincial and city government levels (Zusman & Sutomo, 2010) and with the active involvement of international development agencies and international NGOs (Andonova, Betsill, &

Bulkeley, 2009; Kennedy, Miller, Shalaby, Maclean, & Coleman, 2005; Larsen & Gunnarsson-Östling, 2009; May, Jopson, & Matthews, 2003). The existence of so many actors create multiple goals, networks, capacities, and interdependent relationships, which pose policy tensions at the city level. These tensions may arise from the exercise of power held by various actors, from policy networks and institutional capacities. This research seeks to identify and address these tensions.

The global campaigns concerned with climate change argue that public transport matters not only for people's mobility, the economy and for social reasons, but also for the environmental protection in the long-run (Bakker & Huizenga, 2010; GTZ, 2010). Bus Rapid Transit (BRT) is widely being promoted as a solution to urban transport problems in dealing with increasing air pollution and greenhouse gas emissions. However, literature suggests that the success of BRT in terms of policy-making, plan-making and policy implementation is questioned by many urban transport researchers (Ernst & Sutomo, 2010; Lindau, Hidalgo, & Lobo, 2014; Satiennam, 2013; Wright, 2011; Wu & Pojani, 2016). Tensions caused by MLG settings are likely to contribute to the under-performance of BRT in LIA cities.

1.3. Features and characteristics of medium-sized low-incomes Asian cities

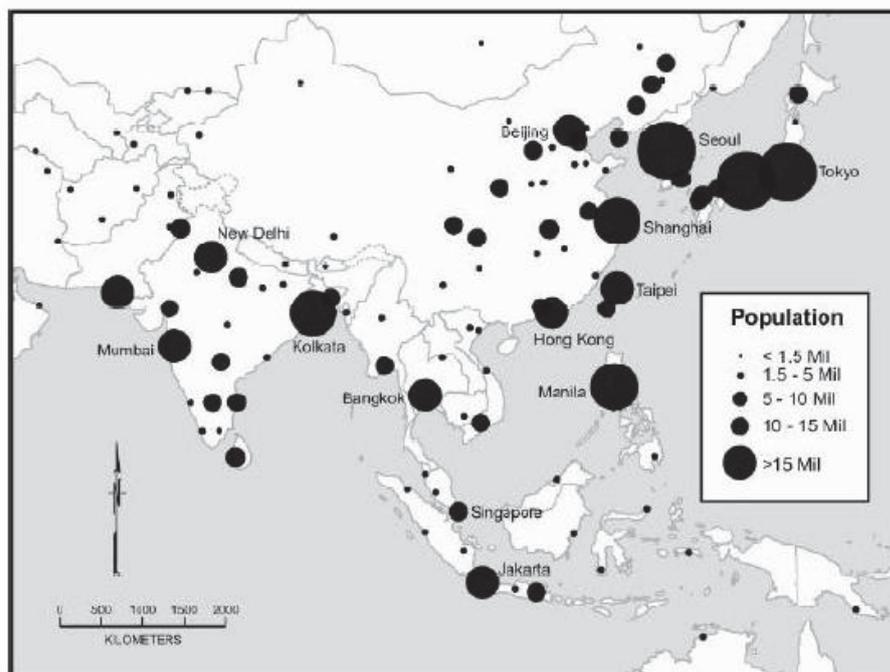
The economic role of cities is increasing significantly in LIA due to rapid urbanisation (Dahiya, 2012). However, transport policies for achieving economic growth and addressing urbanisation are inconsistent with the urban form and travel characteristics of these cities (Imran, 2010b). The aim of this section is to present these issues in the context of LIA cities.

1.3.1. Urbanisation in LIA cities

LIA cities have become the centre of economic activities in the last two decades and have contributed directly to national income. Their contribution varies in different regions of Asia, but on aggregate these cities contributed over 84% to national income in many LIA nations (UN-HABITAT, 2010). For example, Jakarta, as the metropolitan and capital city of Indonesia, contributed almost 12 percent to the national GDP in 1990 (Ooi, 2007). This contribution is increasing overtime, Jakarta contributed 25.5% of the National GDP in

2006 (Firman, 2016). The increasing economic role of LIA cities has generated rapid urbanisation. However, urbanisation in these cities varies in nature and scale. The population growth in LIA cities is mainly due to natural births, migration from smaller cities to larger cities and from rural to urban areas, and the inclusion of land and population on the periphery of cities (Cohen, 2004; Ooi, 2007; Yeung, 2011). In LIA countries, 42% of people lived in urban areas in 2009, which is likely to increase to 50 % in 2050 (United Nations, 2010).

The rate of urbanisation in Asia is 3.5%, which is higher than the average world urbanisation level of 2.6 % during 1975-2000 (Marcotullio & Lee, 2003). Population growth in Asia is concentrated in cities, and is estimated to increase by 1.7 billion by 2050 (United Nations, 2010). It is also estimated that the number of medium-sized cities (population over one million) in Asia will increase from 194 in 2000 to 288 in 2025 (Cohen, 2006; Dimitriou, 2006; Sakamoto, Dalkmann, & Palmer, 2010). These cities are widely distributed, especially in Southeast Asian countries as shown in Figure 1.1. In the case of Indonesia, half of the population lived in urban areas in 2010 and it is predicted that the proportion will reach 60% by 2025 (United Nations, 2012b). With the increasing economic role of cities and population increases, the need to travel has also increased and has affected the provision of public transport infrastructure and facilities.



(Source: ESRI, 1998 and World Gazetteer 2005)

Figure 1.1 : Overview of population distribution in Asian cities
 Source: ESRI (1998) and World Gazetteer (2005) cited by World Bank (2007, p. 189)

1.3.2. Compact urban forms and travel characteristics

Medium-sized LIA cities have distinct physical and social characteristics. The physical characteristics are typically high population density, employment density and mixed land uses (Barter et al., 2003; Madlener & Sunak, 2011). For example, the cities of Southeast Asia have four times higher population density than European cities and eight times higher than North American and Australian cities (UN-HABITAT, 2011). Data shows that the high urban density in Asian cities was more than 300 persons per hectare and was located in Manila, Shanghai and Jakarta (Kenworthy, 2011). In terms of social characteristics, demographic composition and poverty are the dominant features in LIA cities. These cities comprise mainly young people. For example, in Indonesia, 50 % of the population was under 25 years old in 2010 (CIA, 2012). The unbalanced economic and population growth in LIA cities also generates poverty (Jorgenson, Rice, & Clark, 2010). The poor people in these cities live in urban slums and can rarely afford motorised transport (Dahiya, 2012).

LIA cities can be categorised into major cities and medium-sized cities in terms of their population. Traditionally, the major LIA cities receive more attention in terms of urban infrastructure development than do medium-sized cities (Pojani & Stead, 2015). However, these medium-sized cities play an important role because there are many of them, they have relatively low adaptive capacity, and ineffective urban planning in relation to the impact of climate change (Dimitriou, 2006; Fuchs et al., 2011). The main reason for focusing on medium-sized LIA cities is because these cities have significant roles as local economic growth centres, build the links between urban and rural areas, are administrative headquarters, and provide a temporary migration location for rural people moving to urban areas (UN-HABITAT, 2010).

LIA cities contribute to a higher proportion of walking, cycling, and low-cost public transport, or sustainable transport. As shown in Table 1.1, in LIA cities such as Shanghai, Mumbai, Chennai, Guangzhou, Manila, Beijing, and Jakarta have more than 70% of total daily trips are taken on public transport and non-motorised transport. In comparison, in the US and Australian/NZ cities have only 12% and 21% of the trips are made on public transport and non-motorised transport respectively (Kenworthy, 2011). This high share

of sustainable transport contributes to less greenhouse gases (GHG) emissions in LIA cities and needs to be recognised (Dhakal, 2004; Kenworthy, 2011).

Table 1.1 : Modal split in selected Asian cities

City	Public transport trips (%)	Non-motorised trips (%)	Total sustainable transport trips (%)	Private transport trips (%)
Shanghai	15	78	93	7
Mumbai	41	50	91	9
Chennai	42	44	86	14
Guangzhou	14	69	83	17
Manila	59	21	80	20
Beijing	28	48	76	24
Jakarta	26	46	72	28
Bangkok	43	12	55	45
Seoul	35	18	53	47
Ho Chi Minh City	2	44	46	54
Kuala Lumpur	7	24	31	69

Source : Kenworthy (2011, p. 96)

Note: these trips show the proportion of total daily trips

Regardless of this fact, the proportion of sustainable transport trips is continuously declining in LIA cities (Wright & Fulton, 2005). This decrease in share is due to the poor quality of public transport services and infrastructure (Poudenx, 2008) and prioritization of investment in roads. Little information is available on how these cities undertake planning and policy in managing complex urban development agenda that have an impact on sustainable transport trips. Therefore, it is important to analyse urban transport policies in medium-sized LIA cities if improvements are to be made to achieve sustainable transport goals.

1.3.3. Transport and environmental characteristics in LIA cities

Problems with urban transport in LIA cities are caused by many inter-related factors. Wright and Fulton (2005) estimate that the level of motorisation in developing countries will far exceed the level of motorisation in developed nations by 2030. LIA cities have relatively low car ownership as compared to cities in developed countries. The dominant feature of vehicle ownership in LIA cities is higher motorcycle ownership and use compared to cars (Barter, 1999). Moreover, factors such as urbanisation and economic

growth as mentioned in section 1.2.1 also contribute in private vehicle ownerships in LIA cities (Dulal, Brodnig, & Onoriose, 2011; ITP, 2011).

Investment in roads decreases the attention paid to low-cost public transport services and leads to deterioration of non-motorised infrastructure and ultimately results in the dominance of private motor vehicles (Chiou, Wen, Tsai, & Wang, 2009; Marcotullio & Marshall, 2007). The growth of motorisation also increases urban sprawl, which influences travel distance and trip length and subsequently increases the amount of energy used for transport (Santos, Behrendt, & Teytelboym, 2010). As a result, more than 90% of LIA cities have suspended particulate or PM₁₀ concentrations, and Sulphur Oxide (SO), Nitrogen Oxide (NO) and Carbon Monoxide (CO) levels higher than the WHO standard (CAI-Asia, 2010).

In Indonesia, the road transport sector will grow seven-fold in the years 2005 to 2030 and low-carbon transport modes should be prioritised (DNPI, 2010, p. 28). The impacts of growing motorisation have changed the quality of the environment in Indonesian cities. They have led to an increase in the amount of energy used for transport, generated air pollution, and released increased carbon emissions into the atmosphere (L. D. Frank, Greenwald, Winkelman, Chapman, & Kavage, 2010). Energy used for transport increased at the rate of 7% annually between 2000 and 2010 (Ministry of National Development Planning, 2010a), which has led to an increase in CO₂ emissions. Between 1990 and 2005, the passenger car fleet in Indonesia reached a 10% average annual growth rate, greater than that of Malaysia and India (9%) but lower than that of China (19%) (Timilsina & Shrestha, 2009). Transport-related emissions in the Indonesian cities Bandung and Surabaya, like those in many other medium-sized LIA cities, are increasing due to a sharp rise in motorisation and inappropriate urban transport policy responses (Barter et al., 2003; Matsumoto et al., 2007; Timilsina & Shrestha, 2009). The growth of GHG emissions from the transport sector in LIA cities and the failure to develop and appropriate policy response is a cause for concern. This reflects the need for a policy response sensitive to environmental and climate change issues.

1.3.4. Solutions offered to urban transport problems in LIA cities

Solutions to urban transport problems in LIA cities are varied from road-based, rail-based to bus-based transport systems. Historically, developing more roads is perceived as having the opportunity to reduce traffic congestion, but with an impact of an increase in the use of motor vehicles. In last decade, promoting public transport is also seen as a solution to reduce local air pollution and relieving congestion. However, the priority for selecting rail-based or bus-based for public transport systems is influenced by many interrelated economic, social, political and environmental factors. Bus-based public transport like BRT emerged as a solution that promoted by many international development agencies to LIA cities.

Currently, there are over 100 LIA cities that are investing or have invested huge sums to build BRT systems with the help of international development agencies, the private sector and NGOs. International development agencies and international NGOs are interested in LIA cities due to their higher vulnerability and the impacts of increases in temperature and sea level rise (United Nations, 2010). Many LIA cities have very large populations and are located in coastal and low-lying areas, which are at greatest risk from adverse climate-related events, and which make international development agencies interested in advising them to invest in BRT systems (H. Blanco et al., 2009; Firman, Surbakti, Idroes, & Simarmata, 2011; Fuchs et al., 2011; Hunt & Watkiss, 2011; Satterthwaite, 2011; UN-HABITAT, 2008, 2011; WWF, 2009). The Indonesian government has taken this opportunity to access climate change global funding schemes to support the development of the transport sector, by developing a nation-wide BRT system. The international development agencies and international NGOs have played an active role in building awareness of the importance of BRT as a low-cost and modern transport system. The fact that medium-sized cities in Indonesia have distinct physical and social characteristics and a higher share of sustainable transport has been overlooked in imposing BRT and this might create tensions. Overall, the reason for selecting BRT is perceived differently at different government levels.

1.4. The challenges of multi-level governance for LIA cities

The distinct features of LIA cities have been overlooked in transport policies. Consequently, transport policies and investment in LIA cities generally favour either road

development or state of the art public transport development, such as a metro trains and BRT system. These policies are based on the belief that building more roads and developing a technology-based public transport system can reduce traffic congestion and increase economic growth (Almselati, Rahmat, & Jaafar, 2011; Cox, 2010; Santos et al., 2010). The higher rate of motorisation and development of high-technology public transport suggest economic prosperity and therefore have been suggested for LIA cities. As a result, technical approaches with strong economic arguments dominate transport planning and policy-making processes at the cost of neglecting social and environmental sustainability.

In LIA cities, public transport investments make up only around 0.5 % of metro GDP, while road investments were 1.8 % of metro GDP in 1995 (Barter et al., 2003). During the period from 1998 to 2025, it is expected that there will be an increase of 28 % in funding for road development in Indonesia (Fengler, 2007). The proportion of public transport trips is continuously declining in LIA cities (World Business Council for Sustainable Development, 2001; Wright & Fulton, 2005). For example, in Kuala Lumpur, public transport trips declined from 34 % in 1985 to 19 % in 1997 due to the poor quality of public transport services and infrastructure (Wright & Fulton, 2005). Current transport policy approaches reflect that low-cost public transport and non-motorised infrastructure are not prioritised for investment (Ahmed, Lu, & Ye, 2008; Poudenx, 2008). The low investment in public transport and non-motorised transport left these modes for poor people and excluded middle-class users. As a result, transport decision makers and stakeholders do not attach importance to public transport in LIA cities.

In addressing these issues, the UNDP has placed great emphasis on new Sustainable Development Goals (2015) and the IPCC (2014) new report focuses on reducing the GHG emissions in cities from their transport system. The respond to climate change started with the establishment of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992. This institution acts as an international agreement to reduce the sources and impacts of climate change. Subsequently, emissions trading, clean development mechanisms (CDM), and joint implementation (JI) mechanisms have been developed (UNFCCC, 2011). Following the Kyoto Protocol, a Conference of Parties (COP) has been formed. COP-13 reached an agreement, known as the Bali Roadmaps, for emission reductions, mitigation of and adaptation to climate change, technology

development and financial and investment support actions. There was little progress at COP-19 in Copenhagen, but the Paris declaration of COP-21 emphasised reducing carbon emissions from cities (Dasgupta, 2015; UNFCCC, 2016). Regardless of the impacts of these international agreements, these documents provide an opportunity to develop an inventory of carbon emissions, and targets for reducing emissions. Further, the CDM is supported by the Global Environmental Facility (GEF), which administers the financial institutions for climate change programmes (Bakker & Huizenga, 2010) and an increased level of funding is available for developing countries to mitigate carbon emissions from their cities and transport systems. Accordingly, the GEF develops networks and alliances with other international development agencies, such as the World Bank, Japan International Cooperation Agency (JICA), and the Asian Development Bank to fund projects in developing countries. These international development agencies provide technical and financial support for transport. Wright (2004b) and Imran (2010b) argue that international development agencies prefer investment in building roads and targeting vehicle efficiency to reduce congestion and emissions in LIA cities. Meanwhile, international development NGOs such as the Institute for Transportation and Development Policy (ITDP) work on promoting BRT in low-income Asian cities as a solution to environmental problems (ITDP, 2007). For example, TransJakarta is the first BRT system in Asian cities. It began to operate in 2004 with the help of ITDP and many more BRT's are under construction in other Indonesian cities.

Transport is an issue of multi-sectoral policies, which can be best managed through integration with other policies (such as energy, land use, economic, climate change and health) and with multiple levels of actors (such as international, governments, the private sector, NGOs) involved in formulating these policies (Andonova et al., 2009; May et al., 2003). This is because of transport affects different sectors and requires coordination and integration through a multi-disciplinary approach (Hoppe, 2010). However, the integration of other related policies with transport policies is a challenging task where different agenda are embedded in each policy at the international and national levels. Furthermore, this creates policy tensions at the level of subnational government during the planning and implementation stages.

These policy tensions lie in institutional challenges, which stem from governance issues. In transport policies the distribution of responsibilities is scattered among different

institutions, which fail to manage the impacts of transport on climate change, poverty and economic prosperity (Kennedy et al., 2005). In LIA cities, government institutions are highly dependent on international development agencies, the private sectors, and recently on international NGOs (Banister, Anderton, Bonilla, Givoni, & Schwanen, 2011) to identify transport problems and their solutions. The conflicting agenda and multiple levels of actors involved in transport policies causes policy tensions at the local level, at which there are responsibilities for managing roads, public transport and land use (Dotson, 2011). As a result, there is a serious lack of integration of health, environment, land use, industry, housing and finance policies within transport policy, both vertically and horizontally (Dotson, 2011; Kennedy et al., 2005).

In regard to urban transport, MLG structure in urban transport is influenced by the interactions among officials from international development agencies, central government ministries, and provincial and city government levels. Each of these levels has its own authority and resources and subsequently makes decisions based on its mandates, roles and responsibilities. However, there is a great degree of power imbalance between higher and lower levels of actors (Newman, 1996). Powerful actors exercise their power by imposing their agenda and funding on less powerful actors. Political will, bureaucratic hierarchy, cultural variations and distribution of legal powers further increase policy tensions among different actors and their preferred policies (Banister, 2005). It is very rare that relevant local organisations can promote comprehensive policies for urban transport to address their local needs (Newman, 1996).

In addition, local institutions in LIA cities lack the capacity to manage transport issues (Banister et al., 2011). For example, at the city level, climate concerns regarding transport emissions are manifested in two kinds of strategies, namely mitigation and adaptation. Mitigation strategies mainly aim to reduce the level of emissions directly by focusing on technology, such as improvement in the fossil fuels supply processes and changes in vehicle technology (Posas, 2011). Mitigation strategies include promoting public transport, non-motorised transport, energy efficiency and the integration of land use and transport planning. Adaptation strategies refer to the adjustment that human and natural systems should anticipate in reducing the impacts of climate change (Posas, 2011). Adaptation strategies include the extensive use of campaigns to reduce the need to travel, increase public awareness on the impacts of climate change and develop climate-sensitive

transport tools and policies. The nature of mitigation and adaptation strategies needs strong local government and political will which are still in their infancy in LIA cities (Eisenack, Stecker, Reckien, & Hoffmann, 2011).

Similarly, policies for urban development and transport are conflicting in nature and affect the governance of public transport for people in low-income groups. Some theorists in the governance field acknowledge that emerging tensions are inherent in the dynamics of social problems and the inflexibility of governmental approaches in handling transport issues (Bulkeley, 2010; Termeer, Dewulf, & van Lieshout, 2010). Hence, the goal of emissions reduction, social and economic sustainability in transport in LIA cities is challenging. The challenge lies in there being little information on how climate change, economic and social strategies can be integrated smoothly in the conflicting urban transport goals and agenda developed by actors at the international, national and local levels. The debate whether to mitigate or to adapt in the transport sector, or to do both, is far from having reached agreement, because of the under-researched decision-making process in LIA cities (Laukkonen et al., 2009).

Urban development is also influenced by the political economy of actors in higher-level government institutions, which is based on the resources available to control urban development for central government's economic gain. At the same time, the legitimacy of policy-making is also challenged by the process of participation and methods of communication among institutions, organisations and actors at international, national and subnational levels (Ru & Ortolano, 2009; Tanner, Mitchell, Polack, & Guenther, 2009). As a consequence, urban governance in terms of MLG structure has been challenged by the gap between rhetoric and action. It is necessary to reconfigure MLG theory by searching for opportunities that can add value by addressing these tensions. These tensions might emerge due to power differences between multiple actors (public and private) managing climate change and transport policies. Power differences have led to institutional capacity issues due to high interdependencies between vertical and horizontal levels of government (Bulkeley, 2010; Bulkeley & Betsill, 2005, 2013). Therefore, there is a need to study the multi-level policy tensions that may arise in transport policies in the context of governance frameworks in LIA cities in general and Indonesian cities in particular. The above discussion shows that institutions matter in transport policy-making and their relationship should be considered seriously.

This study focuses on multi-level policy tensions in medium-sized low-income Asian cities. That focus has been selected because these cities have significant roles as local economic growth centres, build the links between urban and rural areas, are administrative headquarters, and provide a temporary migration location for rural people moving to urban areas (UN-HABITAT, 2010). However, inappropriate basic infrastructure facilities impede the cities' ability to undertake these significant roles, particularly in transport (Dahiya, 2012; Dimitriou, 2006). Little information is available on how these cities undertake planning and policy in managing complex urban development agenda. Therefore, this study seeks to investigate how to identify these multi-level tensions in medium-sized LIA cities by using MLG theory.

1.5. Multi-level planning policy issues and responses in Indonesia

This section presents the existing condition of planning and policies related to urban transport in Indonesia. As discussed in previous sections (section 1.3), Indonesian cities face increased motorisation and severe congestion due to the adoption of policies in favours of cars and investment in roads. There is no, or very limited, investment, and few policies and governance arrangements for public transport systems in Indonesian cities. Sohail et al. (2006) argue that self-regulation has emerged as an alternative governance arrangement because of the failure of the government to regulate public transport effectively. Local transport such as minibuses or *angkot* plays an important role in providing transport facilities for the urban poor. The *angkot* has the dominant share of public transport use in cities. It also allows drivers to make a living through the public transport industry. Due to the long absence of a decent public transport facility, transport has been developed by locals, based on local conditions and with specific characteristics of demand-responsiveness, context-sensitivity and socio-culturally appropriateness and is accepted as part of the local culture in transport (Mateo-Babiano, Susilo, Joewono, Vu, & Guillen, 2013). There is a tenuous relationship and minimal communication between regulators, providers/operators and users of public transport in developing countries (Sohail et al., 2006), including Indonesia. Therefore, any change to transform and modernise the public transport system by the introduction of BRT and rail-based systems is a sensitive issue for the local population and that sensitivity needs to be addressed in

the planning process. Otherwise, these projects are perceived as a threat to the livelihood of poor people operating local forms of public transport and may result in protests, create political sensitivities, and be projected as a human rights issue.

1.5.1. System for the development of planning and policies

In Indonesia the planning system follows the Law 25/2004 on the National Development Planning System (Republic of Indonesia, 2004b). This law acknowledged the importance of planning at all government tiers from national to provincial, city and community levels. This hierarchy adopted a top-down planning process to achieve outcomes at the local level. However, informal processes include bottom-up consultations, technocratic input, and political participation at several levels.

The system for developing planning and policies in Indonesia faces challenges from many factors related to the capacity of planning institutions, the availability of information for decision-making, and planning knowledge transfer from developed countries through reciprocal visits and the movement of international consultants, NGOs, and international development agencies. However, such knowledge transfer is limited to higher-level planning institutions, while institutions at the sub-national level face serious capacity issues (Ayatac, 2007; Banerjee, 2009; Healey, 2013). Although, subnational-level institutions have the opportunity to raise issues important to them during the planning process, they generally try to align these issues with development programmes and priorities set at the higher levels (Ayatac, 2007; Hudalah & Woltjer, 2007). Therefore, many Indonesian cities have invested in high-speed roads as per the priorities set by higher-level institutions. Similarly, they accepted the development of BRT projects to align their priorities with those of central government ministries and departments. However, since the early 2000s, decentralization has occurred in Indonesia, which has given more policy and financial autonomy to the local levels, under which local planners can set development priorities within their own administrative boundaries (Firman, 2008). Nevertheless, that decentralisation did not bring greater capacity to the local level and inter-governmental relations have become problematic in areas (such as transport and environment) where inter-jurisdictional collaboration is required to address development issues (Miharja & Woltjer, 2010). For example, the conflict on road development in Dago-Lembang in the Northern Bandung Area (NBA) was caused by strong public

reaction toward preserving ecological functions of NBA areas (Hudalah, Winarso, & Woltjer, 2010). Local NGOs, experts and media opposed the proposed road development even though this transport plan had been approved and had received a budget allocation from the provincial government of West Java and the city government of Bandung.

Like many other small- and medium-sized urban areas in many developing countries, central government has a little attention to promote sustainable urban transport in medium-sized Indonesian cities (Dimitriou, 2006). This is due to a lack of understanding in developing countries of the benefits of some alternative modes and a perception that links walking and cycling to backwardness (Roy, 2005; Watson, 2012; Yiftachel, 2006). Hudalah and Woltjer (2007) argued that external forces also influenced the development of perceptions that advanced roads and high-technology public transport as a symbol of development and modernisation. Leshinsky and Legacy (2016) argue that the lack of planning instruments at the local government level, both in substance and process, hinder the innovative solutions to local transport problems. Therefore, urban planners face challenges in capturing the unique city structure and social system present in developing countries' cities (Roy, 2005). Non-technical aspects of planning such as communication that are necessary to advance development projects are largely missing or under emphasised in developing countries (Kumar, 2013). Lindau et al. (2014) studied barriers to planning and implementation of BRT projects in many developing cities in Brazil, Mexico and Asian cities and found that complexity in coordination and participation at multiple levels may cause political problems in BRT projects.

The development and implementation of planning and policies resides not only in the government domain, but also in the public domain. (Martius, 2011) argued that the validity of policies in the public domain in Indonesia is questioned due to an absence of or weakness in public engagement strategies. The authority and power owned by different government agencies and the legitimacy of the policy decisions during implementation are central to the focus of this research. Intergovernmental relationships, interactions and interplay between vertical and horizontal actors at multiple levels are also considered. The research is particularly interested to investigate the role of higher-level actors in the development and implementation of BRT projects, but at the same time is interested in the informal relationships and influence of lower levels actors in promoting or objecting to transport projects. Popering-Verkerk and Buuren (2016) and Mohmand (2016) also

emphasised the need to study informal interaction between different actors in MLG structures. Therefore, the role of actors in horizontal relationships is also important in studying BRT policy development and implementation.

1.5.2. Spatial and sectoral planning

Land use development in Indonesia follows Spatial Planning Law No. 26/2007, which allows central government to formulate a national spatial plan and subnational government to prepare provincial and local spatial plans in their respective jurisdictions (Republic of Indonesia, 2007a). However, the content of the spatial plan formulated by lower levels of government should be aligned with the directions for urban development that have been decided by the central government in the national spatial plan. Ideally, a strategic spatial plan should be closely linked with infrastructure development policy to achieve desirable city structure and accessibility for people in the city (UN-HABITAT, 2009). In Indonesia, the national spatial plan identifies future urban transport projects and made it compulsory for local government to follow and implement these projects in their areas (Republic of Indonesia, 2007a). In addition, the importance of public participation is acknowledged in the Spatial Planning Law, but with limited implementation during the planning process (Rukmana, 2011).

Like the spatial plans, sectoral planning (such as transport, environment, and energy) is also prepared in a hierarchical fashion that involves multi-level actors; and sectoral planning must be aligned with the national and provincial spatial plans. For example, local transport plans must be aligned with the local spatial plans. Similar practice has been observed at the provincial level (Nugroho, Zusman, Nakano, & Jaeger, 2014; Rukmana, 2015; World Bank, 2012a). The difficulty in integrating a transport plan with a spatial plan is that the spatial plan is more focused on land use and has a strong relation with housing and road infrastructure (Hudalah & Woltjer, 2007). There is a limited link between the provision of public transport in a transport plan and the spatial plan, as the latter does not deal with users of transport systems. As a result, high land prices in city centre has forced people to live in peri-urban areas as per the spatial plan and in which there is a lack of public transport networks.

There is no doubt that transport planning and policy need to consider the locations of people's housing and their daily activities to cater for their trips from home to other places. However, in a period of rapid urbanisation and the restructuring of jobs into service sectors, people are traveling from and within the inter-jurisdictional areas, which needs an institutional response for the development of a people-centred public transport system. Problems with housing location and development is also part of planning privatization that emerged in many developing cities in Asia (Shatkin, 2008). For example, Leaf (2015) studied the dominant role of Ciputra Group, one of urban property developers in Indonesia, in building houses for medium-class people in more than 22 provincial's capital cities. The locations for these houses are not connected with public transport networks provided by the city government. This situation illustrates the dominant role of the private sector in housing by leaving out the need for an integrated transport and separating rich and poor people. This trend illustrates potential conflict in managing land use between the city government and urban developers as the private sector. Therefore, this research is particularly focus on how city government in Indonesia face challenges in housing and public transport problems.

1.5.3. Urban transport projects

The selection of urban transport projects is influenced by many factors related to funding availability, social and demographic condition, and national and local politics (Flyvbjerg, 2007; Jabareen, 2006; Kennedy et al., 2005). In Indonesia, government tiers decide urban transport projects according to their roles and mandates. The national vision for urban development is to increase national economic growth and translated as central's government policies to build more roads to connect all parts of the country (Republic of Indonesia, 2011a). Funding for urban transport projects is allocated more for road building rather than promoting public transport. Therefore, urban public transport services were developed informally by individual and the private sector, giving a dominant role to minibuses and paratransit such as *angkot*, motorcycle taxi (*ojek*). This informal mode of public transport makes up 20-50% of public transport modes (World Business Council for Sustainable Development, 2004). The low quality of these services is being replaced slowly with motorcycles and motorcycle taxis (*ojeks*) and better-quality private transport. These several modes of transport are available in Indonesian cities, but there are no mechanisms to integrate these modes to achieve a better-quality service.

The transport sector is seen to contribute to GHGs emission and has been a major concern at the global level. In recent years, climate change and environmental policies have strongly emphasised the use of public transport at the global level (Bache, Reardon, Bartle, & Marsden, 2015; Banister et al., 2011; Marsden & Groer, 2016). However, historically little attention has been given to this aspect due to the existing internal complexity within the sector and the lack of holistic thinking about integrating transport policies with other policies. Therefore, it is interesting to explore whether such an emphasis is present in Indonesia and to what extent it counters economic and social dimensions of transport.

In Indonesia, the central government promotes toll-roads as a solution to heavy congestion in urban areas. However, these projects often collide with local spatial plans and locally-identified transport projects. As a result, there is resistance at the local level to the implementation of such central government projects. For example, the central government decided to develop an inner toll-road to directly connect the southern and northern parts of Surabaya as far as Tanjung Perak harbour (Republic of Indonesia, 2008). Although this plan has been present in the National Plan since 2008, the proposed road has met resistance at the local level, where other transport projects are preferred. The central government project has not been implemented because it has not gained a license from Surabaya's local government. Problems with urban transport in Indonesia include the existing widespread and deep penetration of deregulated public transport systems provided by individual operators. The lack of coordination between the government and local operators and the impact of decentralisation has made the situation more complex.

When the revision of Surabaya's spatial plan was started in 2010, the proposed plan objected to the inner toll-road development, which created tensions and a mismatch of priorities between central and the local government of Surabaya. This also impacted upon the relationships between the East Java Province and the local government of Surabaya due to a disconnection between the Spatial Plan of East Java (East Java Provincial government, 2012b) and the proposed urban transport projects of the Surabaya government. Moreover, these projects appeared in documents that have to be implemented in different time frames, which created additional challenges of political tenure and funding cycles.

In theory, the selection of transport projects should be based on agreement and negotiation between multi-level transport policy actors. But how these projects are selected and the role of provincial and local government need to be explored. Funding for mega transport projects in developing countries is one of the most complex areas to investigate, due to the unavailability or sudden availability of funding from higher-level actors. Therefore, the debate between BRT and roads resounds around the issues of capital expenditures (capex) and operational expenses (opex). In the BRT system, capex includes the purchasing of equipment and buses, the properties owned by the transport department at the local level and the costs of secured lanes for BRT buses. Opex includes the payment of workers' and drivers' wages, for utilities and maintenance and the costs of providing the services such as fuels, power, and others. In contrast, the capex and opex is simple for road development projects, and therefore may be prioritised for quick implementation.

In developing Asian countries, the decision-making power in relation to urban public transport projects is generally distributed unequally between central government, provincial government, and city government in developing Asian countries (Jaeger et al., 2015; Susilo, Joewono, Santosa, & Parikesit, 2007). This is mainly because of a lack of organisational capacity and funding at the subnational levels. As a result, transport projects are shared unequally between central, provincial and city government in terms of planning, funding and implementation. Therefore, transport projects indirectly reflect the concept of MLG in which policy actors and organisations at different levels can make decisions that influence the type and characteristics of projects. BRT, LRT, underground metro, and other high-speed road projects mainly comes about from the vertical lines of coordination of top-down government policy for improving urban transport systems in LIA cities. Therefore, there is a chance that these projects will supersede a 'paper plan' produced at the local level. This possibility needs to be investigated in this research.

Transport projects carry political and societal values and demands strong leadership and interactive communication between formal and informal actors at different levels. Because political actors have multiple goals and priorities, they can overcome the gap between organisations and people. They can connect with local people and political and institutional actors at the provincial and national levels. However, the politics of inter-local government cooperation in Indonesia are still experimental in terms of how to

develop cooperation in transport projects (Hudalah, Firman, & Woltjer, 2014). This is due to the political style and communication patterns of different actors who contribute to policy development.

At the city government level, the Mayor and the members of the House of Representatives (DPRD) are the main political cum institutional actors who have the power to decide transport projects. The Mayors and vice-Mayor received information from middle-management within the government organisations, the heads of the local planning agency and the sectoral departments to make informed decisions. Each decision has an impact on the public and therefore Mayors and DPRD are sensitive to the reactions to each decision of the public, civil society organisations and local NGOs. The provincial government has a dual role, as a representative of central government and in looking after the local governments. However, in the decentralisation era since 2000s, local government has largely ignored the role of provincial government. Moreover, provincial governments have not played their traditional role of transferring national policy in the context of local circumstances. They have prepared new plans for cities and the districts in their administrative areas. This situation contributes to the separation and fragmentation of institutional responsibilities between city and provincial government. This thesis makes a detailed exploration of the extent to which that is the case in transport projects.

Historically, the introduction of BRT in Indonesian cities is based on the successful implementation of Jakarta's BRT, the first in Asian cities, in 2004. BRT is a central government policy initiative, which limits the ability of provincial and local governments to contribute to a discussion of the selection of the project. This is a form of policy transfer from international best-practice which is imposed by central government on lower levels of government (Roy, 2005). The strong influence of international development agencies has driven the central government to accept this popular solution to urban transport problems, taking advantage of funding potential from the global climate change platform to support technical assistance and aid development for BRT systems. This top-down approach in urban public transport systems has undermined bottom-up challenges, in which city government may act as an agent of central government and international development agencies. This condition has ultimately could make city government lose its power to set policy direction. This thesis aims to explore this complex relationship in urban governance.

Hook (2005) argued that, due to increasing private ownerships of public transport services, BRT systems pose a challenge to the ability of city government to set up regulatory control effectively. A policy package for supporting the implementation of BRT is also absent because of a lack institutional design and a legal framework (Filipe & Macário, 2013). Transport planning and projects exhibit a multi-level policy structure in Indonesia and needs a detailed investigation to untangle this complex institutional structure where public transport policy is interwoven with energy, climate change and economic development policies.

1.6. Summary

The chapter has set the landscape of the complexities in urban transport systems in many LIA cities sharp urbanisation, high-use of public transport, walking and cycling trips within high-density environment are some key similarities among LIA cities. In spite of this, these cities have distinct political and institutional dynamics which make the policy environment more complex. In Indonesia, many cities are promoting BRT projects based on different policies devised by multiple actors at different levels. These actors have multiple goals and suggest different implementation strategies and actions which causes tensions in improving public transport systems in Indonesia. The next chapter discusses multi-level governance and how it provides a useful theoretical framework in understanding these tensions in LIA cities.

Chapter 2 Conceptualising policy tensions in LIA cities

2.1. Introduction

The previous chapter has shown that multi-level complex decision-making may exist in public transport planning and policies in Indonesia, which needs to be investigated. This chapter accordingly examines the relevance of multi-level governance (MLG) theory to explain multi-level policy tensions in making regulations and developing institutions related to transport in medium-sized low-income Asian (LIA) cities.

MLG theory was developed within the context of the European Union (EU) in relation to the process of Europeanization. It has specific objectives in terms of social, economic, political, cultural, and institutional arrangements. This chapter presents how would the MLG theory better explain the multi-level policy tensions at various government levels than other theories, such as multi-level perspective, adaptive governance, and monocentric governance. While the theory helps to explain the interactions among actors in the policy process, the exercise of power and legitimacy concerns still undergo dynamic processes.

These debates are critically discussed in five sections. In the first section, section 2.2 the key ideas of governance and MLG theories are presented along with contemporary debates from political science, public administration, public policy, sociology, and urban planning perspectives. Section 2.3 focuses on power, legitimacy, communication, and participation within the MLG structure. Section 2.4, the conception of MLG in the EU and LIA is presented and followed by a comparison between MLG in Europe and LIA cities. The final section 2.5 proposes a theoretical framework that could lead to an investigation of the underlying causes of multi-level policy tensions in medium-sized LIA cities.

2.2. Governance and multi-level governance

Understanding the term governance is crucial before explaining MLG theory. In this section, the conceptualisation of governance is viewed from a range of different perspectives.

2.2.1. Governance

Governance has diverse meanings in a wide range of disciplines. The debate about governance mainly concerns a shift from government as decision makers to governance as a process of involving all related stakeholders in decision-making (Hysing, 2009; Peters & Pierre, 1998; Stoker, 1998; Weber, Driessen, & Runhaar, 2011). The concept of governance describes the decision-making process conducted by various policy actors within and outside government. Governance includes various levels of government organisations, politicians, the private sector, NGOs, supra-national institutions, community groups, and civil society (Weber et al., 2011). However, the common themes of the term are collective actions for achieving binding agreements among public and non-public actors within a network's formation, in which power relations and legitimacy gaps exist in the policy-making process. Therefore, the concept of governance encompasses a complex nexus of the actors who will govern, the objects to be governed, and the institutions concerned (Kooiman, 2008). For optimal results, the actors, the objects and the institutions must act in concert. The interdependence of these elements affects the quality of the governance system in managing urban problems.

In political science, governance stresses the power relationships among different actors involved in policy decisions (A. M. Kjaer, 2004; Stoker, 1998). The involvement of many policy actors from public, private, and civil society sectors blurs roles and responsibilities for tackling social and economic issues (Stoker, 1998). Pierre and Peters (2000) argued that there are a number of actors involved in policy-making with a wide range of powers and capacities to influence policy direction. For example, government encompasses the formal institutions supported by legislation and regulations, the private sector holds a large amount of finance, and civil society provides legitimacy to the process by including the peoples' voice.

Actors receive power not only from formal arrangements and constitutions/regulations for central, regional, and local governments, but also from the authority to manage resources (Jordan, 2000; Peters & Pierre, 2001). For example, the role of government and of government power is changing increasingly with the inclusion of supranational organisations, private actors, and NGOs in policy-making (Peters, 2001). Therefore, to

explore the reasons a particular policy direction is set, it is important to identify policy actors involved in policy decisions, and their power structure.

In the public administration and the public policy context, governance means the management of rules for legitimacy through policy networks (Hughes, 2012; A. M. Kjaer, 2004; Peters & Pierre, 1998). In this case, governance can be defined broadly “to the process whereby rules of public policy-making and implementation are set, applied, and enforced” and narrowly as ‘the management of networks’ (A. M. Kjaer, 2004, p. 191). Policy networks connect policy actors and their organisations and recognize the capacity to undertake policy formulation and implementation, while less dependence is put on the power of government authority (Stoker, 1998). The pattern of communication is the key in establishing policy networks and getting influence in the policy process. The output of the policy process depends on the function, scope, and actors who mediated the networks (McGann & Sabatini, 2011). In the European Commission’s White Paper document, governance means networks of actors, where the control from central government is less influential and networks play an important role in directing the governance mechanism (Schout & Jordan, 2005).

In the context of Indonesia, in the absence of strong supranational government like in the EU, governance means arrangements of interplay between international development agencies, central government, subnational governments, private sector and NGOs. Many international development agencies offered technical assistance and financial support under development aid from various sources of funding. With the contemporary climate change issues, sustainable urban transport has gained wider attention for creating sustainable cities for the future (Bulkeley, Broto, & Edwards, 2012). Promoting public transport is proposed as one of the climate change mitigation strategies. For example, the Global Environmental Facility (GEF) played a role in administering the financial institutions for climate change programmes (Bakker & Huizenga, 2010). Accordingly, the GEF develops networks and alliances with other international development agencies, such as the World Bank, Japan International Cooperation Agency (JICA), and the Asian Development Bank (ADB).

Network formation denotes the resource dependence among policy actors, which also determines the governance mechanism (Griffin, 2012). The functions of networks

determine the quality of the sharing of information and knowledge, which ultimately improves the governance mechanisms (Newig, Günther, & Pahl-Wostl, 2010; Whiteman et al., 2011). Similarly, Peters and Pierre (1998) pointed out the important values of networks in policy-making, particularly in the context of European and US cities. In Asia, the Asian Development Bank (ADB) set up the Asian Mayors' Forum as a means of network construction among Asian mayors and city leaders to discuss issues related to urban governance and potential solutions (Hamid & Villareal, 2001). Therefore, it is important to explore how these policy networks perform their functions to analyse the quality of a governance system.

The critique in policy network theory also raises questions on whether this approach can achieve the optimal results for the public. Challenges also lie in the role of individual or collective actors within the networks' governance that may appear in the form of policy tensions or policy innovation (Newig et al., 2010). If networks are self-governing, as Stoker (1998) proposes, it means that governance can be a loose form of network structure. As it is informal and self-governing in nature, this type of policy network can reach consensus and promote accountability (A. M. Kjaer, 2004). In this research, identifying the availability of policy networks, describing the involvement of policy actors within the networks and determining the main functions of the policy networks that might exist in medium-sized low-income Asian cities, need further investigation.

In sociology and wider social science, governance aims to evaluate policy decisions in a social context (A. M. Kjaer, 2004; Ney & Molenaars, 1999). The social context refers to values, culture and norms of individuals and actors for optimal results (A. M. Kjaer, 2004). Culture is seen as a specific dimension of governance, which consists of certain values and ideas that are shared and guide the behaviours of a certain society (Harpham & Boateng, 1997). Values, culture and norms are developed over a period of time and through practices in institutional and societal settings, which influence the mode of governance (Harpham & Boateng, 1997; Hoppe, 2007). Values, culture, and norms influence institutions and policy decisions. For example, Amsterdam has a critical local governance culture, which facilitates the participation of urban dwellers in urban planning strategies and programmes (Healey, 2006). Culture becomes important because it influences the quality of governance in relation to cultural difference that might create

policy tensions among different policy actors. Therefore, culture and norms should be explored in evaluating governance and policy-making process (Geva-May, 2002).

In the urban planning context, governance refers to the networks of institutional structure and organisations that manage the provision of public services in urban areas (Whiteman et al., 2011). Kennedy (2005) argues that urban governance is a complex matter, which can be understood through the relationships between processes, policy actors' behaviour, and the development of urban form. Recent research emphasises the roles of local political leadership such as mayors in setting up a bold vision for urban areas, along with a range of government and private actors (Jayne, 2012). For example, in the implementation of Bus Rapid Transit (BRT) in Bogota (Colombia), Curitiba (Brazil) and some Asian cities, local mayors worked as a catalyst for the BRT development (Matsumoto et al., 2007). The mayor's vision influences the urban development plans, and details strategic actions to execute the vision (Matsumoto et al., 2007). Kjaer (2013) argues that the local political leadership of a mayor can strengthen the political capital, which reflect the power of a mayor to exert its political leadership. Urban planners play an important role in formulating urban development plans. However, urban planners face challenges in mediating conflicts and negotiating with the interests of different actors (Forester, 1989). These challenges become multifaceted when integrating the cities sustainability of urban planning in general and urban governance in particular (Zeemering, 2012). Similarly, effective urban governance is also determined by adequate financial, revenue-raising, and human capacities from the central government (UN-HABITAT, 2010). Therefore, it is important to develop a network with vertical and horizontal organisations in incorporating sustainability objectives in a city (A. M. Kjaer, 2004).

Traditionally, LIA cities depend on government departments at various levels, but this arrangement of governance is changing after the inclusion of supranational, private actors and other non-government actors in recent decades. Similarly, the power of the central government in LIA has been shifted to local government through de-concentration, delegation, and devolution plans implemented in the last decades (UN-HABITAT, 2010). The decision-making process has now become part of the collective actions between the state and non-state actors. However, local government in LIA cities, particularly in Indonesia, have perceived decentralisation as a means to gain more power rather than to

accept greater responsibilities for improving the quality of public service (Firman, 2009b). Therefore, these local governments have failed to attract private actors to invest in development solutions in the era of decentralisation.

In short, the common themes of governance from the perspective of diverse disciplines show mutual dependencies among diverse actors from the public sector, private sector and civil society. These actors perform collaborative and collective actions in specific policy domains with certain institutional arrangements. In doing so, network formation becomes one of the features of the governance mechanisms, for studying governance provides the foundation for analysing the effectiveness of policy outcomes (Armstrong & Wells, 2006). The mechanisms operate at various levels of the governance system. The governance concept helps to identify various policy actors, their relationships, and power relations among these actors, and their networks, from different spatial jurisdictions (Peters & Pierre, 2001). However, these policy actors, their institutions, and networks have a certain composition and a particular level of authority (Hysing, 2009). Therefore, MLG theory will be explored in the next section.

2.2.2. Multi-level governance

The history of MLG started with the shift of roles from central government to supranational organisations and subnational levels of governments, and the inclusion of non-state actors in policy-making (Bache, 2008). MLG theory was originally developed in the context of the EU to explain economic or regional policy development and integration within specific political systems (Bache, George, & Bulmer, 2011; Betsill & Bulkeley, 2006; Cairney, 2012). MLG emphasises the role of multiple actors, institutions, and their relationships in policy-making (Bulkeley, 2010; Cairney, 2012; Corfee-Morlot et al., 2009). However, these actors at multiple levels exhibit power and authority through their relationships (Piattoni, 2009). For example, the authority of central government has now shifted to supranational and subnational governments, showing the changing nature of power (Rhodes, 1996). Similarly, the active participation and investment of the private sector changes authority and power among the different actors. Therefore, MLG inclines toward the politics involved in governing the policy-making process to explain the relationships among multiple actors and levels.

The strengths of MLG lie in its capacity to explain the dynamic nature and complexity of the policy-making process, to challenge the traditional top-down decision-making, and to explain the complexities of governance process. MLG theory explains the mutual dependencies among different actors present at different levels in policy formulation and implementation. MLG helps to interpret the connections and relationships between multiple actors in hierarchical levels of governance systems (Hooghe & Marks, 2001; Piattoni, 2009). These actors include government organisations at central, regional/provincial, and local levels, various supranational and international organisations, NGOs/civil society, and other interest groups. Therefore, MLG act as a tool that significantly helps us to understand the dynamics and complexity of policy-making (Bache & Flinders, 2004; Hooghe & Marks, 2001; Piattoni, 2009).

MLG challenges the understanding of the traditional top-down approach to the policy-making process and unfolds interaction, roles, and the power of different organisations. For example, MLG explores intergovernmental relations among actors, which influence the power of central government in decision-making and their changing roles such as the increasing role of subnational organisations in policy-making (Bache, 2010c; Peters & Pierre, 2001, p. 134; Piattoni, 2009). Consequently, bottom-up and participatory approaches through network formation among public, private, and civil society actors become features of MLG. This formation aims to achieve development objectives through collective actions. Therefore, MLG adds the dimension of collaborative planning for policy-making through various planning and policy approaches.

The complexities of governance processes are explicable through MLG theory, in which the theory gains wider applications and greater popularity. This is due to its flexibility in describing the complex phenomena of governance processes. Some of the key issues in MLG are the redistribution of power from central government to international and subnational government, the legitimacy of the decision-making process, democracy, locus of authority, and accountability for effective collective actions (Allen, 2009; Bache, 2010a; Griffin, 2012; Papadopoulos, 2010; Scharpf, 2007; Schmidt, 2012). The complexities of governance processes require an investigation of the actions of multiple actors in policy-making to identify the location of power and legitimacy of the process (Bache, 2008; Rhodes, 1996).

Consequently, Hooghe and Marks (2010) identify two types of MLG. Type I refers to a hierarchical description of roles and responsibilities of formal central, provincial, and local or city government institutions in planning and policy-making processes. This type shows vertical relationships and power in hierarchical settings. Type II refers to intersecting actors with specific tasks, which build horizontal relationships. This type also means power diffusion in a polycentric model that provides space for public and private actors to collaborate in policy-making. Separating the two types in explaining policy development presents challenges (Cairney, 2012; Hooghe & Marks, 2010). These two types are also criticised because they lack direct observation for explaining the ideal type of MLG (Piattoni, 2009). However, since they complement each other, an explanation of both types would be necessary to identify how decisions are made (Bache & Chapman, 2008; Hooghe & Marks, 2010).

Debates on the notion of MLG are classified as theoretical, epistemological, and methodological perspectives (Piattoni, 2009; Stubbs, 2005). From a theoretical perspective, the opponents of MLG theory question whether MLG is a theory or merely a description of the phenomena in governance processes (Bache & Flinders, 2004). They raise questions on the meanings of the word 'level', which shows the hierarchical systems of governance. According to Milio (2010, p. 20), MLG 'in fact, creates high deregulation, opens doors to different and not homogenous actors, and allows regions to implement their self-model of development'. Piattoni (2009) argues that it is unclear whether MLG explains processes, situations, strategies, or the structure of decision-making. Jessop (2004) argues that MLG is a pre-theoretical concept due to the ambiguity of the governance concept itself. Consequently, the notion of MLG remains contested for future classification.

From an epistemological perspective, the notion of MLG lacks explanations of the terms 'governance' and 'level', which refers to the ambiguity of meaning in 'governance' and the actual level of government (Piattoni, 2009). While the term 'governance' is more inclined toward political studies, it overlooks the possibility of adding value to the theory from social and cultural analysis (Stubbs, 2005). This type of analysis will enhance the knowledge of the theory since there is little information on how socio-cultural aspects are included in the research of MLG (Milio, 2010). Therefore, the research on MLG should

include socio-cultural aspects developed in specific political environments in analysing the relationships between multiple actors (Bache & Flinders, 2004; Stubbs, 2005).

From a methodological perspective, it is also questioned whether MLG represents a hierarchy or a sphere of authority in relation to power allocation among diverse actors (Bache & Flinders, 2004). This question emerges because the policy process reflects a complexity of decision-making structure in which diverse actors are involved during policy formulation and implementation (Bache, 2010a; Suskevics, 2012). Gaps exist in the distribution of power and in legitimacy and these influence policy decisions. As a result, a question arises as to whether the notion of MLG questions whether it is a hierarchy or a sphere of authority. It is clearly lacking of defined intergovernmental relationships, especially from a methodological perspective, due to “rehashed pluralism” in which the nature and distribution of power are hidden among the interactions between multiple actors (Stubbs, 2005, p. 71). This debate stems from the notions of MLG that work through various levels of government and governance systems. On the one hand, as a hierarchy, MLG means that governance at supranational, national, and subnational levels is linked together to perform collective actions under one policy direction. On the other hand, as a sphere of authority, MLG means that the authority and power to decide the policy direction is also embedded in individual levels of government and governance systems (Rosenau, 2004).

2.3. Power, communication, and participation

2.3.1. Power in multi-level governance structure

MLG structure is also featured with a specific power mechanism in determining the relationships among stakeholders. Power means the ability of certain actors to dominate and set directions for policy-making (Allen, 2009; Marks, Hooghe, & Blank, 1996). Policy actors who own power, reorganise and control the elements of institutional, political and regulatory influence policy goals and directions (Craik, Doelle, & Gale, 2012). These actors have specific resources, for example economic resources, influences, and arguments to support their actions during policy-making and implementation stages. Power relations among institutions, organisations, and actors determine the features of MLG as they have impacts upon policy development and implementation (Craik et al., 2012). Understanding the specific circumstance and context of actor’s relationships helps

the exploration of the distribution of power among actors (Bache, 2008). However, there is less emphasis on the power relationships between actors in MLG research, due to variation in context and types of policy for the social context of governance arrangements (Bache, 2008). For example, in the EU context, Moravcsik (2002, p. 610) mentioned that power is divided vertically and horizontally among actors.

The EU is not a system of parliamentary sovereignty but one of separation of powers. Power is divided vertically among the Commission, Council, Parliaments, and Court, and horizontally among local, national, and transnational levels - requiring concurrent majorities for action (Moravcsik, 2002, p. 610).

The power mechanism is embedded in MLG structure due to conflicting interests and goals owned by each stakeholder in the decision-making process at certain governance level. The reasons are associated with certain types of power held by influential actors, which can be utilised to control the inputs and outcomes of the policy. The exercise of this control will be aligned with actors' beliefs and values systems. As a result, policy outcomes determine other actors' responses and behaviours toward the implementation process. The types of power held by decision-makers also dictate the priority for solving the problems of societies. Consequently, the institutional arrangements, political systems, and regulatory forms are dictated by the dominant actors (Craik et al., 2012). Literature on MLG has focused more on the significant role of power among actors in MLG relationships (Craik et al., 2012). According to Flyvbjerg (2002), power is important to consider in the planning process, because power can influence the production of knowledge, rationale and truth that will affect the quality of planning decisions and outcomes. Power is particularly vital in the MLG setting in which the notion of tensions has been a common feature. In addition, the debate on power is also associated with the extent to which the power of national government is undermined in competition with the emergence of international development organisations and subnational government (Bache, 2010a).

Different types of power within the MLG structure can be classified as economic power, socio-political power, and discursive power during policy-making, plan-making and implementation. *Economic power* refers to the ability to use financial resources to favour a certain policy direction. According to Rhodes (1996), there are five typologies of resources that can contribute to the ability to control the policy decisions: legal resources

determine regulations, procedures, and institutions; organisational resources include the capacity to draft, decide, and implement policies; financial resources include own finance and access to external finance; political resources exert pressures on other actors; and informational resources relate to possession of information and knowledge possession. For specific reason, economic power is strongly related to financial capacity and the access to external finance. For example, in the EU context, access to the Common Agricultural Policy and the European Structural Fund has changed urban institutions and actors in European cities to comply with the requirements of the Policy and the Fund (Marshall, 2005). Similarly, in the LIA cities, access to loans and grants from international development organisations has resulted in the financial dependencies of higher level institutions (Moretto, 2007). In contrast, international funding remains one of the sources to finance the development of institutional capacity in the developing countries (Ayers, 2009). Therefore, financial dependencies remain stronger and influence the directions of policy-making for developing the quality of life of the given society.

Socio-political power refers to the ability of political and community group leaders to influence the directions of policy decision-making for urban governance. Political leaders inherit political capital, which is defined as the symbolic capital in using political influence as a form of power to dictate policy decisions (U. Kjaer, 2013). For example, a mayor can dictate the direction of the policy decisions in his or her functioning role. The role of political leadership, vision, strategy, and connections has a greater influence on deciding policy in the urban areas. Similarly, the government organisations have political power to set the directions of the policies (Sending & Neumann, 2006). In addition, politicians, media and actors within the community such as, civil society leaders, transport experts group and other non-state actors also play a role in setting the direction of policy by redefining its functions within the political will (Sending & Neumann, 2006). In short, socio-political power is associated with the political resource owned by the policy-makers that can influence policy decisions.

Discursive power refers to the use of certain discourses in policy decision-making to influence policy outcomes. Escobar (1988) argued that invisible power has been exercised by the production and circulation of discourse to advance a policy agenda. The use of language and discourses are due to the utilisation of certain forms of knowledge and the production of specific interventions and influences. For example, environmental

discourses are strengthened through practices, institutional capacities, and technologies that strengthen environmental concerns in setting policy directions (Feindt, 2005). The source of discursive power comes from international development organisations, which act as discursive agents and interpret the meanings of the development agenda into national and subnational policy-making processes (Methmann, 2010). In the climate change policy, these organisations use four discursive pillars: - globalism, scientism, ethics of growth, and efficiency - to influence development policy. Therefore, the study of discourse explores contrasting beliefs, perceptions, and cultural practices in policy-making to understand invisible, but important, dimensions of power.

Language has power because it can create meanings that influence change in the behaviour of actors. This is in line with the individual identity developed through interactions with other people and reflections on self-development (Oak, 2011). Interactions with others through language can strengthen beliefs that are shared by decision makers during the policy-making process. The language of the politicians in the media advertisements, press releases and speeches can show the discourses in which they believe when undertaking governance tasks. This language will shape policy decisions and act as a designed political tool to influence and negotiate with other actors (Oak, 2011). According to Paul (2009), discourse theory helps to analyse the policy-making processes by looking at the discussion of discourses surrounding the policy processes and identifying the institutional practices that take place among actors.

2.3.2. Legitimacy, communication, and participation

Along with the types of power possessed by decision-makers, the legitimacy gap becomes an important concept in the structure of MLG contexts. This is due to its role in managing the possible contradictory responses in the policy-making setting (Scharpf, 2007). Legitimacy also refers to ‘the acceptability of a social or political order’ (Lindgren & Persson, 2010, p. 450). Citizens voluntarily accept the authorities’ decisions due to the perceived benefits of those decisions in fulfilling their needs (Suskevics, 2012).

The MLG emphasis that legitimacy is one of the critical issues to consider in designing and implementation policies (Bache & Flinders, 2004). Suskevics (2012) developed a theoretical framework to review and analyse legitimacy issues in the MLG context. Based

on an empirical analysis, the author argues that legitimacy criteria include rule compatibility, accountability, inclusion, and transparency. Rule compatibility refers to the connections between formal and informal rules that are available within the governance system. Accountability refers to liability within the decision-making process. Inclusion refers to the participation process and actors' involvement in the decision-making process. Transparency refers to the visibility of the policy-making process for wider public participation. In this model, the problems of legitimacy deficits are caused by factors including poor inclusion of people and weak stakeholders in the decision-making processes. As a result, these legitimacy deficits contribute to the emerging tensions during the policy formulation and implementation.

Debates are evolving around to the way to design an appropriate mechanism that can synchronize three types of legitimacy: input legitimacy, throughput legitimacy, and output legitimacy (Guastaferrero & Moschella, 2012; Piattoni, 2009; Scharpf, 2009; Sloat, 2002; Weiler, 2012). Input legitimacy focuses on the legal frameworks and informal rules that influenced participation at different levels of decision-making (Suskevics, 2012). Throughput legitimacy focuses on the intermediate processes that endure openness and inclusiveness during negotiations and trade-off among different actors in the policy-making process (Sloat, 2002) Unlike the other types of legitimacy, output legitimacy is directed toward the effectiveness and quality of policy in solving issues (Scharpf, 2009; Sloat, 2002). These are achieved by building communication patterns and acknowledging the contrasting perspective (Suskevics, 2012). However, output legitimacy will have a crucial impact on people's perceptions, especially for those who are directly influenced by a policy's implementation.

Communication patterns in MLG structure are important because of differences among actors to access information and data needed for a particular policy (Gallemore, Gregorio, Moeliono, Brockhaus, & Prasti, 2015; Gudmundsson, Hall, Marsden, & Zietsman, 2016). Multi-level stakeholders actively participate in the decision-making process if their involvement is acknowledged by sharing data and information. The communication methods, such as language and media use, also influence the level of participation (ADB, 2006b) or at least develop one-way communication from government to public (Brinkerhoff, 1999). The communication methods help at least in policy implementation if not in policy formulation (Urwin & Jordan, 2008).

Public participation in Asian cities has been given special attentions recently (ADB, 2006b; Asri, 2005; Widianingsih & Morrell, 2007). In LIA context, public participation also refers to public involvement, public engagement, and community participation in the spirit of citizen involvement in policy-making process. Therefore, current turn of decentralisation in LIA focus on enhancing communication and involving public in transport policy and planning (Andrews & de Vries, 2007). However, the level of participation is also influenced by legal requirement, type of regime, level of trust, the nature of the policy to be implemented, and norms of society (Brinkerhoff, 1999). Bickerstaff, Tolley and Walker (2002) studied the rhetoric and realities of public involvement within transport planning and participation. The authors argued that the lack of clarity in central government policy and guidance has created tensions in the objectives and process of local transport planning for formulating local transport plans. This is because of the differences in translating central government guidance into local practices. Four principles of public participation in local transport planning are mentioned: inclusivity, transparency, interactivity, and continuity. Historically, planning and policy-making are considered as a state activity which acts in the public interest (Arnstein, 1969). Such historical and societal norms and expectations may exist in LIA cities. Therefore, this research investigates how public or stakeholder participation in policy and planning occurs, who is involved, why they are involved, how they are involved and identifies different methods of communication during participation to assess the level of legitimacy in public transport decision-making in Indonesia.

2.4. Multi-level governance in Europe and LIA

This section describes the nature of MLG structures in Europe and LIA. The review explores different dimensions of relationships between and across international, national, and subnational (provincial and local) level organisations. The relationships at different levels investigate the nature, types and location of power and legitimacy deficit or excess currently present in the EU and LIA. The power relations help to determine the influence of certain organisations, actors and discourses in setting the policy direction. Moreover, a review of the planning process, public participation and communication methods will help to identify legitimacy deficit or excesses in MLG.

2.4.1. Multi-level governance in the EU

The parallel between the EU-based MLG and the LIA-based MLG is found in the role of supranational organisations that work outside of the boundary of national government but have access and influence to set the policy directions at national and subnational levels. In Europa, the EU acts as supranational entity with well-established rules and regulations, while in LIA cities, the international development agencies act as supranational entity even though they have not established clear rules and regulations.

In Europe, the EU covered integration of environment, energy, climate and transport policies (Bache, 2010b; Marshall, 2005). Integration results in structural change to institutional settings and domestic politics (Gualini, 2003). The process becomes complex because in fact not all member states are at the same level and therefore integration raises issues of authority, effectiveness of policy, legitimacy, accountability, and identity (Bache, 2010b; Gualini, 2003; Marshall, 2005). Sometimes, the EU is also referred to as a federal system to explain policy integration in the region (Studlar, 2010). The structure of the EU includes cooperation between public and private actors (Papadopoulos, 2010).

MLG explains not only the relationships between the EU and its institutions (the European Commission, the EU Parliament, the EU Court of Justice), but also the relationships between the EU and member states, regional and local governments in Europe (Cairney, 2012). Due to a highly sophisticated governance framework in Europe, MLG provides a useful lens to understand policy-making in particular areas such as transport (Jordan, van Asselt, Berkhout, Huitema, & Rayner, 2012). The MLG structures can be divided into three different levels, starting from the supranational level at the EU level, followed by the national level, and lastly, the subnational level of governance including the city level governance. The first level, at the EU level, policy decision-makers hold authority in the EU decision-making processed by means of institutions, both formal and informal, which results in the balance of power between the Commission, Council, and Parliament (Thomson & Hosli, 2006). In addition, the source of power may arise from the allocation of funds to finance the programmes as part of policy implementation from the supranational level. The example of the EC shows how Structural Funding exhibits power and influence on implementing policies at the regional level (Mann & Haugaard, 2011).

The second, at the national level, political power is also associated with the role of the state in struggling to prevent its policy decision-making power from hollowing out. The hollowing out mechanisms distribute power through both scaling-up to supranational level and scaling-down to subnational level, and sideways (non-state actors at the same level) (Jessop, 2004). The discursive and financial power of EC changes the hierarchical role of central government in providing funding to subnational government but at the same time raises questions about the legitimacy of the policy-making process.

The third, at the subnational level, power is exercised through the formation of partnerships between institutions at a particular level of governance and a higher level, such as the supranational institutions (Bache, 2010c). However, within the partnerships formed, issues of political power are less visible (Bache, 2010c; Piattoni, 2009). The limited financial resources of subnational level government have resulted in the lack of capacity to develop true partnerships. However, the subnational government has some strengths in cultural distinctiveness, administrative capacity to approach people, and local political will (Piattoni, 2009). Through partnership, the subnational governments participated and influenced the policy agenda of the EC with the help of other actors such as non-governmental organizations, social, and advocacy groups (Piattoni, 2009).

The Commission plays a leading role in placing issues on the agenda, and responding to the objections voiced by the central government of member states as formal institutions (Carbone, 2007). The European Commission (EC) comprises the president, commissioners, the cabinets, and directorate generals of various EU agencies (Carbone, 2007). As a result, within the EC organisational structure, potential causes of tension emerge from the interactions among these agencies, their policies and implementation mechanisms as well as with the organisational structure of member states (Piattoni, 2009). Generally, the member states lobby during the formulation of policy objectives and agenda and conduct negotiations before implementation. The lobbying and negotiations processes are forms of informal institutional practices. This is because EC policies might result in the structural change of institutional settings, rules and regulations, which ultimately affects domestic politics (Gualini, 2003).

The dynamic nature of the relationship between the EC, member states and regions may set policy direction. These relationships exhibit characteristics of both top-down and bottom-up approaches (K. Kern, 2010). The top-down approach refers to the process by which the EC dictates environment or climate change policies to its member states (Jordan et al., 2012). The bottom-up approach refers to the influence of the central government, subnational governments and grass roots organisations on EC-formulated policies.

In addition, the uniqueness of the EU policy-making process is also reflected in the dominant nature of the technocratic approach within the EC governance structure. The EC and its agencies rely on experts having sufficient knowledge for specific policies, such as the environment, energy, transport, agriculture etc. In reality, the role of the EU agencies is critical for disseminating information to decision makers at the EU level and for implementing policies directed by the Commission (Wonka & Rittberger, 2010). EU agencies worked with both the EU decision-makers and the central governments of member states and with technical experts, interest groups and sub-national governments. While a reliance on technical expertise will bring some benefits for improved policy contents in problem-solutions relationships, it has also some drawbacks in terms of a lack of understanding of domestic politics and people aspirations. This is reasonable, as policy decision-making at the EU level has less intervention in terms of policy implementation in specific fields, as the fields are the domains of the national governments' responsibility (member states level).

Consequently, the EC has overlooked the domestic politics that take place at the member state level due to its limited mandate in managing the domestic affairs of member states. The Structural Fund is set up by the EC as one of the financial instruments to initiate the integration in the EU's policies. While the EC exercises its financial power to dictate the policy decision-making process at the supranational and national level, the allocation of financial resources to the local and regional governments during the implementation of the policies. This financial link between various agencies of the EC and subnational governments strengthens both organisations' roles and interactions (Bache, 2008). City governments in Europe create networks and improve institutional arrangements in the light of EC directions to get EC funding. This results in an improvement in overall capacity of regional and local institutions.

Local government in Europe generally accepts the need to build strong links with other local government. These links are voluntary in nature and provide a platform for exchanged ideas and urban governance issues among cities in Europe through transnational municipal networks (TMNs). Through TMNSs, local governments can influence policy decisions at the local level as well as at the national, regional, and international levels in Europe.

The EC example shows how Structural Funding exhibits power and influence on the implementation of policies at the regional and local levels (Mann & Haugaard, 2011). The understanding of power in general, and economic power helps to interpret where power lies and how power is exercised in addressing multi-level policy tensions as policy direction is set.

The financial power of the EC changes the hierarchical role of central government in providing funding to subnational governments, but at the same time raises questions about the legitimacy of the policy-making process. Legitimacy involves communication and participation for justification and acceptability of policies between the EC and the affected communities (Bernstein, 2011). Kim (2009) refers to the process of enhancing the participation of all the societal groups, ensuring adequate negotiation procedures and increasing transparency of the decision-making process to improve legitimacy. In this way, subnational governments participate and influence the policy agenda of the EC, with the help of other actors such as non-governmental organizations, social and advocacy groups (Piattoni, 2009). These actors develop a policy network based on their interest and shared information and resources (I. Blanco, Lowndes, & Pratchett, 2011). Moreover, the EC's structure also promotes cooperation between public and private actors to achieve a common goal (I. Blanco et al., 2011; Papadopoulos, 2010).

The actual distribution of power in the context of the EU management enhances an understanding of a multi-directional influence of power in MLG systems. Economic and political powers pose challenges to the practices found in MLG structures. The competition among policy actors at different level is unavoidable, which become the reason to establish partnership as a platform for building more effective interactions and coordination for integrating the policies. Therefore, this research seeks to understand the

actual distribution of power from supranational to national and subnational governance level.

While power relation is important in the MLG theory, legitimacy concern has been a crucial problem in the governance of multi-level environment too. Responding to this legitimacy concern, the EC issued an EU White Paper on European Governance in 2001 (The EU-Committee of the Region, 2009). The White Paper outlines how the European decision-making processes will facilitate participation, transparency, and consultation and mentioned mechanisms on how to improve European governance ability and capacity. However, this effort still leaves some gaps in enhancing the legitimacy of European governance. Formal actors from the government or public sector and informal actors from the private sector and NGOs are involved in selected policy-making processes. The relationships among these actors are complex, as each actor acts both as an individual and as the representative of an institution. Therefore, the source of legitimacy may well stem from the individual actor or the institutions with which they are associated.

Communication among the members of the EU-based MLG is also complicated. This is just to show that EU-based MLG is still experienced as an on-going formation that must be adjusted to the new dynamic of local politics. The European Commission also encourages multiple actors' participation in the MLG structure under the Open Method Communication (OMC) (Pollack, 2005). OMC, such as online methods between the EC and these actors improves communication and participation of local level actors and influences policy agenda (Pollack, 2005). This is one of the strategies to enhance legitimacy in the EU through expanding the participation of the relevant stakeholders and improving the output of the participation process (Guastaferrero & Moschella, 2012). These efforts initiate consultation in the formal process and enhance the political process. However, its effectiveness in improving EU legitimacy remains stagnant (Labitzke, 2012). In short, the understanding of the planning process in general and the level of communication between supranational organisations and wider actors helps to determine the legitimacy concerns in making of the policy at the EU context.

2.4.2. Multi-level governance in the Low-Income Asia

The notion of MLG structure has recently gained popularity in Asia in the study of intergovernmental relations during the policy-making processes. In this region, MLG context has started to be incorporated in diverse strategic development sectors for policy effectiveness. LIA cities are financially dependent on higher-level institutions to achieve their development goals (De Vera & Kim, 2003; Lewis & Oosterman, 2009; UN-HABITAT, 2010). Higher level institutions include international development organisations, ministries in central government and departments in provincial governments. This is due to the limited financial capacities of local government in LIA such as Vietnam, Thailand, Burma, and Indonesia, which make their cities dependent on provincial, national and international organisations (Lewis & Oosterman, 2009). These limitations stem from the lack of ability to raise revenue from local sources and legal constraints established by national governments, which affect the process of borrowing funds from domestic and foreign sources (UN-HABITAT, 2010). Therefore, local government revenues in LIA cities are normally obtained from taxes, grants and loans from national governments and international development organisations (De Vera & Kim, 2003).

Local taxes contribute a small share of the overall development expenses in LIA cities. This is due to a high poverty rate and a high percentage of workers employed in the informal sector, such as street traders, who are not covered in tax networks (World Bank, 2006b). 'Informal sector' refers to non-wage employment in which workers have less access to financial capital, poor productivity, and consists of unskilled workers (Blunch, Sudharshan, & Dhushyanth, 2001; Suharto, 2002). Almost 60% of the urban population in Indonesia, 67% in the Philippines, and 52% in Thailand works in the informal sector (Blunch et al., 2001). The growing numbers of workers in the informal sector poses challenges for structuring the tax income due to wage uncertainty (Gordon & Li, 2009). Similarly, the data show that half of the urban population in LIA cities live on less than US\$ 2 per day (Carr, 2012). As a result, little income is generated at the local level to support urban development projects (Wilson, 2010).

Weak financial capacity at the local administrative level makes local governments in LIA cities dependent on grants or loans from the national government (UN-HABITAT, 2010).

For example, local government in the Philippines receives only 40% of the national revenues for public service deliveries and development (Olowu, 2003). In Pakistan, the federal government holds 92% of the development budget, which funds provincial and local governments according to their needs (Imran, 2010a). In the early 2000s, a decentralisation policy was implemented in many LIA countries. This policy decentralised national and provincial development functions to lower level governments (Firman, 2009b; Siddiquee, Nastiti, & Sejati, 2012). However, this policy was not accompanied by fiscal decentralisation, and therefore local governments are still dependent on national governments to fund their projects. In Indonesia decentralisation policy did not increase local government capabilities by providing financial resources for infrastructural development (Fengler, 2007; Firman, 2009b).

Local governments in LIA cities receive direct and indirect funding for their development programmes from international development organisations. The international development organisations include bilateral development agencies such as Australian Agency for International Development (AusAID), Japan International Corporation Agency (JICA), Swedish International Development Corporation Agency (SIDA), and multilateral development agencies such the Asian Development Bank (ADB), World Bank (WB) and United Nations Development Programmes (UNDP). Generally, the national governments in LIA rely on foreign aid or development loans from these international development organisations to meet the objectives of country development plans. At the same time, subnational governments depend on their national government to implement development policies at the local level. International development organisations work closely with national governments, and more recently with subnational governments, in LIA cities in policy formulation. The significance of the cooperation and funding is that it supports the achievements of the global development agenda for social, economic, and environmental objectives (United Nations, 2012a).

International development organisations provide funding to national and subnational governments in LIA in priority areas, such as climate change, poverty alleviation and energy conservation (UNFPA, 2011). Australia is the largest bilateral donor in East Asia for programmes related to poverty alleviation and sustainable economic development. Australian aid to Indonesia increased from \$505.2 million in 2011 to \$578.4 million in 2012, while Burma received \$48.8 million to \$63.8 million in the same period (Carr,

2012). Similarly, OECD (2013) aid to Indonesia increased from US\$1,047 million to US\$1,393 million during the period 2009-2010 (OECD, 2013). With funding from the UNDP, cities with high pollution levels such as Beijing, Cairo, Mexico City, Sao Paulo, and Shanghai converted local buses into fuel cell buses to reduce transport-related greenhouse gas emissions (UNFCCC, 2011; Wright & Fulton, 2005).

Sometimes, subnational governments align their development programmes with the priorities of higher-level organisations and international development organisations to obtain funding (Qi, Ma, Zhang, & Li, 2008; Schreurs, 2010). International NGOs also work with local governments to develop policies where international funding is available, while at the same time, these international NGOs work with the international development organisations so aid delivery to the local level is effective. For example, in climate change governance, the Global Environmental Facility (GEF) forms policy networks with other international development organisations, such as the World Bank, JICA, ADB and with national and subnational governments in LIA countries to provide funding for climate change initiatives (Bakker & Huizenga, 2010).

The increasing financial dependence of subnational governments on national governments and ultimately on international development organisations, determines the direction for the development agenda in LIA cities (Matsumoto et al., 2007; Moretto, 2007; UNDP, 2011; Yedla, Shrestha, & Anandarajah, 2005). These financial dependencies also put subnational governments in a weaker bargaining position in making policy decisions. In short, the financial dependency of local governments in LIA is due to their inability to generate local revenues for development projects, which provides economic power for national and international development organisations and their networks to set priorities (Corfee-Morlot, Cochran, Hallegatte, & Teasdale, 2011; De Oliveira, 2009; De Vera & Kim, 2003).

The policy directions in LIA cities are not only set by higher-level national and international organisations, but also by popular local or national politicians and community groups (Kiggundu, 2009; Matsumoto, 2007; Matsumoto et al., 2007). Political leadership and community groups emerge when development policies fail to address the social welfare of the community. By putting pressure on local government,

the local politicians and NGOs address environmental degradation and social inequality in their cities (Boyd, Grist, Juhola, & Nelson, 2009; Tanner et al., 2009).

In Cambodia and Indonesia, it has been recognized that local NGOs are playing an important role in raising environmental concerns (J. D. Frank, Longhofer, & Schofer, 2007). In China, over 130 NGOs are working on environmental issues (Ru & Ortolano, 2009). Sometimes local NGOs make linkages with international NGOs and development agencies for financial support and facilities which make their voices more effective (Ibabao, 2013). Local NGOs are sources of social capital in LIA cities (Wallis & Dollery, 2002). In the Philippines, the social capital of local NGOs has been used to solve urban environmental problems (Ibabao, 2013).

In LIA cities, local politicians build connections with international networks to gain insight and support for local development projects. This is indicated by the exchange visits of mayors in Jakarta, Curitiba, and Bogota. The exchange visits among the mayors of these cities are made possible by sponsorships by international NGOs, such as Institute for Transportation and Development Policy (ITDP). The exchange visit of mayors made it possible to implement TransJakarta, the first Bus Rapid Transit (BRT) system in Asia (Hossain, 2006; Kogdenko, 2012; Matsumoto, 2007). The success of TransJakarta influenced the national government to plan BRT projects in Batam, Bogor, Yogyakarta, Bandung, Pekanbaru, Manado, and Palembang cities in Indonesia (Ernst & Sutomo, 2010). In short, local politicians and community groups play an important role in LIA cities and might exercise socio-political power in setting the development agenda.

The higher-level national and international organisations and socio-political actors not only set policy direction, but also advance their policies by soft measures (Moretto, 2007; Thynell, Mohan, & Tiwari, 2010). The soft measures comprise certain discourses in the form of language, metaphor and images that are acceptable at the local level (T. Kern, 2010; Watkins, Swidler, & Hannan, 2012). Generally, the language in policy documents, media advertisements and community consultations convey certain meanings and advance the beliefs of higher-level organisations (Bridge, 2009). Imran and Low (2007) found road investment was promoted by international development organisations as a symbol of development in Pakistani cities. Many believe that building roads will benefit the regional economy and environmental sustainability in urban areas. Empirical

evidence does show a connection between infrastructural expansion and development, but the debate has always been about the scale of the expansion and in relation to urban development (Estache & Fay, 2007). Methmann (2010) argues that the tensions and contradictions between the economic and environmental goals of international and local organisations are hidden by the prevailing discourse. By analysing the discourse of 31 texts, he found the various meanings of globalisation, growth, and efficiency with respect to global climate change governance are constructed in selected discourses that have not significantly changed the climate change issues at the global and local level. Local governments in LIA cities lack the technical capacity to formulate policies or analyse discourse in policy documents. Therefore, local governments overlook the underlying meanings and consequences of the storylines promoted in policy documents (Forester, 1984; Marsden, Frick, May, & Deakin, 2012). Higher-level organisations might use discursive power to set up a policy direction and to have that direction accepted by LIA city government.

Public participation and communication methods have not been well designed to ensure that policy-making and plan-making can lead to successful policy implementation. In LIA cities, there is a low level of public participation in the policy-making process (Ho, Cottrell, Valentine, & Woodley, 2012; Tanner et al., 2009). This is due to the political systems adopted in such cities, in which public involvement means lessening the power of government authorities in the traditional top-down planning model (Burton, 2009). In this model, there is no or a limited statutory requirement to involve people in the planning process (Burton, 2009).

In the top-down model in LIA, there is a belief in planning as a technical exercise (Tanner et al., 2009). Moreover, planners in local government believe that low levels of education and income of people do not generate interest in the planning process (Ho et al., 2012). Tanner et al. (2009) argue that lack of access to information also hinders public participation for urban governance in ten Asian cities, namely Bangkok, Chennai, Chittagong, Cochin, Da Nang, Dalian, Hangzhou, Ho Chi Minh, Ningbo, and Surat. The lack of access to information is possibly associated with the level of transparency and accountability of the local authorities. It creates barriers to developing citizen-government relations as two-way communication, particularly regarding those who are mostly affected by the policy outcomes. For example, in Vietnam, fora for urban planning

and policy discussions at the city level are constrained by the centralised planning systems, which hinder the local community's participation (Tanner et al., 2009). As a result, the participation process is perceived only as symbolic and as tokenism (ADB, 2006b).

In LIA cities, local NGOs has attempted to fill in this gap to a certain extent. The National and local NGOs possess some technical knowledge, understand bureaucratic ways, and claim to represent local people (J. D. Frank et al., 2007). Although it is not a statutory requirement to incorporate NGOs, there is a current trend in LIA cities to communicate formally or informally with NGOs in the planning process (Daniell et al., 2011; J. D. Frank et al., 2007). Zerah (2009) argues that NGOs position themselves as facilitators between government agencies and citizens in participatory governance processes. Ho et al. (2012) argue that interactive communication among state and non-state actors enhances knowledge and mutual trust in protected marine areas in Vietnam. However, in Mumbai, India, it has been found that NGOs help governments to implement their policies rather than represent the needs of local people in the planning process (Zerah, 2009). As a result, planning and policy processes are also influenced by the roles and functions held by the local NGOs in terms of both government and public sides.

The lack of public participation and communication in LIA cities produces poor understanding of society, its characteristics and needs. For example, most people in LIA cities uses public transport and non-motorised transport for their daily trips (Ahmed et al., 2008; Emberger, Pfaffenbichler, Jaensirisak, & Timms, 2008). Therefore, it is reasonable to get support for policies for improvements to public transport and non-motorised transport. However, policy makers promote road construction based on technical transport models. Thus, a lack of communication leads to policy tensions among a range of organisations at different levels and people in LIA cities.

Public participation and communication in LIA cities can be improved by employing local media and using technology. Asian countries are the largest internet users in the world, especially China (22.4%), India (5.7%), and Indonesia (2.3%) (Internet World Stats, 2012). Willard's (2009) research shows that social networking has the potential to enhance public participation and the dissemination of information. Similarly, the rise of

private TV-channels, radios, and local newspapers can play an important role in involving people in development projects.

Using MLG theory, the policy studies aim to reveal the mutual dependence among actors at various governance levels. These include energy policy (Kunchornrat & Phdungsilp, 2012), climate change policy (Schreurs, 2010), marine (Ho et al., 2012), urban development (Kim, 2009), forest policy (Saito-Jensen, 2015), and financial policy (Hamilton-Hart, 2012) (Table 2.1). These studies emphasise in exploring vertical and horizontal integration among policies and actors, participation during the plan-making and implementation process to shed lights about power structure that might exist.

Table 2.1 : Contemporary MLG studies in different sectors

Sector	Author	Key arguments on MLG	Gaps in research	Context	Problem classification
Energy	Kunchornrat and Phdungsilp (2012)	<ul style="list-style-type: none"> • MLG connects vertical and horizontal levels that enable integration of divergent perspectives for collective actions in emission reduction • City role is important for climate change actions and needs local agreements and institutions • Central government role is less clear in governing low-carbon society 	<ul style="list-style-type: none"> • Governance problems with the lack of an independent planning agency • Unclear roles of each actor in vertical and horizontal levels for transformation to low-carbon society 	Asian	Governance problems
Metropolitan areas	Kim (2009)	<ul style="list-style-type: none"> • MLG accelerates the democratic accountability with the involvement of all government and non-government actors in decision-making • Centralised governance system is unable to lead to agreements as a coordination mechanism 	<ul style="list-style-type: none"> • Lack of leadership role as a major change agent • Unclear role and responsibility for institutional change to support MLG structure 	Asian	Leadership and institutional structure issues
Forest	Saito-Jensen (2015)	<ul style="list-style-type: none"> • MLG concerns the implementation of diverse policy measures between central and local government • Power is an issue within MLG structure, including culture and history that limit the application of MLG 	<ul style="list-style-type: none"> • Unclear power relations in MLG structure • MLG has not been discussed in detail by social scientists • Gaps in combining MLG with other approaches because MLG limitations in dealing with power, culture and history 	Asian	Issues of power
	Gallemore et al. (2015)	<ul style="list-style-type: none"> • Transaction costs are important for MLG structure because MLG is translated as cross-level relationships • Communication is important for MLG for collaboration across government levels and flows of information across levels • Powerful actors dominate cross-level flows and collaboration 	<ul style="list-style-type: none"> • Gaps in defining institutional structure and formation of relationships among all actors across-levels • Lack of assessment on the role of emerging institutions initiated by civil society and NGOs 	Asian	Transaction costs problem, issue of power, and institutional structure
	Ravikumar, Larson,	<ul style="list-style-type: none"> • MLG challenges consist of vertical coordination, information sharing, horizontal and inter-sectoral tensions, accountability, equity and justice 	<ul style="list-style-type: none"> • Disconnection between central and local government policies 	Latin America and Asia	Limited support for coordinated

Sector	Author	Key arguments on MLG	Gaps in research	Context	Problem classification
	Duchelle, Myers, and Tovar (2015)	<ul style="list-style-type: none"> • Public participation in decision-making process 	<ul style="list-style-type: none"> • Limited role of urban and regional governments in dealing with climate change issues • Implementation challenges in urban climate change governance • Problems with planning practices and policy-making and implementation 	(Brazil, Peru, Indonesia)	system across sector and scale
Climate change at cities	Schreurs (2010)	<ul style="list-style-type: none"> • City has a crucial role to implement climate change actions plan within a MLG structure • Transnational networks play an important role for horizontal diffusion in information and knowledge exchange among cities 	<ul style="list-style-type: none"> • Limited role of urban and regional governments in dealing with climate change issues • Implementation challenges in urban climate change governance • Problems with planning practices and policy-making and implementation 	Asian (Japan, China, South Korea)	Limited planning capacity at the city government level
	Zeemering (2012)	<ul style="list-style-type: none"> • Interdependence and MLG among all levels of government in formulating city's sustainable development plans in the US • Horizontal governance relations at the local level may be more important for success than vertical governance relations 	City government has limited capacities to coordinate actions and share decision-making within the MLG environment	The US	Governance problem
Transport	Nugroho et al. (2014)	<ul style="list-style-type: none"> • MLG suggests the translation of national public transport policy to local government with two main issues: vertical cooperation and horizontal coordination • MLG denotes a shift in decision-making authority and placing local government as important actor for climate change mitigation strategies in transport • Mayor's leadership style ensures successful horizontal coordination for policy implementation and operations 	<ul style="list-style-type: none"> • Gaps in coordinating and forming partnership and cooperation among diverse government levels and non-government actors • Limited coverage of MLG practices between vertical and horizontal organisations, which mostly cover preparation stage (legislation, research, development, and planning) and ignore the operational stage (cost-benefit, sustainable operations, ridership, modal shift) 	Asian	Planning capacity issues, institutional design, and leadership for horizontal coordination

Sector	Author	Key arguments on MLG	Gaps in research	Context	Problem classification
	Bache, Bartle, Flinders, and Marsden (2015)	<ul style="list-style-type: none"> Blame-game theory is included in the analysis of MLG structure for low-carbon transport Politicians have escaped from responsibility to achieve the targets of transport emissions reduction 	<ul style="list-style-type: none"> Tensions in defining planning instruments to bridge the gaps between transport and climate change policies MLG is combined with blame-game theory to cover the limitations of existing MLG concept 	European	Planning instruments problem
	Marsden, Ferreira, Bache, Flinders, and Bartle (2014)	<ul style="list-style-type: none"> MLG helps to identify the interests and objectives of policy actors from government and non-government sectors Local government is lacking in the ability to lead low-carbon society because of high-costs infrastructure development and resource dependency on national government, conflicting objectives with economic growth and public-private organisational tensions 	<ul style="list-style-type: none"> Gaps in structuring governance mechanisms across governmental levels and its connection with non-governmental levels MLG is combined with theories of incrementalism and position analysis, which reflect the limitation of existing MLG concept 	European	Governance issues

2.4.3. Comparison of multi-level governance in Europe and LIA cities

MLG in Europe and in LIA cities has emerged for different reasons. In Europe, MLG has emerged as a result of the process of Europeanization, in which the EU plays a crucial role in setting the policy direction (Bache & Chapman, 2008). In LIA cities, MLG emerges from the resource dependence of high-level institutions for achieving the urban development agenda (Olowu, 2003). From the literature, there are significant differences between MLG in Europe and LIA cities. These differences stem from the social, political, economic, and cultural practices that attach to these regions. While Europe has seen advanced economic development, with strong democratic institutions, and has a dominant technocratic approach in making policy decisions (Marks et al., 1996), LIA cities still struggle to design institutional arrangements to overcome their financial dependence on higher-level institutions, their weak democratic institutions, and a top-down approach in policy-making (Olowu, 2003). Some insights from the theory of MLG in Europe will help to reconfigure the institutional arrangements of MLG in LIA cities.

The similarities between MLG structures in the EU and LIA cities are inherited from theoretical and empirical practices. From a theoretical perspective, MLG in the EU and LIA cities has similar features, in which governance with collective action among diverse actors at various governance levels exists. This feature poses challenges to the traditional top-down approach in planning and policy-making, in which the national government has dominated policy decisions. However, the nature and location of power and how power distributions take place among actors at different governance levels remain unexplored (Bache, 2008). Along with this, legitimacy gaps pose a challenge for promoting MLG theory, particularly in advancing public involvement and communication methods for policy-making. This informs a potential investigation that should focus on power and legitimacy gaps.

From empirical practices, MLG in the EU and LIA cities is influenced by the availability of financial support, which shapes the directions of policy-making. The process of decision-making in the European context may be applied to LIA cities, with certain adjustments. According to Emberger et al. (2008), the ideal decision-making process in European cities is applicable to LIA cities to achieve sustainable development goals in

urban transport. Under a programme funded by the EU, a study was undertaken in four South East Asian countries, namely Cambodia, Thailand, Laos, and Vietnam. The ideal decision-making processes of Europe is classified into three approaches: vision-led, plan-led, and consensus-led. These approaches emphasise the importance of vision in the planning and policy development. Subsequently, this will lead to the provision of comprehensive plans and the necessary planning documents and the execution of the plans through building consensus and negotiated agreements for collective actions. Even though the study locations are limited to these four countries, some insights can be gained as to how these approaches can be implemented to improve the existing policy decision-making processes in LIA cities. However, gaps remain in how to combine the vision-led, plan-led, and consensus-led policy making approaches in LIA cities.

Despite the similarities in theoretical and empirical practice, the practice of MLG in both the EU and the LIA cities probably originally stemmed from a financial dependency that determines mutual relationships among institutions at local, regional, national, and international levels (De Vera & Kim, 2003; Jordan, 2001; Zerbinati, 2012). In the EU context, member states have a high dependency on available funds allocation administered by the European Commission after policy decision-making with the European Parliament and the Council of the EU. However, member states have a stronger position in implementing EU policy within their domestic policy. In contrast, LIA cities have less economic power due to the limited financial capacity of local government to undertake urban development policies. Financial dependence has resulted in planning and policy being directed by the higher-level institutions. The legitimacy of the local government to make decisions is at stake, which makes the MLG structure become less legitimate in policy-making. This study focuses on revealing the underlying causes of multi-level policy tensions in medium-sized LIA cities. These tensions are caused by conflicting priorities between urban transport policies. Research gaps remain in addressing the nature and location of power and legitimacy issues that impede collective action among diverse actors at various governance levels. Urban politics is a contested arena in which international, national, provincial, and local governance competes for economic, social, and environmental objectives.

MLG is applicable to analyse multi-level tensions in transport and climate change policies because of the patterns and features of MLG that are concerned with the vertical and horizontal complexities of policy-making (Benz & Eberlein, 1999). Benz and Eberlein (1999, p. 332) argued that exploring tensions can lead to positive results:

inherent tensions arising from the threat of over complexity and from conflicting operating logics of different arenas and levels trigger and drive restructuring processes, which have the potential to bring about successful adjustments to new requirements (Benz & Eberlein, 1999, p. 332)

The White Paper on European transport policy provides guidelines for transport management and operations by balancing the modes of transport, overcoming bottlenecks in transport networks and focusing on users of public transport (European Commission, 2001).

In Asia, transport, climate change and MLG is just recently receiving a great deal of attention because of the role of international development agencies and transnational municipal networks that export transport infrastructure projects, such as urban motorways, BRT, and metro trains to achieve economic, social and environmental goals (Kogdenko, 2012; Nugroho et al., 2014; Wright, 2004b; Wright & Fulton, 2005). This research focuses on transport policies in Indonesia and how MLG is relevance to explore the causes of multi-level tensions in researching public transport system. The main aim is to explore the complexity of transport decision-making. Consequently, it is crucial for this study to explore further the components of power and legitimacy. In undertaking this study, a theoretical framework is developed as a tool to investigate how multi-level policy tensions emerge in LIA cities.

As shown in Table 2.1, MLG has possible relevance and utility for understanding the context of the BRT systems planning and implementation in Indonesia and other developing countries. This is mainly due to MLG's ability to explain a dynamic and complex policy-making process as well as flexibility in describing the interdependence of phenomenon across institutions or organisations and actors at international, national,

regional, and local governance levels. Five main reasons why the use of MLG is relevant for this research are summarised below:

First, MLG provides a lens to see how vertical and horizontal coordination among multiple tiers of actors from supranational, national, provincial and city government levels operate in decision-making and how these decisions have impacted at the local/city level. In the case of Europe, the role of the EU is a supranational entity, but in this research international development agencies are treated as supranational entities, with a strong role influencing the policy agenda and the planning process at the central and provincial government levels. MLG theory helps to identify challenges related to vertical coordination and information sharing, horizontal and inter-sectoral relationships, as well as concerns over responsibilities for planning and implementation. The policy-making process is likely to be political cum institutional in nature, but how the politics-institutional dimension worked either in favour or against a BRT proposal at multiple levels is important to explore.

Second, MLG has a capacity to explain the phenomena related to scales and linkages in the policy-making environment. For example, transport policy and planning is highly influenced by decisions made at higher levels. At the same time, civil society and community actors have also influenced the decision-makers at the local level. These scales and linkages may expose varying resources among different actors and their dependencies leading to scattered decision-making processes.

Third, MLG theory helps to identify different beliefs that are held by multiple actors due to their skills and exposure. For example, international experts have technical knowledge of the BRT system, while local experts may have knowledge of the existing realities present in the built environment. These strengths of different actors may result in different discourses in relation to accepting or rejecting BRT. Moreover, differences may exist in the relative perception of road-based, rail-based, and bus-based public transport which needs to be explored.

Fourth, MLG shows the level of partnership, collective actions, and cooperation for public service delivery, albeit increasing the complexity of intergovernmental relations.

Building partnership for collective actions by integrating formal and informal networks and varying institutions, roles, mandates, and responsibilities is crucial for urban transport systems. These interrelationships need to be studied in this research.

Fifth, MLG provides an opportunity to expose strengths and weaknesses of the implementation of decentralisation in Indonesia. It will explore central-local government relations in the era of decentralisation. It will explore the level of local autonomy for policy decisions to improve public service delivery. Therefore, this research is useful to refine the MLG theory in the context of LIA cities by studying urban transport policy and planning.

In short, the relevance of MLG is highlighted here to emphasise its importance in explaining public policy and delivering public services in transport. The theoretical framework for identifying these multi-level tensions is explained in the next section.

2.5. Theoretical framework

This research investigates the multi-level policy tensions in urban public transport policies in medium-sized LIA cities. The significance of this study is that it will help policy-makers to understand and interpret the underlying causes of multi-level policy tensions in urban governance. The causes of policy tensions in the EU and LIA cities reviewed earlier in this chapter emphasise the need to unpack power and legitimacy concerns in policy formulation and implementation. Power relations can be explored by identifying economic power, socio-political power, and discursive power inferred from intergovernmental relationships between international, national, and subnational/local actors. At the same time, legitimacy can be explored by identifying methods of participation and communication during the policy process. The theoretical understanding of the following types of power and different methods of participation and communication help to conceptualise a framework for analysing decision-making in LIA cities. Therefore, the theoretical framework provides a lens to investigate how power and legitimacy might play a crucial role in generating the multi-level policy tensions in LIA cities.

The policy-making process remains a contested arena for achieving quality policy decisions that will cater for marginalised groups within a society. This study focuses on three types of power, namely economic power, socio-political power, and discursive power. The economic power of decision-makers is reflected through the level of financial dependency of lower governance levels and its impact on policy outcomes. Socio-political power focuses on the analysis of how relationships and the influence of political leadership and community groups set the direction for planning and policy-making. Along with these types of power, development discourses expose, through language use in policy documents, political statements, and advertisements, the influence of the behaviour and preferences of decision-makers.

The review of MLG in the EU and LIA cities shows how financial dependencies of local government on high-level institutions affect the priorities of urban development agenda. This financial dependency can be referred to as economic power, which is the ability of organisations or institutions to set the direction of policy decisions by allocating or prioritising funding in specific areas (Moretto, 2007; Peters & Pierre, 2001; UNDP, 2011; Yedla et al., 2005). Peters and Pierre (2001) argue that economic power is not necessarily gained from formal constitutional powers but from wielding and coordinating resources from a range of actors. Therefore, this research investigates financial dependency and its impact on policy outcomes to assess whether the economic power of certain actors can be detected in the policy-making and implementation process.

The previous sections show the differences in how the socio-political actors and factors influence policy direction in an urban environment (Daniell et al., 2011). Local power and politics matter particularly in the era of decentralisation where both democratic practices and accompanying tensions stand side by side in localising power for decision-making to a lower government level (Hadiz, 2010). The review emphasises the role of political leadership, vision, strategy, and connections in influencing policy decisions. Similarly, it shows how community groups, as representative of marginal groups in the society, influence the policy agenda (T. Kern, 2010; Ru & Ortolano, 2009; Sonnenfeld & Mol, 2006). This phenomenon can be referred to as socio-political power, which is the ability of social and political organisations and actors to influence the policy-making

process (Backstrand, 2003). Therefore, this research investigates the interrelationships and influences of political leadership and community groups to assess whether socio-political power can be detected in the policy-making and implementation process.

The discourse in the form of language and media advertisements advances economic, social, environmental objectives, values, and beliefs (Schmidt, 2008). The policy language and communication channels influence public perceptions, facilitate policy agenda, and exhibit discursive power. Therefore, this research will analyse the language used in policy documents, political statements, and advertisements to assess whether discourse and discursive power support/advance certain policies and projects.

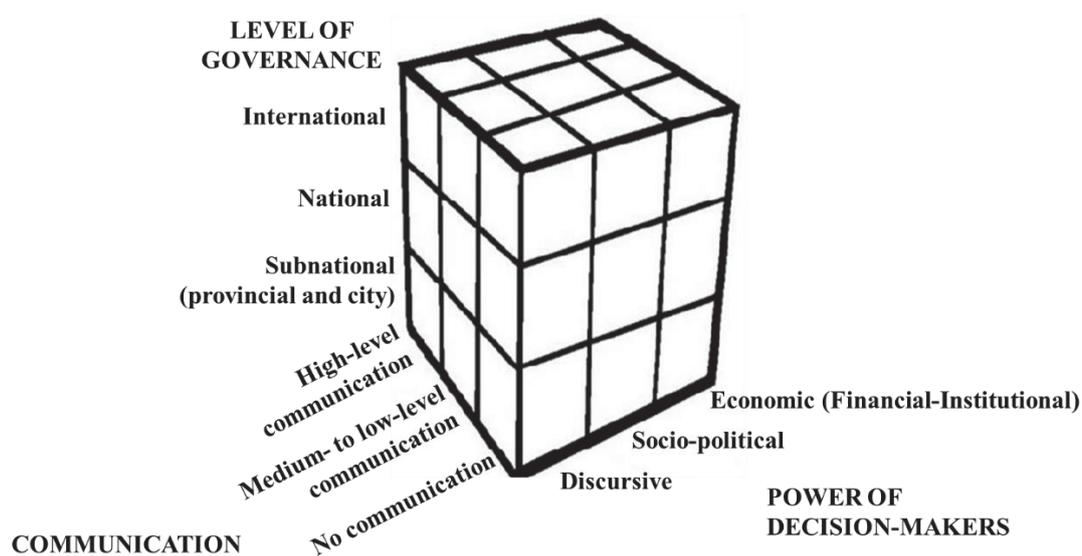


Figure 2.1 : Theoretical frameworks for studying multi-level policy tensions in LIA cities, derived from the power cube model by Gaventa (2006)

Source: Gaventa (2006)

The theoretical framework for analysing the underlying causes of multi-level policy tensions is derived from the power cube model by Gaventa (2006) as shown in Figure 2.1. In Gaventa's model, power is analysed by looking at various combinations of relationships between levels of governance, spaces of power, and forms of power. In this study, the difference is emphasised in the analysis of the types of power of decision-makers and the level of communication and participation in decision-making process. This theoretical framework is significant in combining level of governance, power,

legitimacy gaps, communication, and public participation problems as the dominant underlying causes of multi-level policy tensions in LIA cities. These dimensions of power shed light on what types of power institutions have and how power is exercised to determine the legitimacy of the policy process. The final output of this study will explain the dominant causes of multi-level policy tensions to enhance understanding and interpretation of policy-makers in the policy-making process.

This study determines the levels of legitimacy by considering communication patterns and ways of public participation in the planning process. Historically, planning is considered as a state activity where policies have been prepared in the public interest (Arnstein, 1969). Overtime, there is a trend of limited participation in the form of information sharing in which one-way communication from government to the public takes place (Brinkerhoff, 1999). This is due to a lack of acknowledgement of the right and value of the community to participate in the policy-making process (Gaventa, 2002).

According to Suskevics (2012), the levels of legitimacy are assessed using four criteria: the availability of formal and informal rules, the inclusion of public participants in the decision-making process, the accountability of the policy-making process, and the level of transparency in the policy process. A high level of legitimacy can be achieved by the inclusion of public participants and all stakeholders in formal decision-making process. It means different stakeholders or individuals decide together and act together to formulate policies (Arnstein, 1969). The legal requirement, type of regime, level of trust, the nature of the policy to be implemented, and norms of society also influence the level of participation (Brinkerhoff, 1999). Participation requires communication methods, which refer to the quality of information and knowledge dissemination during the policy process (Bridge, 2009). The communication methods, such as language and media use, influence the level of participation (ADB, 2006b).

The research investigates how public or stakeholder participation in planning and policy-making occurs, who is involved, why they are involved, how they are involved and identifies different methods of communication during participation to assess the level of legitimacy in policy-making. In summary, this research focuses on:

1. Financial-institutional tensions

This research focuses on financial-institutional tensions by looking at the financial inter-dependency between different levels of government in BRT planning and implementation. This type of tension investigates inter-ministerial or inter-departmental competition and contradiction of policy objectives at international, central, provincial, and local levels.

2. Socio-political tensions

In this research, socio-political tensions refer to the dynamic of national and local politics and social realities that facilitate or obstruct BRT projects in Bandung and Surabaya.

3. Discursive tensions

Discursive tensions refer to discourses being advanced by different policies and actors to achieve their agenda of promoting or obstructing BRT project in case study cities.

4. Communication and participation tensions

Communication and participation tensions refer to public and stakeholders' involvement in BRT planning and implementation.

2.6. Summary

MLG has gained popularity in the study of coordinated policy-making processes across governance levels with diverse actors from public and non-public sectors. This theory is derived from the dynamic process of policy-making in the context of the EU. However, power, communication and public participation gaps have been studied partly to improve the effectiveness of MLG. The gaps remain, as an attempt to elucidate power and legitimacy is hindered by taking each component as a separate entity. The underlying causes of multi-level policy tensions are less studied. The nature of power, its types, mechanism of power and the distribution of power remain unclear in the MLG structure. Accordingly, levels of communication and participation in legitimacy concerns in transport planning are less studied.

This study tests the relevance of MLG in investigating the underlying causes of multi-level policy tensions in medium-sized LIA cities. It fills in the power and communication gaps by bridging the existing framework developed earlier by analysing different dimensions of power and legitimacy. Analysing each dimension of power and legitimacy, - economic power, socio-political power, discursive power, communication, and participation -, explains the relationship between different actors and therefore contributes to the exploration of the potential causes of multi-level policy tensions in policy decision-making processes. The next chapter discusses the research design to identify the causes of multi-level policy tensions in addressing transport and climate change in medium-sized LIA cities.

Chapter 3 Research Design

3.1. Introduction

This chapter aims to develop an appropriate research design to answer the research question as to how multi-level policy tensions in medium-sized Indonesian cities are addressed. The chapter provides a rationale for choosing qualitative research and a case study of Bus Rapid Transit (BRT) in two medium-sized cities of Indonesia, Bandung, and Surabaya. The selected cases help us to understand transport and climate change decision-making in general and decision-making for BRT in particular in these cities. The reasons for selecting the case studies are followed by a discussion of research ethics to ensure that the integrity of the research is maintained. The next section discusses the data collection and analysis methods used in this research, followed by a discussion of research limitations.

3.2. Qualitative research

This study focuses on urban transport planning research in the domain of social science and policy. It seeks to explore how politics, power and communication are exercised by multiple actors at different levels. The nature of this research can be best explored by using qualitative research in selected case studies. Stewart-Withers, Banks, McGregor, and Meo-Sewabu (2014) argued that qualitative research can provide the meaning of social, cultural, economic, and political phenomena, in which meaning can be constructed socially, situationally, and historically. The richness of qualitative research lies in illuminating the experiences that people have with respect to particular events in their life and the effects of those events on individual actors (Kvale, 2006). In addition, qualitative research also provides flexible and powerful tools that capture the narrative and the ways in which people make meaning of their experiences to convey findings, symbolic and verbal messages, and the personal views of participants in the field (Rabionet, 2011). These attributes are not captured very well in quantitative research (Ormston, 2013; Overton & Diermen, 2014). Therefore, qualitative data is expected to explain the decision-making processes and power relations among multiple actors in Indonesian cities.

A constructivist paradigm guides this research because I want to focus on how reality is politically constructed and socially understood. Elements of the research design include the connections and relationships among the research paradigm, the main issue in the research topic, the context, theory in place, and methods for data collection and analysis (Petty, Thomson, & Stew, 2012). Constructivism focuses on inductive reasoning strategies to investigate the research question through the understanding of the social construction of meaning (Petty et al., 2012). The role of participants is important to actively construct the reality itself and the role of the researcher is to assist the construction and interpret the meanings to produce knowledge. However, Stewart-Withers et al. (2014) argued that power exists in research relationships, which may affect the selection of facts being presented or excluded to me during interviews. Haas (2004) also argued that the constructivist approach is useful for analysing power in the policy process. Constructivism assumes that “individuals seek understanding of the world in which they live and work ... develop subjective meanings of their experiences” (Creswell, 2009, p. 8). The meanings are produced in complex interactions with other actors along with certain practices perceived by various actors (Creswell, 2009). The case study of the BRT systems as a policy instrument to improve public transportation in Bandung and Surabaya is exploratory in nature. The study will reveal various meanings of BRT policy as formulated by government officials and non-government representatives.

The central inquiry in the case study approach is who initiated the idea of BRT in the Indonesian context, how, why and when funding for BRT projects was secured for Bandung and Surabaya, who is involved in high-level and ground-levels decision-making and how these projects have been advanced or resisted in the planning and implementation stages. The facts and evidences gathered from the fieldworks can help support the knowledge production to address multi-level tensions in BRT development. The values and perceptions of the public transport system keep changing and therefore it is important to investigate the discourse advanced to create such values and perceptions. The topic of the research is a sensitive issue that will have implications on the *status quo* of transport and climate change policy actors in Indonesia. To explain the question in this inquiry, the constructivism paradigm is considered important for this research. Flyvbjerg (2006) argued that the research design should be seen as “problem-driven and not methodology-driven” (p.26). Therefore, this research attempts to search for appropriate methodologies that provide a pathway to respond to the research question.

This research focuses on the development of new insights concerning the existing governance mechanism of urban public transport policy and planning in Indonesia. New insights demand investigation of the processes of decision-making, formal and informal planning practices, the socio-political background, and the interests and perceptions of multiple key stakeholders in transport and climate change governance. These elements of the governance mechanism are taken place in the context of MLG, including international, central, provincial, and city government, which need to be explored. The critical approach is to locate types of powers and legitimacy concerns that might exist at each of these levels of government and during the governance processes. The central theme of this research is to investigate vertical and horizontal relationships among different actors and policies related to BRT systems development. The case study research approach and methods for data collection and analysis are explained in the following sections.

3.3. Case study approach and selecting the case study

This research adopts a case study approach. This approach provides flexibility of research design that allows intrinsic and instrumental data and narrative to emerge naturally (Yin, 2012). It also provides a detailed roadmap for designing the research prior to the fieldwork to validate the case study under investigation. According to Yin (2009), a case study is “an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (p.18). The case study is appropriate for exploring the policy tensions that emerge in the governance of urban transportation and climate change policies. It helps to investigate policy decisions in specific cities in depth and interprets events and actions taken by actors involved in the policy-making process (David & Sutton, 2011). The strengths of the case study approach relate to the detail of the investigation in understanding the events and the implications of critical situations during the policy-making process. The case study also provides a complementary explanation to understanding overlapping and interrelated phenomena in a specific place (Baxter, 2010). Flyvbjerg (2006) argued that a single case study cannot represent the whole system due to biases present in the case study. Therefore, this research proposes to adopt three layers of case studies to answer the research question.

In the first layer, this research focuses on policy and planning for urban public transport to contribute to global climate change mitigation strategies. Many medium-sized LIA cities face severe urban transport and environmental problems, as well as having limited national and international attention, although medium-sized cities received recent attention from the Clean Air Initiative for Asian Cities (CAI-Asia, 2009) and the 2014 IPCC Report on Climate Change (IPCC, 2014). The significant numbers of medium-sized cities with a population of more than two million people is the dominant feature in LIA cities. The number of such cities increased from 194 cities in 2000 to 288 cities in 2025 (Cohen, 2006). These cities are growing very fast and have a tendency to follow the urban transport development pattern and policies of big cities/metropolitan areas (Dimitriou, 2006). Most medium-sized cities in LIA are located in low-lying and coastal areas (H. Blanco et al., 2009; Fuchs et al., 2011; WWF, 2009) and therefore are vulnerable to the impacts of climate change (Fuchs et al., 2011; Seto, Sánchez-Rodríguez, & Fragkias, 2010). Bandung and Surabaya are representing LIA cities of having taken initiatives in promoting public transport solutions of European design in these cities. The involvement of multiple actors is at different levels to overcome transport and environmental problems including international development agencies. The selection of Bandung and Surabaya is based on their progress with BRT projects, which is part of the third layer of the case study.

In the second layer, this research selected medium-sized cities, Bandung and Surabaya as case studies to represent medium-sized LIA cities. The selection is based on their important roles to the national economic growth, while having main problems with their initiatives in promoting public transport solutions in these cities. The problems are associated with the heavy involvement of multiple actors at different levels to overcome transport and environmental problems. Both cities have certain intrinsic values, such as the historical cities, socio-cultural context, economic and demographic conditions, political leadership characteristics, and specific local circumstances that enrich and produce insightful knowledge for understanding the causes of multi-level policy tensions. The research produced from these case studies can help to overcome multi-level tensions in other medium-sized LIA cities.

The third layer of the case study selected BRT development for empirical investigation. Public transport is considered important in role in achieving sustainable urban development goals in Indonesian cities due to a high rate of urbanisation and motorisation (Firman, 2009a; Satterthwaite, 2006). There are three main reasons for selecting BRT development.

First, BRT is a popular policy being transferred globally as a solution to transport and environmental problems. For example, global actors praised the Ahmedabad and Jakarta BRT due to their transport and environmental impacts. The Ahmedabad BRT shifted 34% of total commuters from private vehicles to BRT (ITDP, 2010a), while Jakarta BRT has reduced CO₂ emissions by 37,000 metric tons in 2009, which is equivalent to taking 6,800 cars off the road (ITDP, 2010b).

The second reason for selecting BRT is because BRT is supported by international development agencies in their bilateral or multilateral aid programmes. There are more than 167 cities that have built or are currently building BRT projects, including many in South East Asian countries, such as Indonesia, Thailand, Vietnam, and Cambodia. BRT in LIA cities is supported by the international development organisations, central and local government, local leaders, and wider civil society (Cervero & Kang, 2011; Ernst & Sutomo, 2010; Kogdenko, 2012; Rodriguez & Targa, 2004) as a product to reduce transport-related emissions. They need careful investigations.

The third reason for selecting BRT is that BRT system started facing challenges due to the different structure of different cities, urban population density and urbanisation levels. It is interesting to note that despite wide support for and use of BRT systems around the world, only a few are successful (Agyemang, 2015). It is interesting to investigate what kinds of challenges BRT projects are facing in Bandung and Surabaya and how to make these projects successful. These findings contribute knowledge to cities that have and will have a BRT system in place, so that BRT systems can become successful in Indonesian and other medium-sized LIA cities. Therefore, BRT is considered as a representative of a case where multi-level tensions emerge from the problems of transport governance at multi-level structure in many LIA cities, including in Indonesia.

3.4. Research ethics

3.4.1. Ethics and ethical behaviour

This research has involved human participants as one of the elements in its data collection process. Following the guidelines of ethical conduct established by the Massey University Human Ethics Committee (MUHEC) was necessary prior to conducting the fieldwork in August 2013. The formal procedures required by MUHEC were fulfilled, and I was notified that my project was accepted as being low risk (see Appendix 1). Prior to the interviews, participants were informed about the objectives of the research in brief to gain their trust and agreement to participate in the research (see Appendix 4) and informed consent was given (see Appendix 5). Participation in this research was voluntary. Banks and Scheyvens (2014) and O'Leary (2004) suggested that informed consent help to protect the participants' rights by showing their agreement to be involved in the research.

While complete confidentiality is difficult to achieve, I have attempted to focus on the position of the participants and organisations by which they are employed and their roles in the policy and planning development of BRT. This brings benefits not only in terms of concealing the identity of the participants, but also because it can highlight the tensions between different organisations and units involved in the BRT case study.

Ethical research recognises the role of power in undertaking the knowledge production process (Robbins, 2006). Although I gained informed consent from all participants at the central, provincial and city level of government, it is important to protect the confidentiality of participants (Banks & Scheyvens, 2014). This can protect the participants from harm and helps me to gain trust for further investigations in the urban transport policy and planning fields. Therefore, I have presented the results of the direct interviews with the participants by using direct quotation that associates the participants with their responsibilities, rather than their names. However, in other interviews and specific personal communication with other researchers and experts in urban transport policy and planning, their names are revealed. This ethical procedure was used for qualitative data gained during the interviews and personal communication and discussion with the participants.

3.4.2. Research permits in Indonesia

Indonesian law requires researchers to apply for research permits before commencing data collection. Borovnik, Leslie, and Storey (2014) argued that research permission can come from official authorities and from local gatekeepers, which sometimes is complicated and time consuming. From government authorities, I was not able to access government data and conduct interviews with transport-related government institutions directly without applying to the appointed government agencies for research permission. I had to apply to separate government levels, such as East Java Provincial government, Surabaya City government, West Java Provincial Government, and Bandung City government, to gain the needed research permits (see Appendix 2). For research at the national level government, the researcher had to apply for a research permit to the Ministry of Home Affairs in Jakarta (see Appendix 3). During the fieldwork, receiving these formal stamps of approval from the government at a different level is not a guarantee that I gained all the data and information that I needed. This is because data and information availability is associated with different government organisations and the existence of local actors from both formal and informal sectors who also act as local gatekeepers. Banks and Scheyvens (2014) argued that the existence of local gatekeepers may control the researcher and the process of data and information collection. Therefore, I have had to gain research permissions to access both my participants and gain qualitative data for my research.

3.4.3. Positionality and reflectivity

The issues of the research's positionality and ethics are important to discuss in this chapter as suggested by Stewart-Withers et al. (2014). In Indonesia, I work for the West Nusa Tenggara Provincial government in the Regional Development Planning Agency (BAPPEDA). My daily routine is managing the spatial plan for the provincial level government. I have a familiarity with planning laws and regulations in Indonesia. This familiarity has helped to make connections between transport and transport-related policies from cross-sectoral sources. The positionality is reflected in my position as a government officer, which is beneficial for making a connection with participants within government networks. However, the subjectivity in seeing urban transport problems is embedded from a government-mind set or perspective, not from non-government and academic perspectives. I manage this challenge by accepting my position as a researcher

and I was doing my fieldwork to have comprehensive data in understanding the process, relationships, and interactions among multiple actors in urban transport policy and planning.

Scheyvens, Scheyvens, and Murray (2014) argued that positionality is also associated with 'insider' and 'outsider' notions that may influence the fieldwork practices. McLennan, Storey, and Leslie (2014) also argued that language can create barriers in doing fieldwork successfully. In my case, I was doing fieldwork in my own country, where I can be considered as an insider. There are no language issues because I am a native speaker of Bahasa Indonesia and also speak other local languages in Indonesia (such as Bahasa Sasak, Bahasa Bima/Mbojo), which enabled me to understand the content and translate it into English. There is no conflict of interest between me and the subject under investigation. However, from the case study locations, Bandung and Surabaya, I was an outsider, because I came from a different provincial government, West Nusa Tenggara Province. My professional experiences help to highlight some research insights and build my intuitions, particularly from my interactions with spatial plan development for transport planning and other non-transport related policies.

In terms of reflectivity, I was concerned that participants would only inform me about partial aspects, rather than whole stories. This is due to their perspective on the research under investigation about the low performance of BRT development in both cities. Differences are found in the information provided by government officials and local transport experts who have different interests in relation to the research under investigation. The relationships between the researcher and participants are equal (Dowling, 2000). However, I have limitations in gaining the whole stories from participants, especially research with the elite and powerful actors at hierarchical government levels. Scheyvens et al. (2014) argued that "gaining access to an elite group is often difficult" (p.201). During the fieldwork, I managed to interview the Mayor of Surabaya, by using my informal network that is well-known to the Mayor, but only for less than 20 minutes. In Bandung, the previous Mayor who dealt with the BRT project was in prison because of corruption charges and hence was not contacted for this research.

3.5. Data collection methods

I collected data from policy and planning documents, semi-structured interviews and media news and coverage as data for analysis. The main aim of collecting different sources of data is to enable triangulation (Begley, 1996; Bekhet & Zauszniewski, 2012). This is beneficial for confirming findings, gaining comprehensive data, generally increasing the validity of the studied phenomena. This research applied data and analysis triangulation. Data triangulation means the collection of data from two case study locations; analysis triangulation means the collection of analysis from various different sources (Begley, 1996). The different sources of data also help the researcher to understand the context of the case study to interpret comprehensively the events and actors involved. The details of these data sources are as follows:

3.5.1. Policy and planning documents

The sources of policy and planning documents consulted in this research include:

- Government policies and planning documents at various levels of government, including laws and regulations related to transport, climate change, and transport-related policies, such as transport master plans, spatial plans, climate change action plans, organisational reports, Memoranda of Understanding (MoU) between the central government and the city government, annual financial reports, and feasibility studies for BRT projects in Bandung and Surabaya.
- National, provincial and city statistics on the transport sector were explored in this research to interrogate the metric data to support the qualitative data presented by the interviewees.
- The country profile strategy of Indonesia from the World Bank (WB), the Asian Development Bank (ADB), AusAID, GTZ and other bilateral/multilateral agencies.
- Standard BRT guidelines formulated by GIZ and ITDP as well as BRT progress reports, to understand design requirements and challenges in BRT planning and implementation.
- Recent research on BRT success and failure stories from academics, research centres, and public, private and community organisations, both in Indonesia and overseas, reporting to Indonesian cities.

All these documents were very useful in shaping the understanding of the context of urban transport problems in LIA cities. These documents helped me to understand how the central government in Indonesia intended to manage transport problems, and the responses of city level government. McLennan and Prinsen (2014) suggested that the context and purpose of producing these policies and planning documents must be considered. Therefore, all these documents were reviewed carefully to find the objectives, targets, strategies, tactics, resources allocated or desired, institutional arrangements, and roles and responsibilities of policy actors in a multi-level policy environment.

3.5.2. Semi-structured interviews

Semi-structured interviews were used in this research. The selection of participants is based on their involvement in the case as suggested by Schwandt (2001). Prior to the fieldwork a research interview guide was prepared to express the types of questions put to the participants according to their organisation and relevance to various policies and BRT projects (see Appendix 6). While this guideline is important, during the interviews not all key aspects were explored due to time constraints and the availability of data and information to support the interviews.

The semi-structured interviews were divided into two sections. *First* section was started with the semi-structured interviews with officials at the provincial and city level of government in Surabaya and Bandung. The semi-structured interviews were started in Surabaya City from late August to mid-September 2013. These interviews were targeted at officials from both government and non-government institutions in East Java Province and the Surabaya City government. Furthermore, the semi-structured interviews were continued to Bandung City from mid-September to early November 2013.

These interviews were targeted to officials from both government and non-government institutions in West Java Province and the Bandung City government. Individuals contacted came from a range of government agencies, the private sector and non-government organisations in Surabaya and Bandung and included academics, experts, politicians, and workers in the media. These policy actors were interviewed based on their capacity and involvement in the BRT development projects, with regard to their authority and influence in decision-making processes. Some interviews were less than 20 minutes,

due to time constraints, and the planned time for conducting interviews were coinciding with peak periods when some infrastructure projects were under construction and needed careful attention. The interviews were conducted in the offices of the participants, during the conferences/roundtables/seminars that the researcher was invited to attend, and in their houses.

The *second* section, the researcher conducted semi-structured interviews in Jakarta with central government officials and international development agencies from early November to the end of December 2013. These officials have a different working culture compared to officials in provincial and city level government. Comments and inputs from initial findings about BRT development projects were mentioned to the central government officials, and to the researcher's surprises, some comments and inputs from local level government interviewees were reinterpreted, negated, or rejected by the central government officials and international development agencies experts. This research was started with input from city level government officials because of the importance of city government in undertaking the BRT projects and included observation of the fieldwork site to understand the context of the problems and events that happened before and after the policy and planning for BRT projects.

More than 50 people were contacted to get in-depth information, conduct formal semi-structured interviews, and engage in informal chat during the fieldwork. Most formal interviews were recorded in Bahasa Indonesia language and ranged from 30 minutes to 1.5 hours. However, some participants did not feel comfortable being recorded; in such cases notes were taken to keep a record of the information for further analysis. Using digital recording affected the psychology of the participants in revealing information about BRT development projects. Some participants asked for comments to be deleted or asked that the tape recorder be turned off when certain influential people and institutions were being mentioned. A detailed list of the participants interviewed in Surabaya, Bandung and Jakarta is presented in Appendix 7, Appendix 8, and Appendix 9 respectively. Stewart-Withers et al. (2014) describes this reality as one of challenges in undertaking qualitative research, which depend on what people think, feel or believe toward certain events in their life.

3.5.3. Experts' connections and views

Views from international and local transport planning experts on BRT projects were considered in this research. This is to ensure that the interpretations of meanings embedded in the case study are aligned to the science of urban transport. The views of experts are used as resources or external validation for interpreting the research findings. The experts were contacted by email, Skype and in short discussions in their offices and during the conferences, workshops, and seminars that the researcher attended during and after the fieldwork.

The researcher had a chance to discuss public transport issues in Indonesia with Robert Cervero from the University of California, Berkeley, at the 2nd Planocosmo Conference at the Institute of Technology Bandung (ITB). Some well-known authors in the transport and MLG theory in Europe, such as Greg Marsden, were also contacted by email communication to discuss about the governance problems in multi-level environment. Sunniva Sandbukt, from the United Nations Environmental Programme (UNEP), who undertook research on a BRT project in Bali, was also contacted.

Among local transport experts, well-known academics/researchers from Indonesian universities in Jakarta, Bandung, Yogyakarta, and Surabaya, such as Yayat Supriyatna, Miming Miharja, Ofyar Tamin, Wahyu Herijanto and others, were also consulted to gain their knowledge to enrich the findings of this research. Some authors focus on the decision-making challenges in the decentralisation era, while other authors focus on the challenges of economics, social issues, the environment and the politics of urban transport systems in Indonesia. Specific studies of BRT projects were mostly limited to the technical side of the BRT projects (the 'hard' side) and less information was available on the institutional and political side of the BRT projects (the 'soft' side). One author interviewed, who has a civil engineering background, questioned the validity of this research. This is an interesting view that reflects that certain professionals see the solution to urban transport problems only from an engineering perspective and do not consider the importance and values of transport for the environment. The comments and informal chat of external experts were further incorporated and integrated in the data analysis.

3.5.4. Media data

Other sources of qualitative data regarding the case study of BRT development projects in Bandung and Surabaya were found in the comments and statements of other key stakeholders in the newspapers, both at national and local levels. Newspaper articles at central (Kompas, the Jakarta Post, and others), provincial and city level government (Pikiran Rakyat, Jawa Pos, and others) were considered for analysis. Newspaper statements enter the public domain, and are considered as general knowledge. Even though the degree of truth of the statements is varied, based on the interpretation of the journalists and the newspapers' editors, these qualitative data can nevertheless contribute to reporting specific dates of events within the progress of specific BRT projects, as part of the historical context of the case. The newspapers also mentioned names and positions of the policy actors, which is helpful when reconstructing the process of decision-making for BRT projects, especially the crucial moments in the stories of BRT projects' progress. This enriched my knowledge of the case study under investigation. These sources of data are considered as outside the scope examined in determining ethical conduct as it is freely available to the public. However, the use of the data in this research was highly filtered as to ensure that the quality of the research was not negatively affected. This is aligned with what McLennan and Prinsen (2014) have argued that the collection of archival, textual and virtual data provide qualitative data for my research , but also pose issues of access and ownerships during the fieldwork.

3.5.5. Fieldwork reflections

Desktop study was conducted in New Zealand prior to undertaking the fieldwork, including a website search of different government organisations. However, the reality in the fieldworks was entirely different and required continuous adjustment and discussion with supervisors over Skype. The first fieldwork shock was the news that the BRT project in Surabaya had been rejected, without knowing of any formal statement. The researcher had thought of changing the case study to Semarang, in Central Java Province, where a BRT project was being implemented. However, after consultation with supervisors, it was decided to keep Surabaya to explore in the list as it seemed that the investigation would become very interesting in terms of the reasons for which the Surabaya government rejected the BRT project. From this experience, the researcher learnt that Internet information in developing countries may not be able to convey the reality on the ground.

Fieldwork helped the researcher to discover the problems of her own country by understanding the context, meaning and interpretation of the problems.

The semi-structured interviews were very useful in undertaking this qualitative research. Problems and opportunities are communicated directly and indirectly by particular actors/stakeholders who involve in the BRT project. From government networks, the researcher has access to participants, both individual and institutional. The snow-balling method was used to gain a wide audience and to target the key stakeholders (Schwandt, 2001). However, not all participants are known to the researcher, which ensured the case study investigation was free from specific values being promoted in this research. Many lessons were learnt in approaching participants, such as doing so through the existing networks and circles of friends, and using the snow-balling methods to gain access to the key policy actors directly involved in the BRT project, who were not known to the researcher before fieldwork began. It was learnt that gaining access to interview participants among higher government officials is made easy through informal communication through a contact person who has influence at the city level, rather than through a formal letter to their offices. In fact, this has suggested the possibility that the formal planning processes for transport decision-making may be influenced by informal practices and networks. In conducting the interviews with officials in very high positions, good language skills are required to formulate the wording of questions to get the right messages across and avoid the negative connotation of the phrase “multi-level policy tensions”. The semi-structured interviews provided a platform for the researcher to experience living in the world of the participants and to see the context of the research from their perspectives.

During the fieldwork, various responses indicated the variability of participants. When the researcher explained the research title, aim, objectives and expected outputs, some participants were enthusiastic, but some others were sensitive during the interviews. The title “multi-level policy tensions” was associated with a negative meaning that would reveal problems within a government agency, which made the officials sensitive. The negative implications of the wording of the research topic provide lessons for other researchers in the social science field: when dealing with participants, avoid any word that has a negative connotation. In this research, one of the key officials at the central government ministry declined to be interviewed by the researcher due to the sensitivity

of this research. Other participants who have dealt directly with this official mentioned about the organisational working styles, which protect the good image of its institution. Therefore, negative association to the performance of this agency is threatening and should be avoided by any means. However, those who were enthusiastic about this research saw the originality of the ideas in examining the causes of multi-level policy tensions in transport and climate change governance. They also expected the academic contribution in the research findings would improve policy development and planning practices for promoting public transport in Indonesian cities. After the five-month fieldwork, the researcher returned to New Zealand for data analysis and writing up.

3.6. Approaches to data analysis

All the data from the semi-structured interviews were transcribed by two local transcribers, who have no connection with the BRT development projects in Bandung and Surabaya. These transcribers were also requested not to reveal the names of the persons in the recorded interviews. The transcripts of these interviews were made available in Bahasa Indonesia to protect the originality of the ideas and arguments mentioned by the participants. Certain expressions in the language used by the participants reflect certain underlying meanings that can only be grasped during the real interviews. When reading the results of the transcripts, I can quickly recall the participants' intended meanings.

Stewart-Withers et al. (2014) argued that analysing qualitative data requires four different stages started from data collection, data organisation, data coding, and theory development. Reading the transcripts and listening to the recording again and again is a time consuming activity, but this activity allows the themes to emerge and link together in a structured way. Although it was not obvious at the outset, due to complex interactions between various ideas and policy actors' actions, the capacity to classify and interpret data with new meanings became obvious over time. It was the sole responsibility of the researcher to read and reread all the transcript interviews data and translate them into English for use as direct quotes in this research. The researcher ensured direct quotes were translated from Bahasa Indonesia to academic English language accurately, without losing all the essential meanings during the translation. Switching language may have some impacts on the meaning of the translation, including meaning being reduced, overstated or not expressed appropriately, but care was taken that meanings were not lost.

This research employs four interrelated analyses: policy document analysis, institutional analysis, stakeholder analysis and discourse analysis. According to Yin (2011), an established process of qualitative data analysis includes several activities such as compiling, disassembling, reassembling, interpreting, and drawing conclusions on the main themes of the study. For case studies, interpretation can be in the form of describing the case and its context, using direct interpretation, and presenting the case with narratives, tables, or figures (Creswell, 2009). The results of these analyses are combined to interpret meaning and produce some important insights pertaining to the causes of multi-level policy tensions in transport and climate change governance.

3.6.1. Policy document analysis

Policy document were analysed to investigate policy tensions. Before doing fieldwork, I analysed transport and climate change policies at the central, provincial and city level of government that are available online. During fieldwork, I also collected policy and planning documents that are not available online. Theorists in policy analysis refer to this process as “the development and application of a variety of social-scientific insights to help resolve public problems via concrete policy interventions” (Hajer, 2003, p. 181). Policy analysis consists of an examination of the policy process and the contents of policy developed in specific political settings (Hajer, 2003). Therefore, this research particularly explores the policy inputs made by various actors, their formal and informal networks, and the communication patterns and political dynamics existing in the case study cities. The communication patterns illustrate the government’s role and responsiveness along the continuum of state-society relations in public policy formulation (Haider, Mcloughlin, & Scott, 2011). This research seeks to observe how policy decisions were taken to approve the planning and implementation on BRT development projects in a multi-level government hierarchy. Types of policy and planning documents and data needed for this research has briefly mentioned in section 3.5 about policy and planning documents.

3.6.2. Institutional analysis

This research identifies formal rules, regulation, and legislation at central, provincial and city government levels and traced the norms and values of particular organisations by conducting semi-structured interviews. Institutional analysis constitutes the

understanding of norms, rules, and regulations in the policy-decision making processes for transport and climate change in Indonesia. According to Ostrom (2011), institutional analysis emphasises the importance of formal rules and informal norms, and values in formulating policies. Norms and rules represent beliefs and regulate the actions taken by policy actors.

Data for institutional analysis includes regulatory framework at national and subnational government levels. These regulations set the roles, responsibilities, guided interactions among government organisations and how these organisations interact with non-government organisations and public. For example, law is having a higher position as a combined agreement between the executive and legislature at the central government level and directly influence other regulations at subnational levels. The Government or Presidential Regulation is mainly in the domain of the executive at national level, which does not require agreement from the legislature at national level.

Networks in policy formulation refer to ‘the relationship between processes of interest intermediation and their impact on policy-making outcomes’ (Fawcett & Daugbjerg, 2012). These networks can be either formal or informal or a combination between formal and informal relationships. Networks act as ‘a useful tool for analysing the formally constituted partnerships but especially the influence of informal networks and resource mobilization’ (Armstrong & Wells, 2006, p. 871). Tracing networks help to map out discursive knowledge, and social learning in different actors (Hudalah et al., 2010).

The source of funding for BRT development projects is also part of institutional analysis. Variations in funding capacity among policy actors determine the power of organisations. Therefore, this research explores funding sources for BRT planning, construction, operation and maintenance. This research also investigates the central government and international development agencies’ funding criteria for BRT projects. This is important because BRT in Jakarta was supported by the USAID and the Institute for Transportation and Development Policy (ITDP) in its initial phase (Ernst & Sutomo, 2010), which may compel other governments to fund the remaining part of this project. Therefore, funding structure and mechanisms from international development organisations and national, provincial, and city government were investigated in this research.

3.6.3. Stakeholder analysis

This research used stakeholder analysis because multiple actors from government and non-government need to be identified, who involve in policy-making, plan-making and policy implementation at central and local government levels for undertaking BRT projects in Indonesia. This analysis helps to correlate the nature of their roles with the degree to which they influence policy decision-making processes (Brugha & Varvasovszky, 2000). The degree of their influence is determined by the source of power and mechanism of power that these actors possess. Stakeholder analysis is important for identifying key stakeholders and the general public that will be affected by the implementation of a BRT project implementation (ITDP, 2007). These actors consist of policy-makers, political leaders/politicians, urban planners, transportation planners, finance officers, transport experts, consultants, media editors, and private and public transport business owners, who are involved in transport decision-making formally or informally.

This research focuses on both central government officials and local level stakeholders who supported or resisted BRT project in Bandung and Surabaya. Local stakeholders might be approached through individual contacts and networks to get their perspective. This analysis covers experiences of, and perspectives on, how various actors at local levels advance their arguments and reasons during BRT planning and implementation process. The legitimacy of any policy is based on the inputs of stakeholders in the policy process (Fawcett & Daugbjerg, 2012). This research not only identifies local actors, but also analyses their input in planning and implementation of the BRT projects in Bandung and Surabaya.

3.6.4. Discourse analysis

This research used discourse analysis to explain how language and texts were used to advance arguments in favour of or against BRT projects. Discourse analysis helps to explicate the powerful role of language in policy and politics. Discourse is important because it can influence the setting of policy direction. Policy decisions and policy outcomes are determined by the existence of evolving discourses for exercising the power of certain actors (Hajer & Versteeg, 2005; Jacobs, 2006). Feindt (2005) discovered that discourse matters in environmental policy decision-making in which language and texts

are crucial to analysis of concept, knowledge and meaning of public policy. Through language and texts analysis, the understanding of social construction and power relations during policy formulation processes is enhanced. In addition, the use of media as public domain can influence the decisions and public opinion played a significant part. Discourse analysis leads to the discovery of discursive power in the use of language to advance specific policies and projects (Jacobs, 2006; Sharp & Richardson, 2001). This research identifies prominent discourses by analysing language and text from published documents, newspaper articles and headings and interview data to assess the impacts of the discourses in advancing or rejecting the BRT projects in the selected case study cities. In short, policy document analysis, institutional analysis, stakeholder analysis and discourse analysis were used to interpret data and develop meaningful findings.

3.7. Research limitations

The research's limitations include the technique used in the qualitative research and the case study approach, the data collection process, and data analysis methods. The selection of qualitative research has its own limitations, which include the level of subjectivity of the researcher (Krefting, 1991). Qualitative research relies heavily on the ability of the researcher to assign meanings and have insight for knowledge production based on the existing facts and evidences (Ormston, 2013). To a certain degree, this subjectivity is embedded during the selection and analysis of data during the case study investigation. However, critical questions from the supervisors assisted the researcher to approach the case study objectively and to provide a valid rationale in the selection of the data and in analytical processes.

The case study approach has limitations in terms of the transferability of research findings to other medium-sized LIA cities. There is a limitation that the two case studies may not fully represent the success and failure of BRT systems currently implemented in 23 cities in Indonesia. Each city has a unique history and socio-political circumstances and therefore findings from Bandung and Surabaya should be carefully considered before being translated to other Indonesian and LIA cities. However, despite this limitation, the case study approach provides a rich explanation of how multi-level policy tensions occurred in Bandung and Surabaya, to answer the research question of this research.

The quality of, and access to, data is one of the main challenges in undertaking research in developing countries. The ability of the researcher to access specific data for government spending on BRT by the central government and city governments is limited. This specific data is related to total amount of budget spent for project preparation, construction, operational and maintenance of BRT project. The specific public funding and budget allocation were part of internal government information, which is not available to the public. However, this researcher gained access to sufficient quality data to allow for good analysis. This is because of her background as a government officer, her informal network, and the assurance that data would be used for academic research purposes.

Fieldwork was conducted over five months in two selected case study cities of Indonesia that introducing BRT in their urban transport system, namely, Bandung and Surabaya. In addition, the interviews with central government officials and officials from international development agencies and with national level NGOs were conducted in Jakarta, the capital city of Indonesia. Challenges in relation to participant interviews emerged during the fieldwork, such as the unavailability of key participants at a time set aside for fieldwork. Some resistance to answer questions about in-house practice also emerged. However, the researcher made sure that such limitations were overcome by connecting with a person/expert at a similar level as the participant in that organisation originally scheduled for interview. This strategy overcame these limitations.

The English translation of interview and media data from Bahasa Indonesia to English might lead to misinterpretation or the assigning of inappropriate meaning to the words. However, the researcher is a native speaker of Bahasa Indonesia and care was taken that such meaning was not be lost. Discussion with native English speakers was organised as a strategy to ensure that the meaning written in the quotes is not misleading and is understood clearly.

The scope of the research to reveal the causes of policy tensions had to be limited due to limited resources and limited time for the completion of this research. This research was unable to provide solutions to the issues of multi-level policy tensions. These potential solutions may be needed for practical planning practice that can be applied directly in the work place. However, the research findings in identifying the causes of policy tensions

are expected to provide useful insight to enable institutional development to improve public transport programmes in Indonesia.

3.8. Summary

In conclusion, this research adapts a qualitative research and case study approach to understand multi-level tensions in urban transport policy and planning in the development of BRT in Indonesian cities. While there are some limitations in undertaking the research, various data collection methods and approaches to data analysis can help explaining the emerging multi-level tensions in BRT development. The next three chapters use the data collection and analysis methods described in the previous section to investigate types and causes of tensions that emerged during the BRT development and implementation stages in Bandung and Surabaya.

Chapter 4 Transport planning and policies in Indonesia

4.1. Introduction

This chapter identifies key actors involved in making transport and climate change policies making in Indonesia. The second section critically reviews policy documents prepared under the transport, climate change, development planning, energy, spatial planning, and economic growth sectors to identify the rationale for promoting the Bus Rapid Transit (BRT) in Indonesian cities. Policy documents prepared in the decentralization era (after 2000) are selected for the review. This review provides a background to analyses the BRT proposals in Bandung and Surabaya in Chapters 5 and 6.

4.2. Transport and climate change decision-making in Indonesia

Transport decision-making in Indonesia involves both government and non-government actors. This section identifies their roles and responsibilities to understand the complex process of transport and climate change policy making. Figure 4.1 explains the structure of government in Indonesia. At the central government level, the President and vice-president works together with the National House of Representative (DPR) to formulate laws and regulation. At the provincial level, the Governor and vice-governor along with the Provincial House of Representative (DPRD-Province) set the direction of regional development for achieving national development goals. At the city/district level, the Mayor and vice-mayor works together with the City House of Representative (DPRD-City) as executive and legislature of local government.

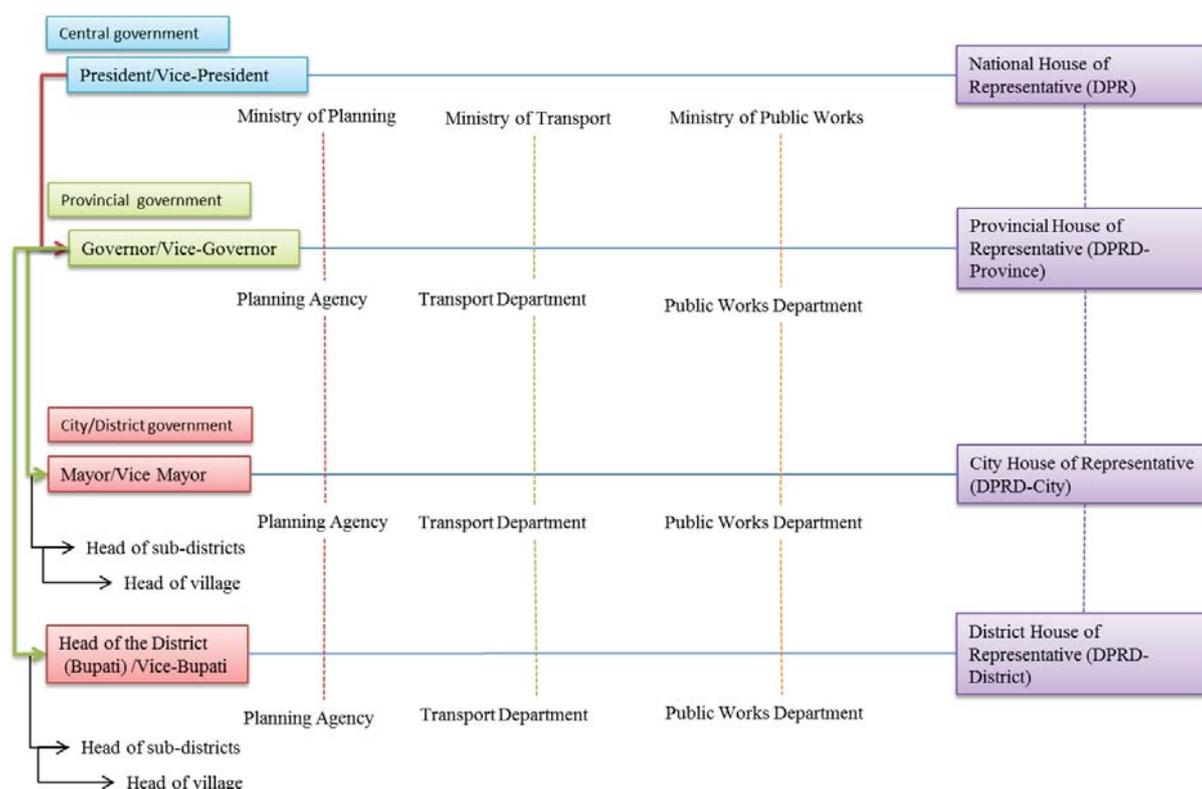


Figure 4.1 : The structure of government in Indonesia

Source: Author

Note: The horizontal lines show the connection between executive and legislature at each government level, as the executive government can undertake development programmes and activities only with prior approval by the legislature for the use of public funds

4.2.1. Government organisations

The central government organisations (line Ministries) in Indonesia formulate transport and climate change policies as per the legislation, develop regulations and implement projects. The Ministry of National Development Planning (BAPPENAS) is responsible for setting the direction of the national development plan based on the vision and mission of the elected President. BAPPENAS prepares long-term (20 years), medium-term (5 years) and annual plan (1 year) plans for Indonesia. BAPPENAS sets the agenda for climate change concerns particularly in bringing together all key sectors that dominantly contribute to GHG emissions, including transport. BAPPENAS decides, in close collaboration with the Ministry of Finance (MoF), the budget allocation for transport programmes nationally. The policy level discussion with the House of Representative (DPR) is supported and facilitated by BAPPENAS. BAPPENAS also has the key role for coordinating Indonesia's development needs in transport and climate change issues during the initial consultations with international development agencies. Table 4.1 shows

government agencies and their responsibility for managing transport and non-transport related policies in Indonesia.

Table 4.1 : Government agencies and their responsibilities

Organisation	Role and responsibility
Ministry of National Development Planning (BAPPENAS)	<ul style="list-style-type: none"> To formulate and develop national development planning as a guideline for central, provincial and city government To control and review regional development planning To coordinate and control national and international programmes To decide budget allocations for programmes together with the Ministry of Finance (MoF)
Ministry of Transport (MoT)	<ul style="list-style-type: none"> To prepare national transport policy that provides guidelines to provincial and city governments To manage the operation of public transport facilities and infrastructure
Ministry of Public Works (MoPW)	<ul style="list-style-type: none"> To formulate national policy for public works infrastructure including roads, and bridges To develop and construct public works infrastructure projects
Ministry of State-Owned Enterprise (MSOE)	<ul style="list-style-type: none"> To develop national policy for transport infrastructures operations To manage the operation of national transport infrastructure and public transport services
Ministry for Environment (MoE)	<ul style="list-style-type: none"> To develop national policy and guidelines for environmental management and pollution control To control and review environmental problems
National Council on Climate Change (NCCC)	<ul style="list-style-type: none"> To provide guidelines on climate change in Indonesia To coordinate and negotiate with international agencies dealing with climate change
Ministry of Home Affairs (MoHA)	<ul style="list-style-type: none"> To coordinate national, provincial and city government programmes and activities for development To supervise national and regional government to improve development practices
Ministry for Economic Affairs (CMEA)	<ul style="list-style-type: none"> To formulate national economic policy, planning and implementation procedures To coordinate and synergise economic policy among line ministries that relates to urban transport policy
Ministry of Finance (MoF)	<ul style="list-style-type: none"> To formulate national policy on economic growth To allocate budget for road and public transport infrastructure projects together with Ministry of National Development Planning (BAPPENAS)

Source: Ministry for National Development Planning ; Ministry of Public Works ; Ministry of Home Affairs ; Republic of Indonesia (2014); Republic of Indonesia (2014)

The Ministry of Transport (MoT) is responsible for traffic and roads transport regulations, laws, and management. The MoT prepares transport policies for air, sea, and land transport sectors in a document called as the National Transportation System (SISTRANAS). SISTRANAS aims to provide policy directions for transport system integration and prepares guideline for the transport planning system at the provincial government (TATRAWIL) and local government (TATRALOK) levels. However, after the enactment of a ministerial regulation (MoT Regulation No. KM 49/2005), the MoT lost its power to integrate transport modes and develop multimodal transport systems.

This is because ministerial regulation has less power to influence the decision-making as compared to the law as decided by both the President and the House of Representative (DPR) in Indonesia. The Directorate General of Rail and the Directorate General of Land Transport, under the MoT, are competing for advancing rail-based and bus-based mode of transport. The Directorate General of Rail is responsible for supervision of PT KAI, a state-owned enterprise for managing railway operations. The Directorate General of Land Transport is responsible for supervision of DAMRI, a bus-based public transport services, at the provincial and city levels. DAMRI operates buses in the major cities and inter-city corridors, competing with the private operators of public transport.

The Ministry of Public Works (MoPW) plans and execute the national road network based on the road hierarchy and national spatial planning. The road hierarchy refers to central government's responsibility for the national roads and provincial and city/district governments' responsibility for provincial and city/district roads. Central government has authority for the planning, construction, and maintenance of national roads and for setting the directions and regulations for spatial planning. Even though these roads are placed in provincial and city administrative boundaries, the central government controls their functions. Directorate General of Highways (DGH) of MoPW has authority for managing and controlling the national roads network, in collaboration with BAPPENAS, MoF, and MoHA. However, the decentralisation era has resulted in more opportunity for provincial and local government to get involved in road building processes (Firman, 2009b; Zusman & Sutomo, 2010). In parallel, the Directorate of General of Spatial Planning of MoPW has controlled spatial arrangements at central, provincial and city/district government levels.

The Ministry of State-Owned Enterprises (MSOE) has a role in administering state-owned enterprises, such as the toll-roads and the railway. The MSOE has a distinct status as a contributor of transport revenue to the government budget. However, the Toll-Road Authority Board (BPJT) (under the MoPW) and PT KAI (under the MoT) manage the operation of toll-roads and railways respectively.

The Ministry of Environment (MoE) takes responsibility for drafting, formulating, and communicating climate change policy and the climate change actions plan. The MoE prepared Indonesia's climate change policy and action plans to fulfil international

commitments. After two international events, COP-13 in Bali in 2007 and the G20 meeting in Pittsburgh in 2009, the Indonesian government committed to reduce 41% of total emissions by 2020. Currently, 23% of CO₂ emissions are generated by the transport sector, of which road transport represents around 90% of CO₂ emissions (Ministry of National Development Planning, 2010a). Due to that emission reduction commitment, the MoE has become the focal ministry to deal with transport and climate change impacts.

A National Council on Climate Change (NCCC) was established in 2008 in response to the increasing concern about climate change and the lack of institutional development for managing the issues of climate change. The President established the National Council on Climate Change (NCCC) through President Regulation number 46/2008; the NCCC is chaired directly by the President of Indonesia. The Council has vice chairs in both the Coordinating Ministers for Economic Affairs and for People's Welfare. NCCC members are from the ministerial representatives (17 Ministries) and the Head of the Meteorological and Climate Agency. The NCCC has a mandate to develop and coordinate national policy, strategies, and activities among line ministries, along with monitoring and evaluation of climate change progresses. The NCCC acts as a focal point for international climate change related activities (ECN, 2011). The NCCC provides direct advice to the President, which places the MoE in a less powerful position (Resosudarmo, Ardiansyah, & Napitupulu, 2013). The daily operational of the NCCC is led by a Secretariat and five divisions, combining government officials, NGOs, and business sector.

The Ministry of Home Affairs (MoHA) is responsible for coordinating national development plans with provincial and city level government departments. MoHA formulated the GHGs inventories to implement the National Climate Change Actions Plan (RAN-GRK) after Presidential Regulation No. 71 was issued in 2011. MoHA documents outline procedures, methods of counting GHGs inventories, and verification of the results (Ministry of Home Affairs, 2011). MoHA also conducted the evaluation and monitored the performance of provincial and city governments in implementing national development plans and climate change actions plans.

The Coordinating Ministry for Economic Affairs (CMEA) is responsible for organising the national economic development policy, planning, and implementation procedures.

CMEA ensures that the selected programmes (including transport infrastructure investment) for economic development are undertaken and synchronised by related ministries.

The Ministry of Finance (MoF) prepares annual budgets for the country by allocating resources in different sectors, including transport. The MoF considers the inputs and recommendations provided by BAPPENAS, MoT, and MoPW, but final allocation lies with approval by the House of the Representative (DPR). Lobbying between ministries and the DPR for additional budget allocations to support development programmes becomes a common phenomenon.

There are several overlapping responsibilities between the MoE, BAPPENAS, the MoF and the NCCC, that makes coordination and collaboration difficult among different government organisations. The NCCC competes with the MoE, BAPPENAS, and the MoF in taking up the leadership role in managing climate change issues. DNPI (2009) stated that “The establishment of NCCC is not to replace the role of sectoral/line ministries in the implementation of government programmes under their authority” (p. 14). Wingqvist (2008, p. 11) argued that “the Ministry of Environment has been the focal ministry for climate change, which means that integration with development priorities has been a problem, and has created certain situations where government policies such as a push to expand the use of fossil fuels, work against legislation from the MoE”. The NCCC acknowledges the role of the Ministry of Finance (MoF) as the main port-of-call for formulating financial support for climate change programmes. At the same time, BAPPENAS has a role in collaborating climate change issues in the national development plans and building cooperation between central and local government’s development trajectories. However, policy, planning and implementation of climate change action plans are fragmented among these institutions at the central government level.

4.2.2. International organisations

International development agencies play an important role in transport and climate change policy development in Indonesia. Key policy documents in transport and climate change are formulated in collaboration with these agencies and central government ministries. Issues of climate change, especially the increase of GHGs emissions from the

transport sector, have been identified and highlighted by international development agencies. In 2006, the World Bank has considered the increasing GHGs emissions from the transport sector, but proposed the strategies for transport development in roads (World Bank, 2006a). Key policy documents such as The Indonesia Climate Change Sectoral Roadmap (ICCSR) were a joint-work between BAPPENAS and Germany Technical Cooperation (GIZ) (Ministry of National Development Planning, 2010a). Green Paper Economic and Fiscal Policy Strategies for Climate Change Mitigation in Indonesia was also the result of cooperation between the Ministry of Finance and the Australian Government through the Australia Indonesia Partnership (Ministry of Finance, 2009). GIZ also provided help to the MoT in formulating the National Urban Transport Policy.

The international development agencies supported institutional development by the establishment of the Indonesia Climate Change Trust Fund (ICCTF) (Ministry of National Development Planning, 2009a). The ICCTF office manages the funding from international development agencies. This fund provided financial support to energy conservation, sustainable peat land management and public awareness on climate change projects (Climate Change Fund, 2010). However, no transport projects were fully funded by the ICCTF to this end.

Since the implementation of its low carbon development strategy (LCDS), Indonesia has received substantial technical and financial support from international development agencies. The agencies include AusAID - Australia, GIZ - Germany, ECN - Netherlands, IGES – JICA, DFID - The United Kingdom, CIDA – Canada, Asian Development Bank (ADB), the World Bank, and other non-profit organisations. For example, the Blue-Sky Programme has been introduced since 1992, and has gained major support from the Asian Development Bank (ADB) and Japan Bank for International Cooperation (JBIC). The collaboration with the Energy Research Centre of the Netherlands (ECN) has resulted in policy studies on “Paving the way for low-carbon development strategies” (ECN, 2011). The World Bank promoted low carbon cities to generate economic benefits. Japan International Cooperation Agency (JICA), through the Institute for Global Environmental Strategies (IGES), focuses on cities and low carbon transport development activities.

These agencies also work with provincial and city governments to demonstrate small-scale showcase projects. For example, GIZ launched the Sustainable Urban Transport

Improvement Project (SUTIP) in 2009 to promote public transport in Indonesian cities (GIZ, 2013). GIZ has direct partnership with the city governments of Bogor, Palembang, Surakarta, and Yogyakarta for demonstration projects of Bus-Rapid Transit (BRT).

The international development agencies influence policy direction by providing funding and technical assistance to various Ministries and departments. One of the interviewees stated that

Transport policy in Indonesia is driven by the donor's interests, which make the real planning practices difficult. BRT is the central government policy that is already locked-in with the interests of the donors, without considering the difference among different cities in Indonesia. There is no need to make it compulsory that all cities in Indonesia must have BRT in place.
(Urban transport planner, interview, November 2013)

There is also a complaint that international development agencies and their strategies are not aligned with the central government development goals. In reality, the central government is trying to align its goals with the donors' preferred areas. Overall, international development agencies are influential in setting directions of transport and climate change policies at central and subnational government levels in Indonesia.

4.2.3. Non-government organisations

International development agencies encourage non-government organisations to be actively involved in transport and climate change policies at various levels. Therefore, organisations such as Instran¹, Pelangi², and the Indonesian Transport Society (MTI)³ are actively involved in transport policy at the central government level. These NGOs are involved indirectly in the BRT in Bandung and Surabaya. Their work is based on a contractual basis with the international development agencies. Their staff are also working with international development agencies as local transport experts (Damantoro interview, 2013). These NGOs have branches at provincial government level, which also contribute to local transport policy development.

¹ Instran is an NGO in transport issues, which based in Jakarta and focus on land transport, information about Instran is available at <http://www.instran.org/>

² Pelangi is an NGO in transport, energy and climate change projects, which based in Jakarta and its detail information is available at <http://www.pelangi.or.id/home>

³ Indonesia Transport Society is a non-profit organization that contributes to transport decision-making process in Indonesia and information is available at <http://mti-its.org/>

The private sector is also actively involved in lobbying regarding the direction of transport policy. The Land Transport Owners Organisation (ORGANDA) is a well-known national organization for public transport owners that has branches at provincial and city government levels. ORGANDA must cooperate with the government at multiple levels in setting the routes for public transport, and has demanded for tax reductions for vehicles in order to reduce costs for its operation and maintenance. ORGANDA has to lobby the central government regarding price reductions for public transport in order to protect its members' profit margin. The central and regional governments have the authority to set up travel fares or the cost of public transport services. This fare mechanism does not cover the operational and maintenance costs of the provision of public transport services by ORGANDA. Therefore, ORGANDA demanded tax reductions and a subsidy mechanism be put in place to cover the losses of its members. ORGANDA and the MoT have a strong link in terms of final decisions on transport policy development. Overall, development of transport and climate change policies involves several governments, non-government and international organisations.

4.3. Transport and climate change policies in Indonesia

This section critically reviews transport and climate change policies in Indonesia between 2000 and 2012. The review highlights the underlying assumptions and the policy goals, objectives, and strategies, which could provide background for BRT advancement in Indonesian cities (see Chapters 5 and 6).

4.3.1. Environment and climate change policy

Since 1998, Indonesia has been a signatory to the UNFCCC and the Kyoto Protocol to highlight its commitment to reducing GHGs emissions reduction. In 1999, the Ministry of Environment with support from UNFCCC prepared its First National Communication Plan. However, the focus of this plan was limited to mitigating carbon emissions from the industrial sector. It was predicted that by 2025 growth in the transport sector (3.9% per year) would exceed the growth of the industrial sector (3.4% per year) and require more energy (Ministry of Environment, 1999). Therefore, it was proposed to promote public transport and road pricing to control vehicle emissions (Ministry of Environment, 1999, pp. 1-4). The Plan recognises the poor public transport services in Indonesian cities and places emphasis on increasing the capacity of vehicles and improving comfort to make

public transport attractive. Road pricing and area traffic control systems (ATCS) were considered important for improving the value of public transport. In addition, the technology for the control of vehicle emissions and clean fuels were promoted to improve the environmental performance of the transport sector (Ministry of Environment, 1999).

In 2004, Indonesia ratified the Kyoto Protocol by passing the Law No. 17 in the Parliament (Republic of Indonesia, 2004a). After this enactment, the country became a Party to the Protocol and had access to the Conference of the Parties (COP), which serves as the supreme body of the Convention (Article 13 of Kyoto Protocol).

In 2008, the Ministry of National Development Planning (BAPPENAS) produced a policy document on Indonesia's responses to climate change. This document provided the direction for mainstreaming the climate change issues into the development planning programmes. In the same year, the Indonesian President established the National Council on Climate Change (NCCC) as discussed in the section 4.2.1.

In 2009, the Environmental Protection and Management Law (No. 32/2009) replaced the 1997 Law on Environmental Management. The new law aimed to define clearer procedures and enforcement in protecting the environment (ECN, 2011). However, these efforts were of questionable value due to weak implementation and enforcement capacity (ECN, 2011).

In 2009, the NCCC drafted the National Economic Environment and Development Study (NEEDS) in close collaboration with the UNFCCC. In 2010, the NCCC in collaboration with McKinsey produced Indonesia's Greenhouse Gas Abatement Cost Curve. The document recognises transport as a major contributor of emissions and calculates the GHG abatement cost. The NCCC (DNPI, 2010) is also concerned with land and spatial planning and found that infrastructure decisions in the transport sector determine the future of transport-related emissions. It was found that the road transport sector will grow seven-fold in the years 2005 to 2030 and should prioritise the low-carbon infrastructure development (DNPI, 2010, p. 28). However, low-carbon infrastructure development, such as public transport was not included due to the lack of available data. The document outlined the three priorities for managing climate change challenges related to mitigation, adaptation and data and information development. Transport, which contributed 70

MtCO₂ or 22.4% of total emissions in 2005, is mentioned in the mitigation strategy (p.17). It was proposed to reduce 26% of GHG emissions from the transport sector by promoting public transport (BRT and city train systems), improving transport management and planning and traffic demand management, and integrating land use and transport (p.22).

The Second National Communication on Climate Change Convention document, prepared in 2010 (Ministry of Environment, 2010), categorised the transport sector as a secondary sector for tackling the climate change issues, as compared to agriculture, coastal management, fisheries, energy, and forestry.

The Ministry of National Development Planning (BAPPENAS) formulated the Indonesia Climate Change Sectoral Roadmap in 2010 with the support of NCCC and GIZ. The document aimed to set up a roadmap for integrating and aligning the climate change issues into the national development plans, particularly sectors that are contributing to the GHG emissions. The document discusses transport under the energy sector, and states that 48% of country's primary energy is consumed by the transportation sector, which generates 67 million tonnes of CO₂ (TNA 2009, cited at p.38). Road transport consumes about 88% of total energy in the transport sector and road sector emissions are growing by 8 to 12% annually (p.38). Motorised road vehicles contribute up to 98.8% of total emissions in large cities, including Bandung and Surabaya (p. 38). The policy proposes that mitigation of transport emissions can be achieved by 1) avoiding the need to travel by integrating land use and transport 2) shifting travel to energy efficient vehicles and sustainable modes of transport and 3) improving the engine and fuel technology of vehicles. The road map suggests on three different phases:

Phase I is mainly concerned with building a database, creating information and knowledge management about the impacts of climate change and how each sector contributes to those impacts. It aims to build awareness and capacity, to provide policy direction, and to create development map for key development sectors. It targets line ministries and government officials at the central government level and consultants who work in the climate change field. For the transport sector, the activities in this phase are directed toward information dissemination to local government, reviews of the cities' master plans and identification of the barriers to implementing the master plans (p. 43).

Phase II is focused on the formulation of planning and policy, regulations, and on institutional development processes to integrate development planning with climate change. It proposes that the national government formulate policies for the integration of BRT with existing public transport systems and provides guidelines for developing the BRT system in 23 cities of Indonesia between 2010 and 2014 (p.43). In addition, planning of the development of BRT systems in 23 cities is to take place from 2015 to 2029.

Phase III is directed toward the implementation of plans and programmes as part of the government's annual work plan and the processes of monitoring and evaluation of the implementation of climate change policy taking place.

Due to the BRT proposal, Indonesian cities were selected as examples of best practices for sustainable urban transport at the COP-19 in Warsaw in 2013. However, an official at the Ministry of Transport explains:

... when proposing the elements for sustainable transport to the UNFCCC, I cannot claim that we are going to opt for BRT because BRT's definition is a highly technological design that requires dedicated lanes and other specific requirements. I think BRT is less suitable with high population density and narrow roads present in our cities ...
(Official of MoT interview, November 2013)

In summary, the road map provided the guidelines for the central government ministries to develop database/information, planning and policy process, institutional development, implementation, monitoring, and evaluation mechanisms for BRT development in 23 Indonesian cities. However, the position of BAPPENAS has recently become weak after the Coordinating Ministry for Economy, the Coordinating Ministry for Public Welfare and the NCCC took charge of the Steering Committee (SC) to integrate the planning and policy processes for climate change issues.

In 2011, climate change policy was followed by several programmes under the MoE in urban areas. The Blue Sky Programme was one of the attempts to improve the air quality in the urban areas in Indonesia (Ministry of Environment, 2011). Under this programme, the "Breathe Easy, Jakarta" project was initiated with the help of the US Environmental Protection Agency (EPA). This project comprises air quality monitoring, emissions inventories, and human resource capacity building (EPA, 2011).

In 2011, Presidential Regulation No 61 Year 2011 concerning The National Actions Plan for GHGs emissions reduction (RAN-GRK) (Ministry of National Development Planning, 2011) was enacted. This regulation aims to provide a platform for institutionalised climate action plans prepared by BAPPENAS in collaboration with the MoE, MoF, and UNDP. The plan includes 70 programmes in five sectors, including the transport sector. It was proposed to reduce 26 % of emissions from the energy sector and 41 % from the transportation sector. These targets rely on cleaner fuels, utilisation of clean technologies for transport equipment, and the development of a low emission, sustainable and environmentally friendly national mass transport system. It is also proposed to prepare strategies to reduce the need to travel and to address unnecessary distances through land use management, promotion of non-motorized, public transport, and water transportation services and improvement of the energy efficiency of the existing fleet. The Ministry of Transport, Ministry of Energy and Mineral Resources, and Ministry of Public Works were tasked with this target reduction. Due to part of a Presidential Regulation, RAN-GRK can coordinate the climate mitigation actions plan at both central and subnational government levels. The National Action Plan on Climate Adaptation (RAN-API), prepared in 2012, advances the concept of resilience in all development sectors (National Development Planning Agency, 2012). Infrastructure in transport is a part of the social and livelihood resilience. Since the formulation of the National Climate Change Actions Plan in mitigation (RAN-GRK) and adaptation (RAN-API), it has become compulsory for provincial and city governments to provide and produce climate change actions plan documents (RAD-GRK). So far, 31 provinces have provided a Governor Decree on RAD-GRK completion, one province is in the process (South Kalimantan Province), and 1 province in the finalization process (Papua Barat Province). RAD-GRK focuses on the development of local public transportation, transport fuel conversion (from oil to gas), and transport management.

It was conceived that potential funding for BRT was likely to come from the UNFCCC and non-UNFCCC climate financing instrument (Dalkmann, 2010; UNEP, 2011). Under the UNFCCC, funding is from the Clean Development Mechanism. Under the non-UNFCCC, funding for BRT is from the Clean Investment Fund, which is managed by the World Bank and multilateral and bilateral funding agencies such as the Asian Development Bank (ADB) (Dalkmann, 2010). All international funding is administered by the Indonesia Climate Change Trust Fund (ICCTF) (Ministry of National

Development Planning, 2009a). However, in ICCTF's investment strategy, transport is not considered as the prime priority for getting climate funding. There is another opportunity to receive transport infrastructure investment under the Transport Demand Management (TDM) funding portfolio. Under TDM funding, alongside BRT, electronic road pricing, and parking restraints projects received funding. BRT has been proposed as one of the transport projects which can fulfil the requirements for acceptance as Nationally Appropriate Mitigation Actions (NAMAs). The MoT proposed BRT as part of TDM strategies to NAMAs, which is under the platform of UNFCCC (National Development Planning Agency, 2010). NAMAs require a comprehensive system of measurement, reporting and verification (MRV) of GHGs emissions data, which is a very difficult task due to lack of capacity in subnational governments. The review shows that public transport projects, especially the development of BRT, are a fundamental part of climate change plans at the national level.

4.3.2. National development planning system

The Indonesian planning system started to gain attention in 2004 after the enactment of the National Development Planning System as Law No.25/2004. (Republic of Indonesia, 2004b). The national development planning system aims to formulate and approve the development plans, and mainly comprises long-term (20 years), medium-term (5 years) and short-term (1 year) plans. The Long-term National Development Plan (named RPJPN) is the basis for the Medium-term Development Plan (named RPJMN) and the Annual Development Plan (named RKP). These plans provide guidelines for urban and regional development, and are implemented by the line ministries of central government and provincial and local governments in Indonesia. The RPJMN communicates the political agenda of the elected President, including vision, mission, and development programmes. The RPJMN also formulates a guideline for strategic plans at the ministerial level, and long-term regional development plans (RPJPD) and medium-term regional development plans (RPJMD) at subnational levels.

The first long-term plan, the National Long-Term Development Plan (2005-2025), aims to develop the country so that it is more advanced and prosperous, and more self-reliant, and just (Ministry of National Development Planning, 2010b). The vision emphasises becoming a developed and self-reliant, just, and democratic country. One of the missions

in achieving this goal is to improve planning practices at central government level. The RPJPN is divided into four five-year phases of medium-term development plan (RPJMN).

The National Medium-term Development Plan (RPJMN 2005-2009), prepared by BAPPENAS, was the first plan that adopted climate change issues in the national development agenda. The second National Medium-Term Development Plan (RPJMN 2010-2014) formulated programmes of the President Yudhoyono. The written plan consists of three thick documents, which include the strategy, general policies, a macroeconomic framework, development plans for social life fields, and regional development plans. This plan emphasises increasing the quantity and quality of infrastructure development, including viewing roads as a key priority for economic growth. The plan acknowledges the efforts in the last decade which improved Indonesia's rank from 76 (in 2011) to 67 (2014) in infrastructure competitiveness (World economic Forum, 2012, 2013). In contrast to road development as a key to economic growth, the transport guidelines of the plan focus on promoting sustainable transport. The plan emphasizes formulating a low-carbon development strategy (LCDS) in large urban areas and promoting sustainable transport in Jakarta, Bandung, Surabaya, and Medan. The LCDS promoted "Avoid-Shift-Improve (ASI)" approaches (see Figure 4.2), which include reduction of subsidies on fuel to improve high-quality public transport.

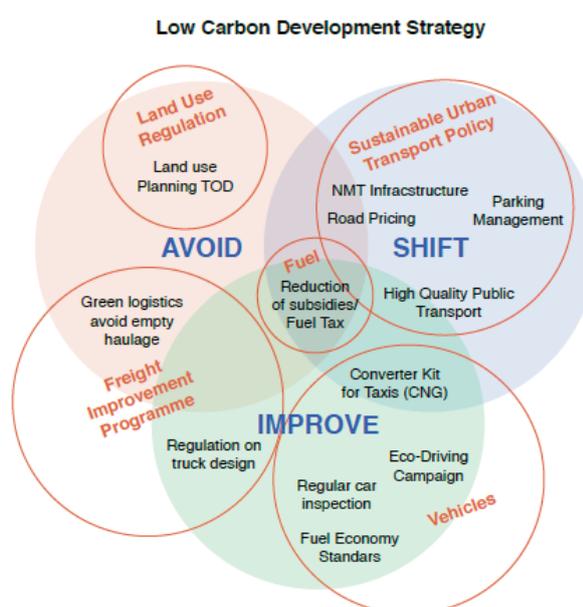


Figure 4.2 : Low carbon development strategy

Source: National Development Planning Agency (2010, p. 82)

During the urban development plan-making process, public participation is promoted in all government levels in Indonesia as part of the regulation based on the National Development Planning Law No. 25/2004 (Republic of Indonesia, 2004b). This form of public consultation is well known as *Musyawarah Perencanaan Pembangunan (Musrenbang)*. *Musrenbang* is conducted during the process for urban development plan annually. However, it has resulted in limited outcomes because of the lack of representatives of local communities to voice their concerns as part of procedural justice and social learning for building community empowerment (Aswad, Heywod, & Susilawati, 2011). *Musrenbang* is started from the village level, which is the lowest part of government structure in Indonesia (see Table 4.2). However, this has not accounted for successful transport projects being proposed for funding allocation at the legislature discussion and negotiation processes. The participatory local planning process is introduced but the performance and outcomes of this process remained unchanged and not free from political influences and domination of certain interest groups of the society. In short, public participation is conducted every year during *Musrenbang* forum, but with limited use to actually accommodate public needs.

Table 4.2 : *Musrenbang* at multi-level government

Government level	Public consultation for development planning	Outcomes of <i>Musrenbang</i>
Village	<i>Musrenbang Desa</i>	Proposed projects and activities at village level
Sub-district	<i>Musrenbang Kecamatan</i>	Proposed projects and activities at sub-district level
City	<i>Musrenbang Kota</i>	Proposed projects and activities at city government (Urban Development Plan)
Provincial	<i>Musrenbang Provinsi</i>	Proposed projects and activities at provincial government (Provincial Development Plan)
National	<i>Musrenbang Nasional</i>	Proposed projects and activities at central government

Source: Author from fieldwork

After the *Musrenbang* process, the Planning Agency at each government level started to accommodate all proposed programmes and activities to draft the development plan for the next financial year. However, the development plans are in a hierarchical nature and each plan is enacted as part of the government regulation. The hierarchy of development

plans is shown in Table 4.3 explaining the time-frame, scale, and level of development plans in Indonesia, along with the budgeting for transport projects. The role of politics within the politicians and members of the House of Representative is controlling and approving public funding for urban transport projects.

Table 4.3 : The hierarchy of development plans in Indonesia

Development Plan	National	Provincial	City/District
Long-term (20 years)	RPJPN Prepared by BAPPENAS	RPJPD-Province Prepared by BAPPEDA-Province	RPJPD-City/District Prepared by BAPPEKO
	Content: long-term development vision for Indonesia (country)	Content: long-term development vision for province	Content: long-term development vision for city
	RPJPN is enacted as Law	RPJPD-Province is enacted as Local Regulation	RPJPD-City is enacted as Local Regulation
Medium-term (5 years)	RPJMN Prepared by BAPPENAS	RPJPD-Province Prepared by BAPPEDA-Province	RPJMD-City/District Prepared by BAPPEKO
	Content: Vision of Indonesian President (programmes and activities based on President's vision)	Content: Vision of Governor (programmes and activities based on Governor's vision)	Content: Vision of Mayor (programmes and activities based on Mayor's vision)
	RPJMN is enacted as Presidential Regulation	RPJMD-Province is enacted as Governor Regulation	RPJMD-City is enacted as Mayor Regulation
Short-term (1 year)	RKP Prepared by BAPPENAS	RKPD-Province Prepared by BAPPEDA-Province	RKPD-City/District Prepared by BAPPEKO
	Content: details programmes and activities for funding allocation and gaining approval from the legislature in annual financial year	Content: details programmes and activities for funding allocation and gaining approval from the legislature in annual financial year	Content: details programmes and activities for funding allocation and gaining approval from the legislature in annual financial year
	RKP is enacted as Presidential Regulation	RKPD-Province is enacted as Governor Regulation	RKPD-City is enacted as Mayor Regulation
Budgeting plan (1 year)	APBN Prepared by BAPPENAS and the Ministry of Finance	APBD-Province Prepared by BAPPEDA-Province and the Financial Department at province level	APBD-City/District Prepared by BAPPEKO and the Financial Department at city level
	Content: funding allocation for all activities in the next financial year	Content: funding allocation for all activities in the next financial year	Content: funding allocation for all activities in the next financial year
	APBN is approved by both the executive and legislature at central government APBN is enacted as Law	APBD-Province is approved by both the executive and legislature at provincial government APBD-Province is enacted as Local Regulation	APBD-City/District is approved by both the executive and legislature at city government APBD-City is enacted as Local Regulation

Source: Author from fieldwork

4.3.3. Transport policy

Historically, Indonesia's national transport policy focused on building new roads and widening the existing road network. For example, paved roads in Indonesia increased from 47.3% in 1998 to 60.5% in 2005 (World Bank 2007). During the first decade of the twenty-first century, road investment made up to 75% of the total transport budget in the country and has resulted in the increases of total road lengths (see Figure 4.3) (World Bank 2007).

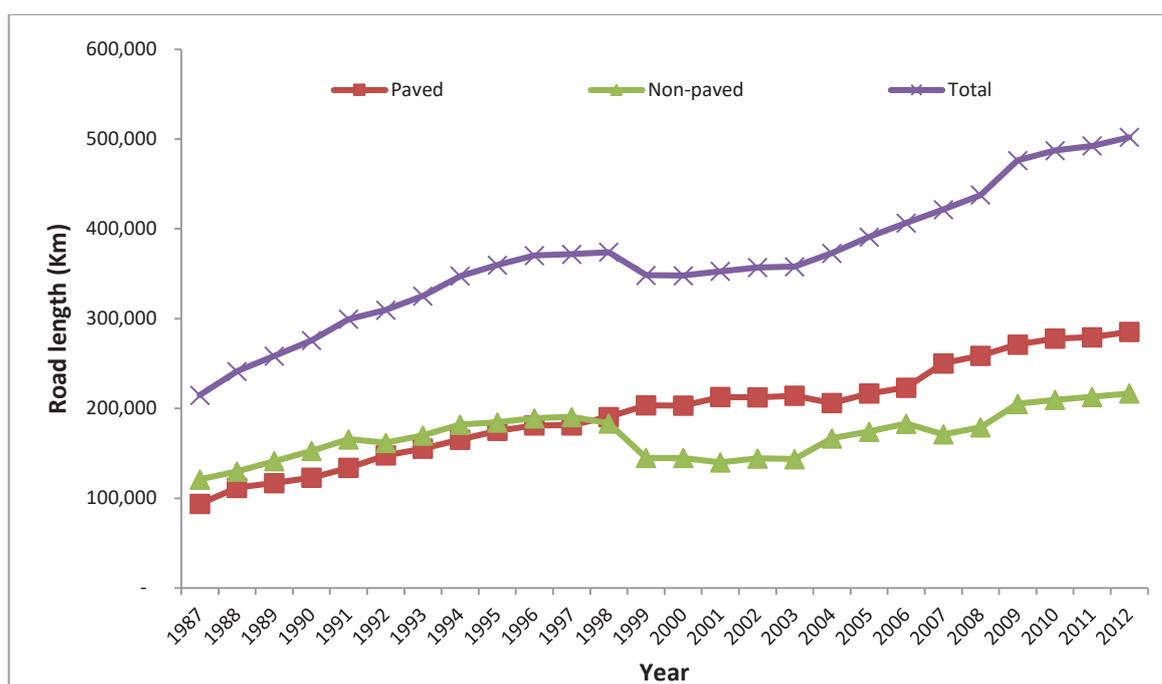


Figure 4.3 : Road length based on the type of surface materials during 1987-2012 (Km)

Source: <http://www.bps.go.id/>

Increased government spending on road construction and maintenance encouraged motorisation. The data available from the National Bureau of Statistics (<http://www.bps.go.id/>) confirm this trend (see Figure 4.4), which shows a significant increase in the number of vehicles. Motorcycle has dramatic increased by 83% and passenger car has increased by 10%, as compared to the slow increase of bus (2%) and truck (5%) during 1987 and 2012.

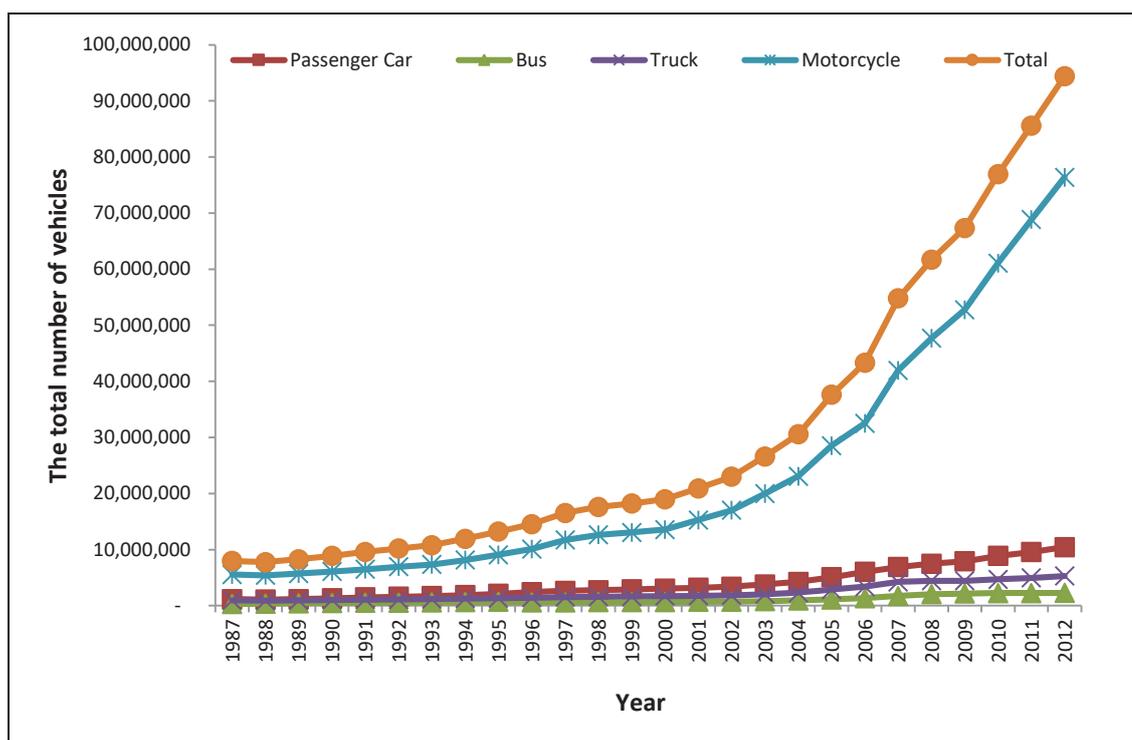


Figure 4.4 : Motor vehicle ownership by type between 1987 and 2012

Source: <http://www.bps.go.id/>

Funding for road transport comes from two main sources, the national revenues and the international development agencies. National revenues for funding road transport come from taxes. International development agencies provide funding through loans and grants. Expenditure from these sources is dominated by road construction and maintenance. For example, the ADB contributed more US\$ 1,014 million to the Indonesian transport sector in the period from 2000 to 2011 (ADB, 2012). Support for roads construction was also shown in US\$ 336 million funding made available from the Australian government under the Eastern Indonesia National Roads Improvement Project (EINRIP) from 2005 to 2014 (AusAID, 2013). In contrast to road funding by international development agencies, the World Bank supported Sustainable Urban Transport Project (SURIP) between 1996 and 2005, while USAID, the World Bank, and ITDP supported the TransJakarta project (Ernst & Sutomo, 2010; Zusman & Sutomo, 2010).

Since the first decade of the twenty-first century, there have been many efforts to formulate national transport policy and related legislations. The National Transport System (SISTRANAS) is a regulatory framework under the Ministerial Decree No. KM 49/2005, which aims to integrate multimodal and intermodal transport systems in

Indonesia (Ministry of Transport, 2005). SISTRANAS outlines seven priorities for transport systems integration at the national government level, which include the improvement of environmental quality and energy efficiency related to transport. SISTRANAS is used as a guideline to formulate the Regional Transport Plan (TATRAWIL) at the provincial government level and the Local Transport Plan (TATRALOK) at city government level. These transport planning documents provide maps of transport priorities and strategic development for integrating transport systems at three different government levels. The interpretation of SISTRANAS at the subnational is translated according to the needs of each administrative areas and confined the transport planning based on these formal jurisdiction areas. As a result, the implementation mechanisms between different levels of government remain uncoordinated, particularly in urban and regional transport networks planning integration. There are no planning tools and supports system that builds interconnections among SISTRANAS, TATRAWIL and TATRALOK.

In 2007, the enactment of Law No. 23/2007 on railways focused on the contribution of railways to the urban transport system (Republic of Indonesia, 2007b). This law mandates railways as the main public transport mode for urban and regional connectivity. Following this law, the regulation of Transport Minister No. 43/2011 on Masterplan of national railway systems (Ministry of Transport, 2011) was enacted. In this masterplan, Java Island will be connected with high-speed trains connecting cities from west to the east (Merak-Jakarta-Cirebon-Semarang-Surabaya-Banyuwangi). Rail-based public transport will be the main mode of public transport mode and support the integration of urban and regional transport networks along with the internal urban transport networks by 2030 (p.33).

In 2009, Law No. 22/2009 on Traffic and Road Transport was enacted (Republic of Indonesia, 2009a). This law was inspired by the implementation of the BRT system in Jakarta and obliges government to provide public transport. Article 138 states the government is responsible for providing safe, secure, comfortable, and affordable public transport for the community. Article 158 states the government must ensure road-based mass public transport is available to transport people in urban areas. The criteria for providing road-based mass public transport include: 1) buses with mass capacity, 2) specific lanes, 3) specific routes that do not overlap with existing routes, and 4) feeder

services. The concept of improving public transport entails improving the infrastructures, such as roads, pedestrian spaces, public transport vehicles and information systems. It is estimated that the transport sector will need 10 trillion IDR for a 0.3 % emission reduction from transport (DNPI, 2010, p. 27). According to an urban transport expert,

Central government revised Law No. 14/1992 on Land Transportation after more than 17 years by the enactment of Law No. 22/2009. The implementation of TransJakarta in 2004 has inspired Central government, in this case the Ministry of Transport, to formulate new law. This is an important turning point for giving value to the public transport system. (Urban transport expert interview, November 2013).

After the enactment of this law, the central government started a campaign for promoting public transport improvement programmes, including BRT. The MoT rushed the implementation of the BRT system by providing buses to city governments that signed the MoUs with the MoT. In contrast, the Ministry of National Development Planning (BAPPENAS) emphasises formulating BRT guidelines, regulations and institutional capacity building activities before the implementation of BRT systems in 23 Indonesian cities between 2015 and 2029 (Ministry of National Development Planning, 2010a).

The MoT and GIZ formulated a grand design for urban transportation in 2009, which called Grand Design Urban Transportation in Indonesia (Ministry of Transport, 2012a). This document aims to develop sustainable urban transport systems in Indonesian cities by designing, financing, and strengthening institutional linkages between the central and subnational government levels. The document was prepared with the technical and financial support of GIZ and is currently undergoing a revision process to formulate guidelines for city-level governments. However, an expert from the Ministry of Transport stated, “we need more buses for BRT development in our cities rather than dealing with the theoretical planning procedures that GIZ offered us” (Official at Ministry of Transport, interview November 2013). As a result, GIZ Sustainable Urban Transport Improvement Programme (SUTIP) has been launched with BAPPENAS and the MoF, rather than with implementing agencies like MoT.

4.3.4. Spatial planning policy

The central government policy on spatial planning has gained attention since the enactment of Law No. 26/2007 on spatial planning. In Article 5, the law emphasised the need for spatial structure development policy to improve the quality and coverage of

transport network services in an integrated and equal distribution in all regions in Indonesia. The strategy for land transport is to improve the quality of transport infrastructure and integrated services between national road networks, rail networks, and water transport networks (rivers, lakes, and crossings). Specifically, in Article 15, urban areas act as the main knots for the transport systems at central, provincial and city level government levels. City centres act as a main knot of the transport systems that connects surrounding areas within the agglomeration of administrative boundaries.

Figure 4.5 shows the importance of spatial planning policy and its spatial plans in a hierarchical nature. The National Spatial Plan is used as guideline for regional, provincial and city/district government level in formulating their spatial plans according to their jurisdictions. Urban transport projects listed in the National Spatial Plan should be aligned with the proposed urban transport projects at the lower level.

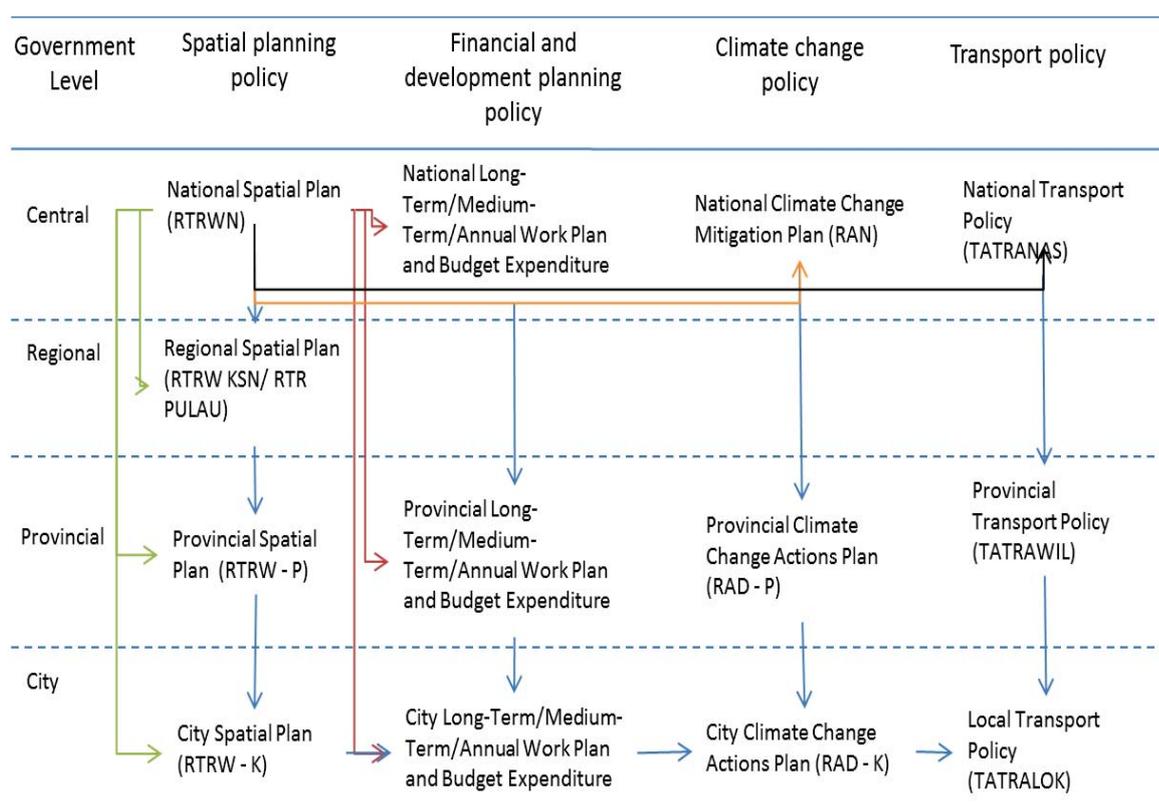


Figure 4.5 : Planning and policy documents at central, provincial, and city level in Indonesia
Source: Author based on fieldwork

Since 2007, the National Spatial Plan has become an important factor underpinning all regional and sectoral development planning. According to a member of the national

legislature, spatial planning is one of the planning procedures that will improve coordination between central, provincial, and local government.

... Local autonomy actually gives freedom for local decision-making. However, this freedom is also constrained by the spatial planning, which has been set up as a hierarchical system from central to provincial and local government levels. Therefore, spatial plan at local government levels should comply with provincial and central government. Law guarantees this arrangement. So, local autonomy will not cause conflict among central, provincial, and local government level...

(National legislative member interview, November 2013)

However, this plan is making slow progress in formulating regulatory arrangements for subnational government, as mentioned by the national expert on spatial plan:

The spatial plan at the central government level has been lagged in formulating many legal drafting and regulatory arrangements within the spatial arrangements. This has caused confusion for provincial and city government for planning and implementation of spatial plan at the lower scale.

(Spatial plan expert interview, November 2013)

4.3.5. Energy policy

Indonesian's national energy policy for the transport sector has been influenced by the international development agencies, such as the International Energy Agency (IEA). In 2002, the IEA (2002) emphasised a bus-based system for energy conservation in the transport sector. The case studies of Jakarta and Surabaya were presented to reflect the opportunity for bus-based systems to improve public transport and reduce emissions from the consumption of fossil fuels.

In 2005, APEC (2005) produced a policy document to analyse the performance of energy policy in reducing GHG emissions. The focus for performance improvement in the transport sector was directed toward the mechanisms of fossil fuel subsidy and alternative fuels for transport. The targets were to build 33 natural-gas fuelling stations and develop 15,000 converter kits to support the utilisation of alternative energy for transport.

In 2006, transport fuels have been the focus of the Indonesian government policy in the energy sector. According to the Presidential Regulation No. 5/2006, the National Energy Policy aims to balance the consumption of energy from coal, oil, gas, and new/renewable energy. For oil, it aims for an emission reduction target of the energy consumption from

52% to 20% by 2025. Reducing oil dependency becomes essential due to underlying issues of the country's reduction of oil production (World Bank, 2004).

In 2007, the National Energy Council (*Dewan Energi Nasional*) was established to guide the direction to the national energy policy formulated by the Ministry of Energy and Mineral Resources (MEMR). Reduction of the transport subsidy for fossil fuels has been considered in the Council's agenda. In 2008, the effort in developing alternatives for fuel was initiated by the MEMR through the Ministerial Regulation No. 32/2008. However, the social impacts of removing the fossil fuel subsidy are risky for the political party ruling the country. In the last many decades, a subsidy scheme for fossil fuels has influenced land transport policy. Domestic oil prices are lower than the market price. The price was affordable for most people, which encouraged motorisation. Yusuf, et. al (2010) argues that Indonesia's CO₂ emission can achieve 6.7% reduction if all energy subsidies are phased out.

In 2008, the International Energy Agency (2008) reviewed the energy policy in Indonesia by hiring international experts from the US, Canada, Japan, Australia, and New Zealand. The review outlines challenges in governing the energy sector, which include the transport sector. Issues highlighted in the review include limited access to the basic services in transport, imbalance oil needs and the production of oil for fulfilling the transport needs, social risks in eliminating the price controls and subsidy mechanisms. As a result, the energy policy faces dilemmas in governing the energy sector, building coordination with other major energy associated policies, such as the transport sector, and making decisions for fossil fuels consumption.

4.3.6. Economic policies

Since 2000, the Indonesian economy has grown an average 5% to 6% per annum. That growth has had an impact on transport and the environment. In 2009, the Ministry of Finance (MoF), with the help of AusAID, prepared a Green Paper for economic strategies, which set the target of reducing emissions by 41% by 2020. Most of the examples in the Green Paper were derived from Australian experiences that have limited relevance to the Indonesian context. This policy became a basis for the development of the Low-Cost Green Car (LCGC) policy in 2013. The LCGC policy aims to make Indonesia the

production hub for low-cost and environmentally friendly cars in the ASEAN Economic Community by 2015. The President signed the Low-Cost Green Cars regulation in 2013, which aims to improve fuel efficiency and to hasten local assembly by providing tax incentives that will ultimately boost the national economy. Loans for first-time car buyers were made simple and less complicated to secure, which increased demand for private vehicles. This increase put pressure on the limited capacity of existing roads. The policy makes it difficult to promote sustainable transport.

In 2011, the Indonesian government launched the Master Plan for Acceleration and Expansion of Indonesian Economic Development (MP3EI). This policy document aims to transform the country's status from a developing to a developed country by 2025 by reducing the transport costs that hinders economic development in the region. The Master Plan initially targeted six corridors and five cities (Jakarta, Bandung, Semarang, Jogjakarta, and Surabaya), which were to be connected with good quality toll-roads to accelerate economic activities. The President of Indonesia stated that the Master Plan did not intend to replace the National and Regional Development Plans but provide a clearer direction for these plans (Republic of Indonesia, 2011a, p. 9).

4.4. Summary

The development of transport and climate change policies in Indonesia is part of complex political-institutional processes at the central government level. Several central government Ministries and Departments are involved directly or indirectly in different aspects of transport and climate change. The complexity further increases due to the policy directions set by international development agencies as a part of their technical and funding assistance. Since the 2000s, different mitigation and adaptation strategies have influenced national climate change policy in Indonesia. Under the mitigation strategies, the idea of developing a Bus Rapid Transit (BRT) system emerged worldwide as a popular solution to urban transport problems and a response to the potential funding available from international development agencies. The Indonesian government has taken this opportunity to use climate change global funding schemes to support the development of the transport sector, by promoting public transport improvement programmes. BRT development in several cities of Indonesia is included in this programme in a 'one size fits all' approach, without considering local circumstances. BRT development projects

were further strengthened by associated-policies in transport, energy, spatial and development planning, and economic growth. The promotion of the BRT system as a national policy received attention from international development agencies and funding from the climate change global fund. How BRT development policy was received in medium-sized Indonesian cities of Bandung and Surabaya will be discussed in Chapter 5 and Chapter 6. These chapters illustrate how the process of BRT development contributed to tensions between policies at different levels of organisations.

Chapter 5 Transport planning and policies in Bandung

5.1. Introduction

This chapter analyses potential causes of tensions in urban transport planning and policies in Bandung City, the city that introduced the Bus Rapid Transit (BRT) system. The chapter begins with my reflection on commuting with public transport in Bandung. Following this, the second section presents urban transport challenges and opportunities in Bandung. The third section explains formal and informal relationships of different organisations and offices in making decisions for public transport systems in Bandung. Intergovernmental relations between the West Java Province and the government of Bandung City are reviewed in setting the directions of transport policy and planning in Bandung. The final section explains policy tensions at horizontal or city level that impact on vertical or hierarchical relations with central and provincial government and non-government organisations.

5.2. Personal experience of commuting in Bandung

I stayed in Bandung to collect data and lived there during October and November 2013. I stayed three kilometres north of the city centre in a high-density suburb called Dago, located near to the government offices I wanted to visit and connected to the city with deregulated minibuses, which is called *angkutan kota* or *angkot* in Indonesian language.

An angkot has a capacity of 12 passengers, although *angkot* always take more passengers at the peak-hour rush times. *Angkot* have more than 38 routes throughout the city. The route name is written at the front of the vehicle and different colour codes represent their destinations. *Angkot* are heavily used because of the affordable fares (IDR 3,000-4,000) for one journey/destination, or NZ 30-40 cents) and wide geographical coverage of the city. Bandung has more than 5,000 *angkot* running on its roads. However, there is no publicly available timeline or route information for *angkot*. Drivers and passengers provide guidance, if necessary, to the many *angkot* users. I often get help from other passengers waiting at the roadside. There are no designated bus stops for *angkot* and passengers wave their hands to the driver, who stops to pick the passengers. Similarly, I could get off anywhere along the road (see Figure 5.1).



Figure 5.1 : Waiting passengers of *angkot* in Bandung
Source: Author from fieldwork

I used the informal but frequent *angkot* door-to-door service throughout my stay in Bandung. However, service quality was poor because I was often squeezed in alongside other female passengers. In addition, *angkot* take a long time to reach their destinations because they stop so often. This signal lower fare and convenience/availability are more important than travel time in choosing *angkot*. The large number of *angkot* vehicles contribute to traffic congestion and air pollution, but they provide frequent and affordable mobility to most people who live in Bandung.

Angkot were available to reach the nearby Bus Rapid Transit (BRT) station, which was located five kilometres from my hotel. Bandung BRT, branded as Trans Metro Bandung (TMB), served two corridors of the city on the limited access of the urban motorway built by central government (see Figure 5.2). TMB comprises new air-conditioned buses that can take more than 36 passengers. The fare is set at IDR 3,000 (NZ 30 cents) for the public and IDR 1,500 (NZ 15 cents) for students. Although this fare is comparable to the *angkot* fare, limited routes, coverage, and the type of land use alongside the route do not

make the BRT attractive for passengers at this stage. I used the BRT services only twice during my two months' stay in Bandung.



Figure 5.2 : Trans Metro Bandung (TMB) bus in operation
Source: Author from fieldwork

The BRT in Bandung provides good quality infrastructure and amenities for passengers. Passengers must board at elevated stations and to pay their fares manually on board, not using a smart card. BRT services are more formal than *angkot*, but are suffering from limited network coverage, unfinished BRT's stations facilities and the fact that some routes involved the elevated design for the BRT's stations along the corridors which is difficult for elderly and women (see Figure 5.3).



Figure 5.3 : TMB station in Jalan Sudirman, Bandung

Source: Author from fieldwork

I also used government-owned and operated DAMRI buses and motorcycle taxis during my stay in Bandung. The DAMRI bus service comprises old non-air-conditioned buses. As with the *angkot*, passengers can board and stop anywhere along the routes so they therefore provide a door-to-door services.

One of the quickest options for moving around Bandung is to take motorcycle taxi or *ojek* in Indonesian language. *Ojek* has two seats – one for the driver and one for the passenger. The driver provides a taxi service from origin to destination through narrow and congested streets. However, the service is unsafe because the drivers speed wherever possible. As a woman, I also felt that sitting with a stranger is not a good idea. *Ojek* is available all over Bandung, parked at informal and temporary terminals near road corners and residential areas. There are several informal associations of *ojek* that try to protect and regulate their services and negotiate any issues with local government. Using ineffective public transport in Bandung has strengthen my motivation to contribute to the improvement of public transport systems development in Indonesia.

5.3. Bandung urban transport challenges and emerging opportunities

Bandung is the third largest city of Indonesia and the capital of West Java Province, located 200 km southeast of Jakarta (Government of West Java Province, 2011). In 2013, there were 2.5 million people living in the city (Bureau of Statistics of Bandung City, 2014). It is estimated that the city's population will grow to 5.3 million by 2030.

5.3.1. Economic growth, urbanization, and urban form

Bandung's economy grew by 8% annually during the last decade, which is higher than the 6% of the national economic growth. The booming service industry is located in the inner to intermediate suburbs, making for a compact city form (Arifwidodo & Perera, 2011). In 1990, planning policy focused on strengthening the city centre. This was followed in 2003 by the compact urban form policy (Arifwidodo & Perera, 2011). In 2007, eight new city centres were proposed to accommodate the growing economic and business needs of the city (see Figure 5.4) (Bandung City Government, 2011c). The growing economy of the city attracts a large number of people from rural areas and nearby towns and the city population has grown by 6.4% since 2002 (McKinsey Global Institute, 2012).

The compact inner city of Bandung is accessible by walking, cycling, paratransit, and public transport. Motorised trips comprise more than 40% of paratransit and public transport (Joewono & Kubota, 2005). This statistic does not include the large numbers of walking and cycling trips that take place. The great amount of walking, cycling, and paratransit is due to the compact urban form and contributed to by urban poverty, in which 9% of the total population of the city lived in 2012 (Bandung City Government., 2012). Poor people are mainly involved in informal economic activities such as trading alongside roads and footpaths, so they make short trips and rely mainly on paratransit and non-motorised transport (Joewono & Kubota, 2005; Tarigan, Susilo, & Joewono, 2014). Paratransit not only provides transport facilities, but also creates job opportunities for unskilled labour (Tarigan et al., 2014). However, the massive volume of paratransit creates traffic congestion in Bandung (Tarigan et al., 2014).

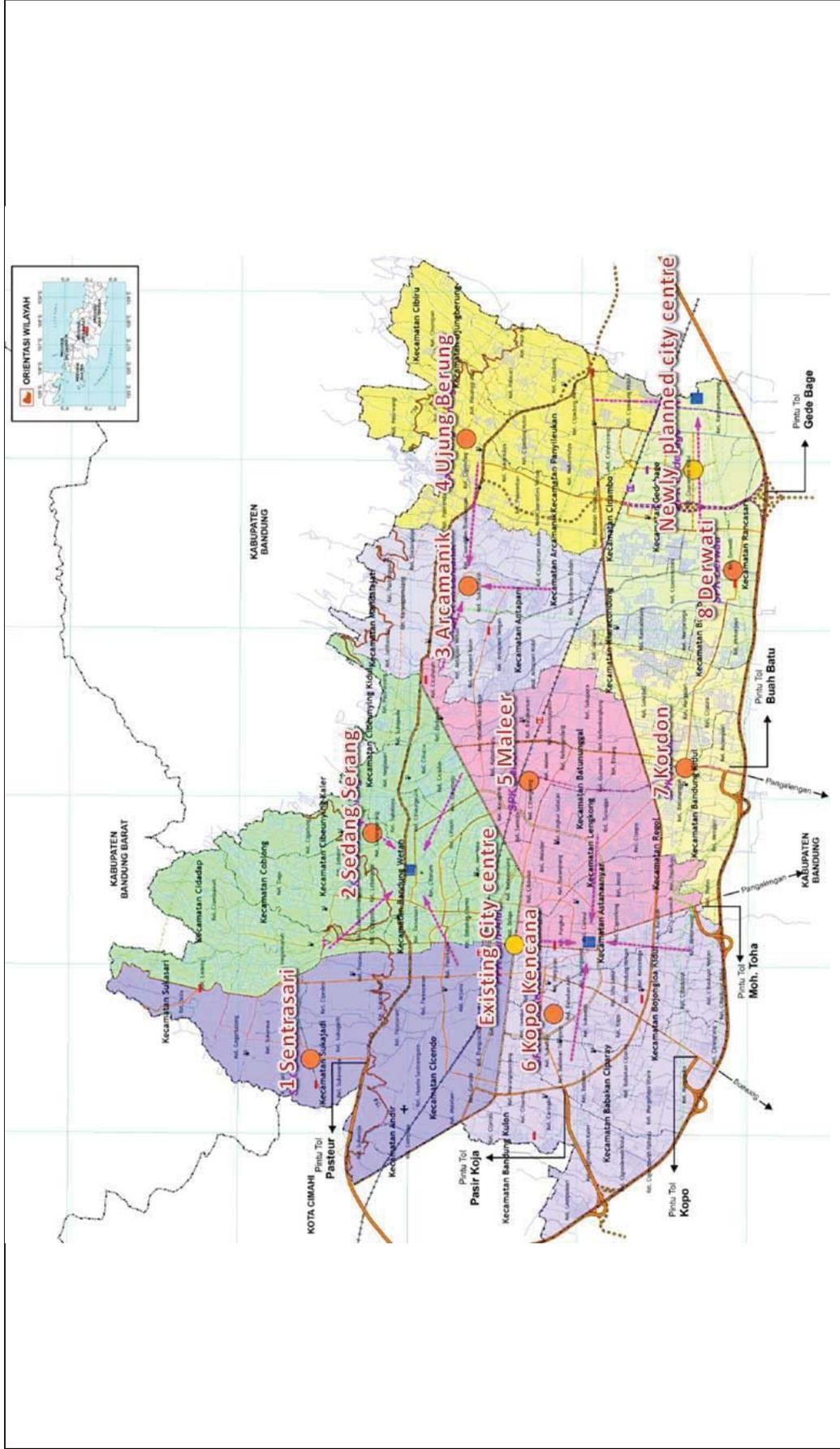


Figure 5.4: Bandung's existing city centre and new urban centres
Source: Bandung City Government (2011c)

Rapid population and economic growth in Bandung has also put pressure on land use. Bandung's Spatial Plan 2011-2031 proposed high-density housing in the city centre and surrounding suburbs, with medium- to low-density housing in north and east of the city (Bandung City Government, 2011c). This plan endorses development trends in the urban fringe that are already happening and causing urban sprawl. For example, Bandung's total built area of 108 km² in 1991, which became 217 km² in 2001 (Angel, Parent, Civco, & Blei, 2011). High land values in the city centre have forced people to live in peri-urban and neighbouring city areas such as Cimahi City, West Bandung District, and Bandung District (Hudalah, Winarso, & Woltjer, 2007).

5.3.2. Increasing road construction and motorization

The development of the urban fringe of Bandung has also increased due to large scale investment in the suburban road network (Firman, 1996). Beyond suburban roads, the Padalarang toll-road was constructed in 2005 to link Jakarta and the Bandung Metropolitan Area (BMA) (Firman, 2009a). Road construction has increased the paved road length from 820 km in 2003 (Government of West Java Province, 2004) to 1185 km in 2011 (Government of West Java Province, 2013). Overall, the road networks increased by more than 5% between 1997 and 2007.

The construction of new roads encourages motorisation. Between 2004 and 2012, motorcycle use increased by 19% annually, while the use of private vehicles increased by 7% annually in West Java (Government of West Java Province, 2013). In 2006, Bandung experienced 2.5 million trips per day of which private vehicles accounted for 60% (motorcycles 36% and cars 24%) (Bandung City Government, 2011c).

5.3.3. Air pollution problems

Road construction, urban sprawl, and motorisation are causing economic and environmental problems in Bandung. Traffic congestion cost IDR 1.7 million per day (Transport Department of Bandung City, 2013). The increasing amount of motorisation has resulted in many road accidents. For example, 120 people died in 2012 in road accidents and most were pedestrians (Traffic Police of Bandung City, 2013).

In 2012, the transport sector consumed 3,664,250 litres of fuel and emitted around 257 Gton of CO₂, which causes serious air pollution in Bandung (Environmental Agency of Bandung City, 2012). In Bandung, Suspended Particulate Matter (SPM) has reached 110 ug/m³, which is well above the WHO standard of 60 ug/m³. The NO₂ level has reached 100 ug/ m³, 2.5 times higher than the WHO standard (40 ug/m³). In parallel, the lead level also increased to 2.5 ug/ m³, which is much greater than the WHO standard of 0.5 ug/m³. From 2008, the Environmental Agency of Bandung City regularly conducted air quality monitoring at sixteen selected roadside stations. The data show that the SO₂ level in Bandung is ten times higher than the WHO standard. Similarly, the CO level of 567 Gton of CO₂ is eight times higher than the WHO standard.

5.3.4. Declining public transport patronage

One of the reasons for the fast-growing use of private vehicles and the consequent increase in air pollution is the lack of improvement in public transport services and infrastructure in Bandung City. For example, the number of public transport vehicles increased by only 0.7% from 1998 to 2009 (Bandung Development Planning Agency, 2009) compared to 13% for private transport vehicles (an average of cars and motorcycles). The number of public transport routes has increased slightly, from 48 routes to 54 during 1998-2008 (Bandung Development Planning Agency, 2009). Public transport provides services to only 30% of the population living in Bandung City (Bandung Development Planning Agency, 2009).

Public transport in Bandung includes government-owned buses (DAMRI), privately owned buses, paratransit, and taxis. DAMRI runs 126 buses on five routes but 40% of the buses are twenty years old. The people of Bandung also rely on 5,521 paratransit vehicles on 39 routes (Transport Department of Bandung City, 2013). These routes are assigned by the City Transport Department (DISHUB) and the Traffic Police Office in collaboration with the private public-transport service owners association (ORGANDA). There is no integration between different modes of public transport in terms of scheduling, ticketing, networks, or management.

To address these issues, the central government selected Bandung in which to replicate the TransJakarta experience of building a high-quality and modern BRT system. Based on the Bandung's transport master plan of 2009, thirteen different corridors have been identified for Bandung's BRT, as shown on the map (see Figure 5.5). The first two corridors (dark green and light green) of the Trans Metro Bandung (TMB) started operation in 2009 and 2012. In 2013, the third corridor was being constructed and by 2015, the corridor has been in the operation connecting Cicaheum and Sarijadi. Details of these corridors are given in Table 5.1.

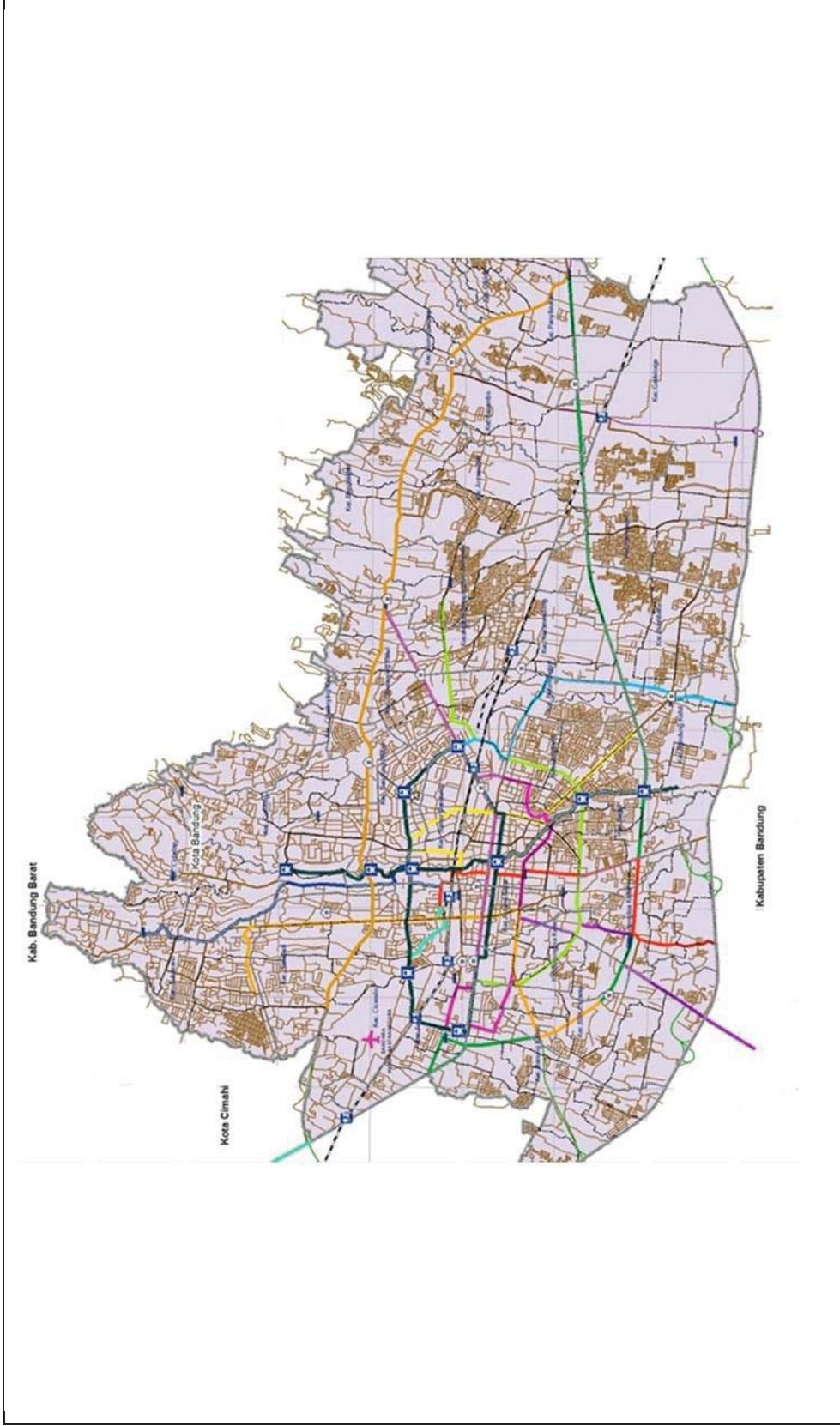


Figure 5.5 : Planned routes for Trans Metro Bandung (TMB) project

Source: BAPPEDA Kota Bandung (2009)

Notes: Colour lines show different routes planned for BRT. Currently two corridors, dark green (Corridor 1 from Elang (Cibeureum) to Cibiru) and light green (Corridor 2 from Cicaheum to Ciberuem) have been constructed

Table 5.1 : Details of Corridor 1, 2 and 3 of the TMB project

Details	Corridor 1 (Dark green)	Corridor 2 (Light green)	Corridor 3 (Purple)
Length (KM)	20	12	10
Construction cost/Km (million IDR)	4,255	6,535	7,345 (estimation)
Operational time	06.00-18.00	06.00-20.00	06.00-20.00
Headway/frequency	20-30 Minutes	10-15 Minutes	10-15 Minutes
Fare per trip (IDR)	1,500 (student) 3,000 (public)	1,500 (student) 3,000 (public)	1,500 (student) 3,000 (public)
Bus size	Medium	Big	Big
Operator	PT.Bianglala Metropolitan	Perum DAMRI	n/a

Source: Transport Department of Bandung City (2013)

5.4. Transport decision-making in Bandung

This section aims to identify the different actors and their roles in transport decision-making in Bandung. The actors include central, provincial, and local government organization and their departments, which are formally responsible for transport policy-making, and private sectors, media, experts/academics, and the communities that influence of transport outcomes.

5.4.1. Stakeholders in the decision-making

The structure of planning system in Indonesia and the hierarchical nature of decision-making in urban transport and transport related policies are explained in Chapter 4, especially the connection between central and provincial and city government. This section is the explanation of horizontal connection among actors at the local level, which consider the role of international development agencies, central government, civil society, and non-government organisations.

5.4.1.1. International development agencies

International organisations and donors have an influence on decision-making concerning transport in Bandung City. In 2009, the French Government, through SNCF, assisted the Bandung City government with an urban transport master plan whose main focus was railway development (Ministry of Transport, 2009). Under the coordination of the MoT, SNCF worked with local government and transport experts during the planning processes. In 2013, the Institute for Transportation and Development Policy (ITDP) started working

closely with the city government of Bandung and local civil society organisations such as Riset Indie to plan and design BRT Corridor 3 (ITDP, 2013), even though the ITDP has not been involved in the planning and implementation of Corridor 1 and Corridor 2 in Bandung. The ITDP received its main financial support from the United Nations Environment Programme (UNEP) for the support of BRT projects in Indonesia (UNEP, 2010).

5.4.1.2. Central government organisations

Central government, particularly the Ministry of Transport (MoT) and the Ministry of Public Works (MoPW), plays an important role in making transport decisions in Bandung City. Bandung City is part of the Bandung Metropolitan Area (BMA) that has been classified as a national centre of activities (PKN). Consequently, BMA areas are planned and funded for activities that support an increase in national GDP. The Ministry of National Planning (BAPPENAS) is tasked to develop urban development plans for BMA as part of the national economic growth. The MoPW is responsible for ensuring the improvement of the national roads' network that connects Bandung City with Bandung District, Cimahi City, and West Bandung District. The MoPW is also responsible to formulate specific spatial plan for BMA as part of the national spatial plan. The MoT is responsible for urban transport plan and projects for people and goods as stipulated in the Law No. 22/2009 on Traffic and Transport.

5.4.1.3. Provincial government organisations

In West Java Province, the provincial government organisations, particularly the Regional Development Planning Agency (BAPPEDA) prepares urban transport development agenda for its own administrative areas, including city and district areas. BAPPEDA formulates spatial plans and provincial long-term, medium-term, and annual development plans. Transport is an important part of these plans. Every year, BAPPEDA organises a meeting for public consultation – *Musrenbang*, which provides an opportunity for relevant provincial departments to discuss their projects of highest priority. Transport plans for the next financial year are also notified to the public during the *Musrenbang* meeting. BAPPEDA is also responsible for funding allocation in collaboration with the Provincial Finance Department that manages provincial funds and allocates transport budgets to different departments. The Provincial Tax Department collects vehicle registration taxes within provincial boundaries.

The Provincial Transport Department (DISHUB) manages urban and rural transport and oversees traffic management at provincial, city and district levels. It formulates a master plan (TATRAWIL) for provincial traffic networks and road transport, and designs parking, traffic management, the road hierarchy, and public transport systems. The department designs inter-city public transport routes and manages the fare structure on these routes. The department also coordinates the traffic and road transport forum - a platform for network building between government and non-government organisations. The Department of Transport (DoT) works together with ORGANDA and police for governing traffic, routes, and transport management. For road use and land use, the Provincial Public Works Department (PU) oversees construction, maintenance, and operation of roads, bridges, and other transport related infrastructure. The department also coordinates transport programmes with central government, city government, and international development agencies for transport project plans.

At the operational level, this department analyses transport impacts on the provincial roads and along with the provincial Environmental Agency, measures vehicle emissions. The Environmental Agency (BLHD) prepares environmental impact assessment studies and coordinates climate change action plans for new transport infrastructure. BLHD is responsible for assessing the level of emissions on roads and monitors the air quality programme in Bandung. For energy consumption, the Energy and Mineral Resources Department (DISTAMBEN) coordinates action plans for transport energy consumption and reduction in collaboration with the Transport Department. This department monitors transport emissions to ensure that climate-change reduction targets are met. Figure 5.6 shows the intergovernmental relations among BAPPEDA and other provincial departments that manage urban transport.

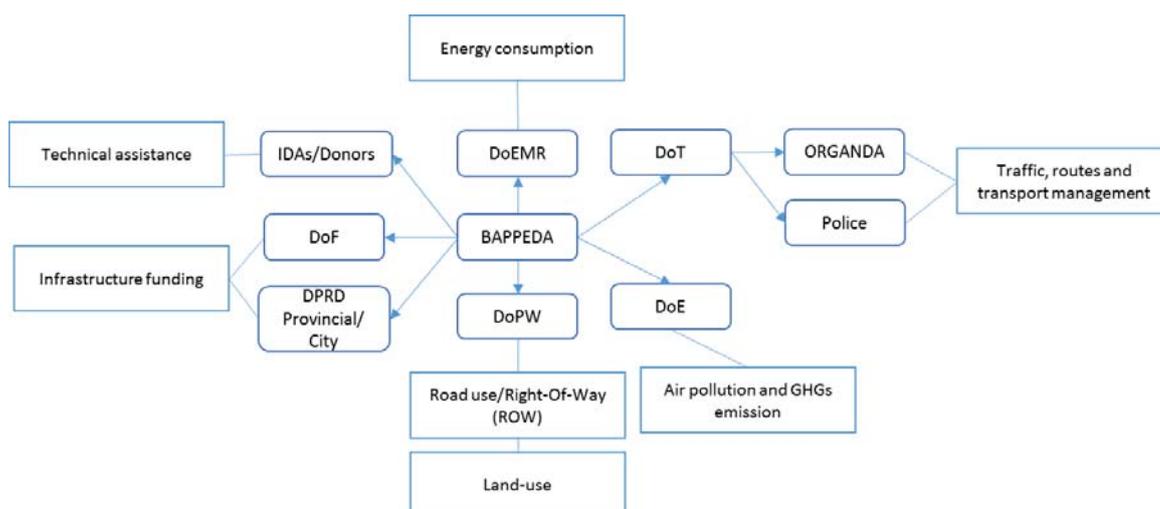


Figure 5.6 : Provincial government organisations
Source: Author from fieldwork

The West Java Provincial government has established the West Java Province Metropolitan Development Management (WJPMDM) as a government organisation that ensures coordination of urban development projects among cities and districts in West Java. The main functions of WJPMDM team are to formulate, coordinate, synergise, and monitor the urban development programmes, including urban transport in three urban centres (Bodebek Karpur, Greater Bandung, and Greater Cirebon) and two growth centres (Pelabuhan Ratu and Ranca Buaya). WJPMDM is led by the Secretary of the West Java Government, with a member of BAPPEDA as the vice-chairman. WJPMDM is run by external advisors, who are mainly transport experts and academics. For example, Johnny Patta acts as the coordinator and Bambang Kusbiantoro holds the position of vice-coordinator; both are academics from Bandung Institute of Technology (ITB). In addition, the Coordinating Board for Transport is the ad-hoc organisation that holds meetings of government and non-government officials for resolving transport problems in West Java Province.

5.4.1.4. City government organisation

At the city level, the dominant role of the Planning Agency of Bandung City (BAPPEKO Bandung) is reflected in the formulation of spatial planning policy, financial and development planning policy. This agency also coordinated climate change policy with the Environmental Agency of Bandung City and the transport policy in close coordination with the Transport Department of Bandung (see Figure 5.7). The Planning Agency of Bandung has to coordinate these plans with various departments at provincial government

level and ministries at the central government level. Consequently, the Planning Agency of Bandung must build the vertical and horizontal relationships during plan formulation.

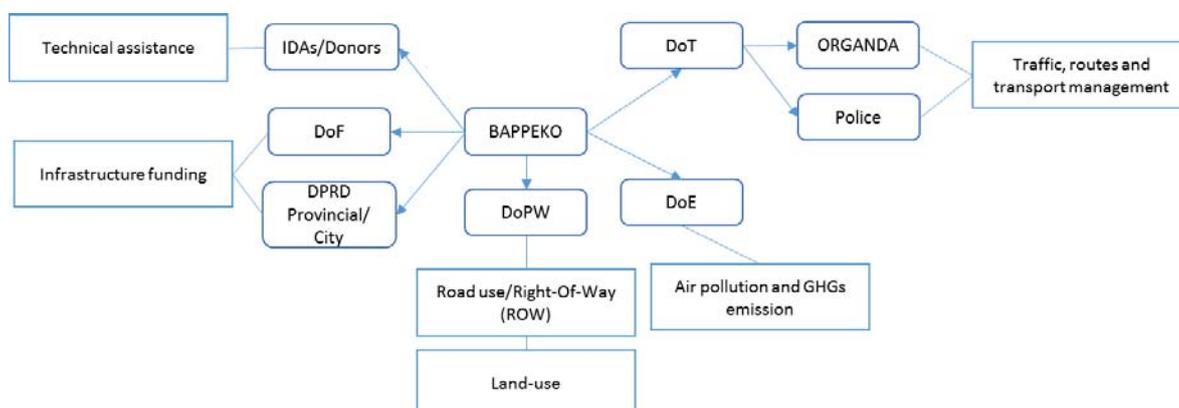


Figure 5.7 : City government organisations

Source: Author from fieldwork

The Bandung Planning Agency (BAPPEKO) prepares the urban long-term, medium-term, and annual development plans for Bandung City. BAPPEKO Bandung undertakes monitoring and evaluation exercises related to development projects. For funding allocation, BAPPEKO must work together with the Financial Department of Bandung City to assess the financial viability of transport programmes and activities and estimates the costs of transport infrastructure planning and potential revenues to repay capital costs. BAPPEKO also organises annual *Musrenbang* meetings at the city level to gain inputs from various stakeholders about their plans. Transport plans are notified during the *Musrenbang* event to the public to gain support and to ensure legitimacy.

The Transport Department (DISHUB) of Bandung City prepares transport master plans in collaboration with BAPPEKO Bandung. The local office also coordinates local transport planning issues with the Traffic Police and Public Works Department, and designs parking, traffic management, and public transport systems. With ORGANDA, the Transport Department designs the transport routes and fares for urban areas. The Transport Department office in Bandung manages the construction of public transport facilities and issues routes licences for paratransit and taxis. The regular operation of DAMRI, the state-owned public transport company, is under the control of the Transport Department. For road management, the Public Works Department of Bandung City is responsible for road facilities and infrastructure maintenance, improvement, and the

construction of designated city roads. This department plans for roads, bridges, intersections, and road facilities, especially for designated city roads that are the responsibility of the government of Bandung City. At the same time, the local traffic police of Bandung City are responsible for ensuring smooth traffic flow on the local roads network and especially at intersections. The police issue driver's licences and are responsible for maintaining vehicle registration processes and the database.

The Environmental Agency (BLHD) of Bandung City is responsible for assessing vehicle emission levels and monitoring air quality in urban areas. The agency also coordinates the climate change studies related to transport infrastructure. The agency also prepares annual reports on the air pollution levels in Bandung City, which are required by the Ministry of Environment's national programme, Blue-Sky.

5.4.1.5. Public transport operators

The public transport service is run by the state-owned operators (DAMRI) and private and individually owned public transport vehicles in Bandung. The state-owned Public Transport Services (DAMRI) operates the bus-based public transport services and manages public transport operations. For running its regular services, a government subsidy is the main source of revenue for DAMRI since the fares are unable to cover the high operational costs. In 2009, the total number of buses in operation was 214 units with twelve operational routes (Bandung Development Planning Agency, 2009). In addition, trains connect the city routes of Padalarang (8 trains per day) and Cicalengka (17 trains per day). This service is provided by the state-owned enterprise, PT KAI (Bandung Development Planning Agency, 2009).

Bandung has a unique feature of a strong public transport workforce union, especially among minibus' drivers. Public transport services are also provided by private operators in the form of minibuses (*angkot*), taxis, motorcycle taxis (*ojek*), pedal rickshaws (*becak*), and horse buggies. *Angkot* has 38 routes with 4,695 vehicles in operation under the management of the Organisation of Land Transport Owners (ORGANDA). ORGANDA also leads three cooperatives (KOBANTER BARU, KOBUTRI, KOPAMAS) (Bandung Development Planning Agency, 2009). ORGANDA is formally acknowledged as representative of minibus drivers, however, the co-operatives are also having their own influence to manage the public transport industry at the local level. KOBANTER BARU

is the biggest cooperative with 9,870 members, 4,544 vehicles and around 7,000 drivers. Drivers are classified based on the route unit and are under the supervision of a Control Unit Coordinator (*KPU*). The owners of *angkot* must become a member of one of the cooperatives, otherwise they are unable to operate their vehicles on the roads. The cooperatives have a monopoly by controlling the routes (Meakin, 2004). The owners are obliged to pay a membership fee to the management of the cooperatives. The cooperatives are strongly organised to protect their interests and respond to any changes in the transport policy.

For non-regular routes, there are 1,225 taxis that are run by 12 private companies, namely Centris, Kota Kembang, PT 4848, Kuant, PRIMKOPAU, PT Borobudur Megah Utama, PT Citra Pratama Intibuana, PT Tara Megah Muliatama, PT Surya Pratama Mandiri, OI Taksi, CV Mitra Lintas Transport, and Bandung Raya (Bandung Development Planning Agency, 2009).

The other option is motorcycle taxi or *ojek*, which operates in 53 locations around the city, with distances ranging from 1 to 5 km; the fare is based on the trip distance and is negotiable. For short distances (1 to 3 km), more than 4,000 pedal rickshaws or *becak* are available in the 60 locations that mostly operate around the markets and trade centres.

5.4.1.6. Non-government organisations

Non-government organisations play advocacy roles in transport planning in Bandung City. These organisations include the Indonesian Chamber of Commerce and Industry (KADIN), the Organisation of Land Transport Owners (ORGANDA) and civil society organisations, such as the Bandung Creative City Forum (BCCF), and mass media, such as *Pikiran Rakyat*. Transport Research Groups from the national university, such as ITB, also contribute to transport decision-making processes in Bandung City.

The Indonesian Chamber of Commerce and Industry (KADIN) represents the private sector for policy advocacy for commerce and industry, including the transport industry. KADIN actively negotiates transport projects with provincial and city governments. KADIN also works together with the Organisation of Land Transport Owners (ORGANDA). ORGANDA of West Java Province has branches in each city and district including Bandung. Together with the Transport Department, ORGANDA has been

involved in designing public transport routes in Bandung. ORGANDA of Bandung City organises land transport for city buses, containers, and other transport freight services.

Other city institutions are also involved in transport decision-making and consultation. The Bandung Creative City Forum (BCCF) plays a constructive role in advocating the use of paratransit and public transport services in Bandung. BCCF conducts events and public campaigns that raise awareness of the importance of paratransit as a means of public transport to serve society. Local newspapers such as *Pikiran Rakyat* act as a platform on which people can participate in providing inputs and comments on urban transport in Bandung City. Transport Research Groups from ITB and other local universities are made up of academics and transport experts who conduct research and collect transport data, which is useful in transport policy-making in Bandung.

In short, transport decision-making in Bandung City has involved both government and non-government organisations. The processes have been influenced by nine government organisations from the government of West Java, eight organisations from Bandung City Government, and three non-government organisations. These organisations are responsible for transport planning, operation, and advocacy. The decisions around urban transport policy and planning have emerged from the coordination, coalition, and negotiation among these organisations. This includes the implementation of the Bus Rapid Transit (BRT) policy and planning in Bandung City.

5.4.2. BRT decision-making in Bandung

The BRT system, branded as Trans Metro Bandung (TMB), aims to improve the quality of public transport services in Bandung. The vision of TMB is to enhance the safety, comfort, punctuality, and quality of public transport services within affordable fares. TMB aims to introduce new infrastructure and a culture of using public transport to the public and the transport industry. The BRT system is perceived as implementing modern technology for travelling supported by high-quality stations and smart-card fare collection to replace the traditional methods of cash payment.

The BRT in Bandung was introduced as part of the central government policy for public transport improvement programmes after the successful implementation of the

265/2008 under the Bandung Department of Transport to plan and implement the BRT system. The UPT TMB played a central role in the development and management of the BRT in Bandung. The UPT TMB received funding and subsidy from the government of Bandung city, but its authority is limited to manage the designated lanes for BRT buses. This unit is responsible for communicating with multiple stakeholders from government at central and local level as well as with non-government organisations, the private sector, and transport experts from local universities. After the implementation of two BRT corridors, the ITDP provides technical assistance directly to the Bandung City government/UPT TMB in terms of planning, designing, and implementing the BRT system for third corridor.

Table 5.2 : The chronology of BRT in Bandung

Timelines	Details
2005	After the Central Government initiative, Bandung City sent proposal for BRT Project to Central Government (BSTP) bypassing the West Java Provincial government MoU signed between Bandung City Government and Central Government (MoT)
2006	BSTP-MoT provided 10 buses for BRT Corridor 1
2007	DAMRI won the tender for the procurement and operation of BRT The first trial started in April 2007 on unfinished infrastructure, designated lanes for BRT buses were requested for the middle of roads; where not permitted, the left lane was used
2008	Mayor Dada established UPT TMB to manage daily operation of BRT buses Public demonstration and violent protest took place in December 2008 during the initial launch of BRT
2009	BRT Corridor 1 is in operation in September with limited functions

Source: Author from fieldwork

The BRT project adopted a top-down planning approach in which central government proposed the project while city government designed and implemented the project without any proper BRT guidelines, funding, and technical supports. The supports in terms of the technical help of ITDP was received for the third corridor of BRT, which still an on-going process in the time of writing this thesis. This project did not adopt the more common hierarchy of government decision-making, which characterised by a strong role played by the provincial government in designing and implementing transport projects in provincial cities. The provincial government is seen as representing central

government. The central government has negotiated a separate agreement with the West Java Province to provide for BRT buses that will operate within the boundaries of the province.

Overall, the decision-making in BRT project planning and implementation is divided among government and non-government agencies. The central government decided to cater for the provision of BRT buses and Bandung government must take the responsibility of building the stations, which are not sufficient from its local funding. In dealing with this funding problem, Bandung government offered the private sector to build the stations with private funding, in return for the free advertisement taxes. DAMRI won the tender for the operational of BRT, but not for construction of stations. Therefore, Bandung government depended on the private sector funding for the stations and used limited local public funding for the operation and maintenance of BRT buses, which limited to provide a high-quality public transport service.

5.5. Bandung transport policy review

This section critically reviews urban spatial planning policy, urban development planning policy, climate change policy, and urban transport policy to identify key themes that emerged and influenced transport planning dimensions in Bandung. These documents have been prepared by the central, provincial, and city government departments because of their responsibilities to urban transport development in Bandung.

5.5.1. Urban spatial planning policy

The urban spatial planning policy for Bandung City is decided at three government levels (central, provincial, and city government). At the city level, the Bandung Development Planning Agency prepared the urban Spatial Plan in 2004. The Plan aims to create spatial arrangements that are safe, convenient, productive, effective, efficient, sustainable, and environmentally friendly (Article 3) (Bandung City Government, 2011c). This plan was enacted as the local government regulation No. 18/2011 reflecting the agreement between the executive and legislature in Bandung. The Spatial Plan of Bandung City has been revised three times, in 2004 (local Regulation No.02/2004), in 2006 (Local Regulation No. 03/2006), and in 2011 (Local Regulation No. 18/2011) respectively. The last revision

was the result of the adjustment made to the Law No. 26/2007 on Spatial Planning so that it can be used to develop policy guidelines for the next 30 years in Bandung.

The Bandung Spatial Plan has made a specific arrangement for the transport system. In Article 9, the Spatial Plan emphasises the development and improvement of transport services based on integrated and manageable public transport. It has proposed monorail, trams, sky-bridge, heavy railway, BRT, and inner toll-roads in Bandung (Article 28). Having bus lines instead of BRT development was mentioned in the 2011 revision, which provides guidelines up to 2031. This does not bode well for the BRT plans because their integration with other public transport modes is a difficult task, which cause by differences in the organisations of operators and management systems regarding routes selection and payment methods. However, it was noted that these projects need further assessment to ensure sustainability.

At the city level, the dominant role of the Planning Agency of Bandung City (BAPPEKO Bandung) is reflected in the formulation of spatial planning policy, and financial and development planning policy. This agency also coordinated climate change policy with the Environmental Agency of Bandung City and the transport policy in close coordination with the Transport Department of Bandung. The Planning Agency of Bandung must coordinate these plans with various departments at provincial government level and ministries at the central government level. Consequently, the Planning Agency of Bandung must build the vertical and horizontal relationships during plan formulation.

During the plan-making process, based on central government regulations, the draft of the Spatial Plan was put out for consultation with the local legislative members and the community. The consultation aimed to gain input and feedback from concerned people and organisations. Consultations were also held with the West Java Province, and the Spatial Plan Division at the Ministry of Public Works (MoPW), which has the power to approve or not approve the content of the Plan. Finally, the city level legislature approved the Plan after ensuring the Plan was aligned with the provincial and central government directions. After local legislature approval, the Spatial Plan was enacted as a local regulation.

Although the planning process involves public hearings and public consultations, the public has little power to change the direction of the Plan, when compared to the power of provincial and central government in determining the outcomes of the Spatial Plan (Spatial planner, Central Government, 2013). Therefore, the spatial planning processes brought out city-wide controversies on various issues, including transport. The public took the opportunity to voice concerns about both the content and the process.

The limitations of the Spatial Plan are also associated with the legal framework that would provide clear guidelines for implementation. For example, one expert mentioned several problems:

There are certain issues related to the implementation of the spatial planning regulation ... the weak legal framework generates conflict and contestation between the spatial plan and the development plan ... lack of comprehensibility in the language used in the spatial plan, difficult to translate, institutional capacity and funding to implementing the spatial plan is low, and therefore politicians are not taking notice of spatial planning (Spatial planning expert 1 interview, 2013)

At the provincial government level, the spatial plan was enacted as the Local Regulation No. 22/2010 on Spatial Planning of West Java Province (Government of West Java Province, 2010). In Articles 13 and 14, the development of mass public transport was proposed to reduce congestion and to support economic activities in the city centres of Bandung. The programme of the Bandung Urban Railway Transport Development was mentioned specifically in the plan with a focus on the Bandung Metropolitan Area (Article 59). However, the concept of a BRT was not specifically mentioned as part of the urban transport arrangements in Bandung.

Lastly, at the central government level, a national spatial planning regulation (general framework for spatial planning) was enacted as Government Regulation No. 26/2008, under the coordination of the Directorate General of Spatial Plans, Ministry of Public Work (MPW) (Government of Indonesia, 2008). In Article 11 and Appendix II, Bandung Metropolitan Area (BMA) is selected as the centre for events on a national scale or as a National Activity Centre (PKN) for industrial activities and services. The city's functions are designed to connect the main transport nodes for a national road network system. The regulation proposed the construction of inner toll-roads, strengthening road hierarchy and building a number of flyovers in Bandung City. It also proposed to revitalise the double-

track railway networks in BMA. However, there is no proposal for urban mass rapid transit development, despite the MoT's support for the BRT in this city at the time. In short, the review of central, provincial, and local spatial plans shows that central government focuses on the development of road infrastructure development in BMA, provincial government focuses on regional transport planning connections between different cities and districts, while urban transport focuses on networks, movement, and public transport in the city.

5.5.2. Urban development planning policy

Urban planning policy documents refer to the long-term development plan (*RPJPD*), medium-term development plan (*RPJMD*), and the annual development plan (*RKPD*). These documents are prepared by Bandung City Development and Planning Agency (BAPPEDA) as stipulated in the Planning Law in 2004 (Republic of Indonesia, 2004b). The plans were prepared through various stages, including draft plans being prepared by local consultants through a bidding process and public meetings (*Musrenbang*) as a form of community participation. These documents are guided by spatial plans at both central and provincial government levels.

Urban planning documents and guidelines, which inform urban development, are as follows:

- The Bandung annual development plan (*REPETADA – 2002*)

Before the implementation of the Planning Law in 2004, the annual development plan, *REPETADA* (Bandung City Government, 2001) was formulated as an operational form of *PROPEDA* of Bandung City Year 2000-2004 (Bandung City Government, 2001). The vision for Bandung City was to achieve a service city that was safe, comfortable, beautiful, clean, and healthy, translated as *Genah, Merenah, Tumaninah* in the Sundanese language. The strategic agenda for transport aims to improve urban transport management through programmes for the maintenance and improvement of roads and bridges, and development of traffic facilities (Bandung City Government, 2001, p. 17). As an exception, several transport projects were grouped under the heading of 'the crash programme' to help funding decisions. These projects were toll-road access in Gedebage, flyover development in Kiara Condong, and mass transit system development/LRT

(Bandung City Government, 2001, p. 32). All these programmes were expected to enhance the economic activities and attractiveness of Bandung City.

- The long-term development plan of Bandung City (RPJPD Year 2005-2025)

From the Planning Law of 2004, Bandung City Government has formulated a long-term development plan (RPJPD) for 2005-2025, enacted as Local Regulation No. 08/2008 (Bandung City Government, 2008). The plan aims to achieve urban development targets for 20 years with the vision for Bandung being a sustainable city with the slogan 'Bandung as a dignified city' (*Bandung Bermartabat*) (page III-3). The targets for the transport sector are to develop the transport system to ensure safety, efficiency, and convenience, and to be environmentally friendly (page III-3). Road construction and maintenance is aimed at improving the condition of existing roads. The length of roads that are in good condition is expected to increase to cover from 2.5% to 5% of the total area of the city (page IV-24). Mass rapid transit was mentioned on page IV-19. However, the Plan does not specifically state that the BRT system is part of the transport system.

- The medium-term development plan of Bandung City (RPJMD Year 2009-2013)

The medium-term development plan for Bandung City (RPJMD) for 2009-2013 was revised twice, in 2009 and 2011. In the last revision, the plan was enacted as Local Regulation No. 08/2011 (Bandung City Government, 2011b). The plan sets strategies and policy directions for achieving development goals with development indicators. In the transport sector, issues are lack of transport infrastructure, traffic congestion, air pollution, and little accessibility to mass public transport for citizens (page 66). Road construction and maintenance so roads are in good condition was targeted to increase to cover 3 % of the total area of the city (page 110). It also proposed that the development of mass rapid transit be planned according to the local resources and capacity (page 76). The BRT system was mentioned briefly, to have five corridors running by 2013 (page 111). The target is the establishment of a consortium through which each bus of the BRT will be replaced by 3 minibuses/*angkot* (page 111). The budget estimation is not specifically explained in this plan.

5.5.3. Climate change policy

Climate change policy documents also have an impact on decisions taken at different levels. The West Java provincial government prepared a climate change action plan in 2012 for the first time. The document was based on central government's guidelines for developing local action plans for GHG emissions' reduction in 2011 (Ministry of National Development Planning, 2011). At the provincial government level, the climate change action plan was enacted by Governor's Regulation of West Java Province No. 56/2012 (Government of West Java Province, 2012). In this document, the transport sector is combined with the energy sector and focused on a mitigation strategy rather than an adaptation strategy. The target is to achieve a 15% reduction in fossil fuels consumption by 2025. Supporting activities include monitoring the quality and quantity of fossil fuels' consumption; vehicle emission testing; traffic management and railway development. There was no detailed explanation in which the BRT system was referred to as part of the solution to issues of climate change. The plan also lacks a detailed timeline, budget estimate, description of resources needed, and explanation of organisational arrangements.

In 2012, Bandung City Government produced a report on Bandung: *Kecamatan Profile - Climate and Disaster Resilience* (Bandung City Government, 2011a) in collaboration with the International Environment and Disaster Management Laboratory Graduate School of Global Environmental Studies, Kyoto University and the Bandung Institute of Technology (ITB). The report aims to assess local capacity and resilience to climate change disaster focusing on 30 sub-districts in Bandung City. The study focuses on physical, social, economic, natural, and institutional dimensions. However, the analyses have not been incorporated into a local climate action plan for all development sectors with specific policies, strategies, and budget-allocation estimations.

5.5.4. Urban transport policy

In 2009, Bandung formulated the Transport Master Plan. The Plan provides detailed strategies for development of the transport system for the next twenty years in the city. The Plan focuses on three strategies: network capacity development, public transport development, and transport demand management (see Figure 5.9). The Plan emphasises "creating public transport for Bandung City 2010-2030 that reliable, comfortable, and

humanistic” (Bandung Development Planning Agency, 2009, pp. 11-11,). The plan describes LRT/Monorail, BRT/Busway and Skylines projects. However, the BRT was rationalised in this plan because the BRT-buses had already been received by the city government in December 2006.

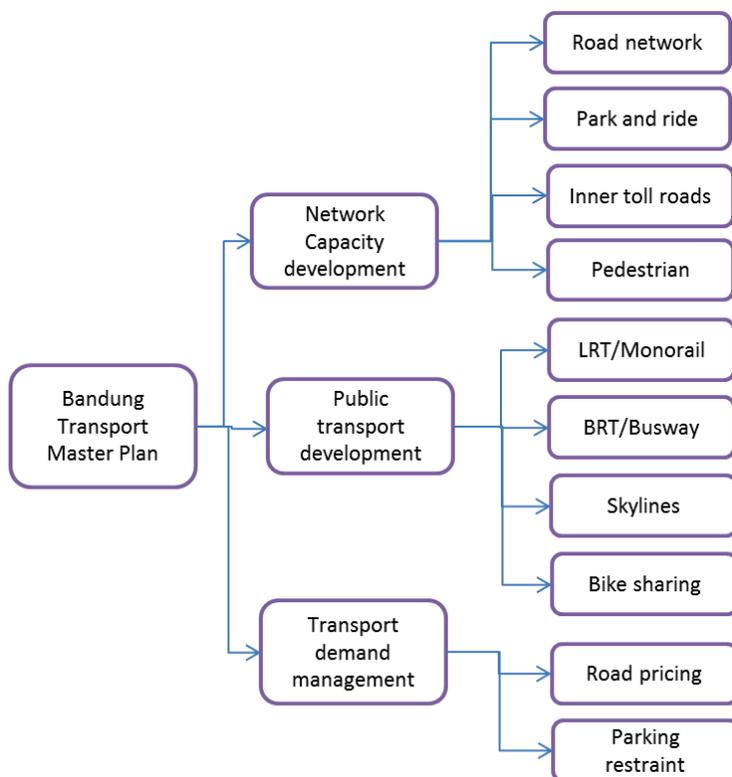


Figure 5.9 : Bandung Transport Master Plan
Source: BAPPEDA Kota Bandung (2009)

A Public Transport Master Plan was prepared for the Bandung Metropolitan Area (BMA) in collaboration with the French Government. Indonesia received a grant of one million US dollars from the French Government to prepare infrastructure projects related to railway development. This funding has been used to produce urban transport policy, strategy, master, and action plans for the BMA. SNCF International, a French consulting company, undertook the studies in collaboration with the Ministry of Transport, West Java Provincial Government, and Bandung City government, and included transport experts from the Bandung Institute of Technology (ITB).

The study focused on the development of railways for urban and peri-urban areas of Bandung City. For urban areas, it was proposed to combine different transport projects such as monorail, busway, cable car, sky-bridge, bus service, and existing local transport services. For the peri-urban areas, it was planned to have railways and bus services. The

study also estimated the cost of transport infrastructure investments, economic analysis, funding schemes, and traffic volume. However, due to the expertise of SNCF in the railways business, all the options to improve urban mobility are directed toward technical approaches to railway development. Therefore, this study pays less attention to the BRT system.

5.5.5. Bandung BRT studies

The studies of BRT development in Bandung were mostly conducted after the first implementation of BRT's Corridor 1. Pressure from central government made the Bandung government speed up the implementation of the BRT system. This has resulted in the following hierarchical planning stages being ignored, which are required to make urban transport sustainable. The head of UPT TMB stated that

The BRT project has been accommodated in Bandung City long-term development plan (RPJPD) Year 2005-2025 and Bandung City medium-term development plan (RPJMD) Year 2009-2013.
(Head of UPT TMB interview, 2013)

After the signing of the MoU between the MoT and Bandung City in 2005, the planning documents for BRT were unavailable before the implementation of the BRT project.

In 2006, central government delivered ten buses to the Bandung City Government. In 2009, the Planning Agency of Bandung City produced the urban transport master plan for Bandung City, in which the BRT project was accommodated as part of the urban transport system. The transport master plan proposed thirteen different corridors to develop a comprehensive BRT system in Bandung. Other essential documents such as a feasibility study and detailed engineering designs were not prepared before the operation of the first corridor in 2008 (Transport engineer 1, Bandung City, 2013; Transport engineer 1, IDA, 2013). However, the Minister of Transport's regulation No. 10 was enacted in 2012, providing detailed guidelines for the development of BRT systems in any Indonesian city (Ministry of Transport, 2012b).

- A feasibility study for corridor development for Trans Metro Bandung's routes – 2010

In 2010, the Research Centre for Community Development of ITB (LPPM-ITB, 2010) conducted a feasibility study regarding corridor development for Trans Metro Bandung

routes. This study outlined the comparison of BRT implementation in other cities and summarised previous studies on public transport in Bandung. However, there was no detailed calculation for assessing the economic and financial feasibility of BRT development in Bandung to guide decision-making.

- Cost estimation for transport infrastructure development in Bandung City – 2010

The Planning Agency of Bandung conducted this study of the capital cost estimation for transport infrastructure development projects in Bandung City in 2010. This study aims to estimate the capital cost of building BRT and monorail. For the BRT project, costs were calculated for busway lanes, shelters, buses, and other supporting facilities. The buses and shelter development costs varied according to the types and designs selected. The study informed decision-makers only about the initial information for transport investment. Consequently, there was little comprehensive information about the total initial capital costs that would allow decision-makers to allocate local public budgets for BRT investment.

- Study of concept formulation for BRT standards for facilities and infrastructure in Indonesian cities – 2012

In 2012, the Research Centre of the MoT conducted a study for formulating facilities and infrastructure. This study aimed to evaluate the performance of the BRT system in eight provincial cities in Indonesia (Pekanbaru, Palembang, Bandung, Yogyakarta, Semarang, Surabaya, Denpasar, and Manado). The results of the study are central to the formulation of standards concept for facilities and infrastructure for the BRT. The differences in city characteristics are mentioned as the focus for adoption and adaptation analysis of BRT standards. The technical standard from BRT guidelines from the ITDP's perspective was the main reference for formulating the national BRT standard. The main issues are that there is no priority to secure designated lanes and the high operational subsidies for BRT buses. For Bandung City, on page V-68, the study highlighted that the MoT provided the BRT buses, while the Bandung government provided the designated lanes, bus stations and ticketing.

These studies were conducted after the implementation of the BRT system in Bandung. The findings were used to inform the decision-makers after the operation of the system, but not before the planning stage of the BRT project. Oktora (2013) stated the irony.

In Bandung, all transport experts are resided, however, traffic congestion is getting worse with no real solutions.

The same comments were also made by transport reporter working at national newspaper in Jakarta. He criticized that Bandung's transport experts worked all over the country, but did not make a difference in their won city to solve transport problems (Media person 3 interview, 2013). As a result, limited studies are available to run public transport improvement projects. The lack of planning documents availability to guide the implementation of the BRT project possibly led to tensions in the planning and policy process.

5.6. Policy tensions in the BRT project

This section aims to identify multi-level tensions in transport planning and policies as conceptualised in Chapter 2. Using the theoretical framework as shown in Figure 2.1, this section presents multi-level tensions in the development of the BRT systems in Bandung. The tensions emerged due to the institutional settings in which power existed in Bandung. They can be categorized as institutional-financial power, socio-political power, discursive power and communication and participation gaps.

5.6.1. Institutional-financial power of higher level governments

Previous sections clearly show that Indonesia follows a top-down hierarchy. Central government formulates national policies and planning mechanisms that are generally followed in provincial and local policies and plans. For example, regional, provincial, and local spatial plans have to follow guidelines provided by the National Spatial Plan. Transport and climate change policies follow a similar vertical alignment. The vertical alignment gives the power of setting agenda and projects to higher-level government in Indonesia.

In the case of the BRT, the central government chose Bandung to replicate the TransJakarta experience of building a BRT system. This central government (MoT) initiative was sped up by the signing of a MoU with Bandung City Government and the provision of 10 buses to the city. The government of Bandung City has established a dedicated Technical Implementation Unit (UPT) for BRT system in Bandung (Trans Metro Bandung), called UPT TMB. After handing over the buses, the MoT put pressure

on UPT TMB to start BRT operations without waiting to complete detailed studies. The UPT TMB could not afford to lose the support of central government and an official from the local transport department stated:

BRT development in Bandung is central government policy, we just have to accept it and do it, because if we do not do it now, no further support for buses will be available for our city.
(Transport planner 1 of Bandung City, interview 2013).

However, it was not simple to kick off the initial trial of the BRT operation. To be accepted by the public, the BRT required dedicated lanes, frequent routes, and good quality station infrastructure. Central government (MoT) required UPT TMB to allot an operational licence to BRT buses, which required clearing on-street parking to secure lanes for BRT buses. However, the local Revenues Department administered the parking system in the city and saw on-street parking as a source of local revenue for Bandung (Transport official 2 of Bandung City, interview 2013). Local businesses also saw street parking as a viable option for their customers (Transport expert of Bandung City, interview 2013).

Similarly, the UPT TMB in Bandung's Transport Department had to coordinate with the Project Manager and the Procurement Unit when undertaking the tender processes for BRT operational and shelter development. In parallel, the UPT TMB had to coordinate with central government – the Ministry of Public Works (MPW) and the Ministry of Transport (MoT), to secure licences for using national roads for BRT operations and when building shelters along national roads, and when the BRT Corridor 1 was planned. However, the dedicated lanes were not available due to the different authority for managing roads (Alamanda, Putro, Hermawan, & Utomo, 2010; KPPU, 2009). Thus, the UPT TMB was under pressure from the MoT to initiate the BRT system, secure dedicated lanes from the national roads and to negotiate with the Revenues Department on parking issues.

The absence of detailed guidelines on the BRT from the central government also created problems associated with the weakness of the UPT TMB's position in negotiating these issues with other organisations. The central government guidelines and regulations for public transport were developed in 2012, which provided a statutory basis from which the UPT TMB could negotiate further corridors with other departments.

The central government adopted a 'project approach' to build the BRT in Bandung rather than a holistic approach integrating different planning documents to solve transport problems (Transport engineer, NGOs, 2013). Therefore, the horizontal alignments were either weak or missing in various planning documents. This was because so many organisations at multiple levels were responsible for preparing the documents and implementing transport projects. For example, in the case of the BRT, the procurement of buses was the responsibility of the Director of the Urban Transport Development System (BSTP), under the Directorate General of Land Transport at the Ministry of Transport. The Bandung government was responsible for the provision of shelters, bus stations, and other TMB facilities and secure dedicated lanes for BRT buses. The construction of bus stations, shelters, and supporting facilities was the responsibility of the Technical Services Unit (UPT TMB) of the Transport Department of Bandung City. The private sector (contractors) was assigned to build the stations and all facilities on contractual basis. The funding for these construction facilities came from the local government annual funds (APBD).

The local government of Bandung City has limited financial capacity to support facilities for a BRT system. IEA (2002) estimated that the capital cost range from US \$ 1 million to 8 million /km was required to build the BRT system. The Jakarta Government spent US \$1.3 million/km as the construction cost of TransJakarta (Sutomo, Romero, & Zusman, 2012). While central government perceived that the BRT development in Bandung as "a pilot project" by providing ten buses, the creation of a new organisation and infrastructure needed a substantial amount of funding. Local revenue in Bandung is mainly generated from taxes and advertising and was insufficient to cover the infrastructure costs of the new BRT system. The funding issues created nearly two years of delay before BRT implementation after the new buses were delivered in 2006. According to the mayor,

We just want to run the BRT project like TransJakarta, but there are so many constraints so that the concept has not been perfected.
(Mayor Dada Rosada as cited in Pikiran Rakyat (2008c))

In addition, the financial dependency is reflected in Bandung City,

We do not have enough money for a huge investment in urban transport projects; we need the help of the West Java Province and from the central government, particularly for the BRT project.

(Urban planner 2, interview, 2013)

Funding issues led to a lack of stations and shelter development along the BRT corridors. The contractors responsible for building the shelters and stations were unable to finalise the 32 stations required for Corridor 1 and 20 stations for Corridor 2 (Pikiran Rakyat, 2011). For shelter development, funding was expected from the private sector, PT Bianglala, which compensated with advertising locations and tax reduction (Transport official 3, Bandung City, interview, 2013). In parallel, the business plan for BRT did not clearly set up the strategies and sources of revenues to support sustainable funding for the operation of the BRT system. The UPT TMB relied heavily on the Bandung Government's annual budget, which is limited and generally allocated to local road construction and maintenance. The initial capital cost for BRT development was from Bandung's Annual Budget (Legislative member 1, Bandung City, interview, 2013). Vehicle taxes are managed by the provincial government and shared with the Bandung City Government, but this funding source has not been earmarked for BRT-based public transport (Tax official 1, West Java Province, interview, 2013). In short, the Bandung City government was financially dependent on higher-level government (heavily on the central government in the case of the BRT) and to some extent the private sector to develop a BRT system in the city.

There are some limitations in working together with the private sector to develop the BRT system; participants of this research highlight these limitations.

We understand the solution to traffic congestion in Bandung is by developing an effective public transport. But the development of BRT is lagging because we relied on the private sector, and their funding capacity is also limited.

(Local politician 1, interview, 2013)

Public transport investment is not an attractive investment for the private sector. This is because of the low rate of return of its investment.

(Urban transport 4, interview, 2013)

It is the obligation of the government to provide a public transport system to meet local needs. By giving up this responsibility to the private sector, it weakens the role of government.

(Local politician 2, interview, 2013)

Bandung City government lacked the human resources and technical capacity to design and implement a BRT system in the city. This was an opportunity to involve local experts, but scepticism about the involvement of local experts in the transport decision-making processes was pointed out by the planning agency

The academic experts from transport engineers, transport planners, and urban planners who worked for the local government do not understand the rule of the game and shared authority within the government institutions from central government to provincial and city government levels.

(Transport planner Bandung City, interview, 2013)

One official mentioned that

The knowledge and contribution of local transport experts did not accommodate the planning and policy interventions from the higher level government, which create problems for us.

(Transport Engineer 1 interview, 2013)

In the planning stage for BRT's Corridor 1 and Corridor 2, the designing of Bandung's BRT was undertaken by public servants who were not highly trained and not familiar with the BRT design (Urban transport expert interview, 2013). As a result, the BRT planning design was not up to the standard set by the ITDP guidelines for TransJakarta. It has resulted in the poor performance of the planning and execution of the BRT project.

In the initial planning of the BRT in Bandung, there was limited technical support provided by the central government and the international organisations such as ITDP and GIZ (Nugroho et al., 2014). ITDP provided technical assistance in building TransJakarta and noted the knowledge gaps that existed at both central and subnational government levels as well as among the urban transport planners and engineers. The BRT implementation in Bandung is very slow. The initial plan aims to develop 13 corridors by 2014, but up to the writing of this thesis, only 3 corridors are in operation with limited use. The third corridor was started in 2015 with the technical assistance of ITDP. According to Djatnika, Indrawati, and Don (2015), people in Bandung have no ability and willingness to pay higher fare set by Bandung government and raise a quest about

financial viability of BRT. Therefore, funding other BRT lines is becoming increasingly difficult.

Lack of a specific guideline for the BRT at the central government level will most likely have implications for the implementation of the BRT system at the city level. In the case of Bandung, failures in the grand design of the TMB Project were acknowledged by the head of the UPT TMB. Bandung's Long-term Urban Development Plan (RPJPD) has mentioned briefly the planning and implementation of the BRT system. However, the nature of this planning document has failed to guide a more practical strategies and tactics in executing the implementation of the BRT system at the operational level. Gaps exist between development plans and operational plans exist. Pressures and conflicts with the existing paratransit operations on the same routes trigger dissatisfaction from private operators of private public-transport services. The permit for road-space utilisation also put the TMB Project in the mix along with other modes of transport. Therefore, full BRT implementation as advised by ITDP was not carried out in Bandung City.

Bandung roads were designed according to the guidelines of the US Highway Capacity Manual (HCM), which does not have specified bus lanes. The BRT system aims to improve speed by providing dedicated lanes. However, these goals need justification based on traffic flows and stop distances. This led to technical challenges related to road geometry and traffic data, which appeared in the BRT system design. These challenges cannot be addressed at city level due to lack of human resources capacity. However, the challenges created issues in getting necessary approvals from the central government authority that manages national roads and additional land uses.

The BRT project replaced the conventional lease system of the daily payment to bus operators with a new 'buy the service' system (Transport engineer 2, Bandung City, interview, 2013). The system refers to the government's payment to the operators based on the based on the kilometres being served. As a result, the government set up a specific service standard so operators could focus more on improving the quality of services (Transport policy analyst, NGOs, interview, 2013). However, the drawback of the system is that on both sides, the government is not well prepared with management and human resources (Transport engineer 3, Bandung City, interview, 2013).

Despite all the challenges to the implementation of the BRT, Bandung won, from 2011 to 2014, an urban transport award from central government. The award is known as *Tata Wahana Nugraha* (DPRD Bandung City, 2014). The selection was based on Bandung's performance in managing its urban transport in terms of the security and safety and of the traffic and road transport. This reflects central government's appreciation of Bandung government's efforts in striving to control the BRT project. Although the award recognises the efforts of Bandung City government, achieving a high-quality BRT system is still a dream. Institutional complexities, a lack of financial and human resources, and being dependent on higher-level governments provide clear power over the city government in Bandung.

5.6.2. Socio-political power

Socio-political power refers to the ability of political and community group leaders to influence the directions of policy decision-making. Social and political factors can facilitate or obstruct the BRT projects in Bandung. Local politics play an important role in setting transport directions in Bandung. Bandung City is led by a mayor, who is elected directly by the people for a five-year term. Before the enactment of the Law No. 32/2004, mayors were selected and appointed by local parliaments. Direct election gives the mayor an authority and legitimacy to lead Bandung. The Mayor of Bandung City, Dada Rosada, had a clear vision and commitment to BRT development, which was reflected in the attention given to BRT's planning activities over a short period. The mayor argued that the local government played a crucial role in improving the quality of public transport for the community. According to the transport laws, the government must ensure that public transport is safe, comfortable, and affordable. The BRT is part of the efforts of Bandung City government to improve the quality of public transport services to the community (Mayor Dada Rosada, 2008).

The commitment of the previous mayor of Bandung City was reflected in the agreement between BSTP-the MoT and the Bandung government in 2005 (Transport official 1, Central government interview, 2013). Local political leaders played a major role in decision-making for BRT implementation in Bandung City. The Country Director of ITDP-Indonesia claimed that BRT implementation was highly dependent on the commitment of local political leaders. He argued that

The successful BRT implementation requires the commitment of the local leaders, good political will, strong leadership and vision to improve the public transport in Indonesian cities.
(ITDP Indonesia personal communication, 2013)

The same argument was also put forward by an environmental expert who is concerned with the urban transport system in Bandung and the head of UPT TMB:

The biggest challenge in developing public transport is the commitment to provide public transport toward the implementation stage. This is because urban public transport is a long-term solution to reduce traffic congestion. For short term, the local government can still rely on *angkot* and focus on improving the management of *angkot*.

(Environmental expert, interview, 2013)

The new mayor [Ridwan Kamil] is very enthusiastic with improving public transport, walking, and cycling in Bandung as long as he is not contaminated by politics. He is concerned with the *angkot* and planned to integrate *angkot* with mass public transport systems.

(The head of UPT TMB interview, 2013)

The Mayor is not alone in exercising his power in transport decision-making in Bandung. The mayor needs approval from the Council/House of Representative (DPRD) members to allocate funding to specific development projects. The legislative members represent the people and therefore keep the local government and its executives (such as the local Finance Department and BAPPEDA) accountable regarding financial spending. The role of legislative members is more important because budget details are not widely accessible to all stakeholders. From the perspective of a politician, one of participants stated that,

The executive [the local government of Bandung] has many programmes related to urban transport, but none of these programmes have really provided solutions to congestion. The executive must focus on certain road sections and points where the congestions are critical and start working on those points.

(Local politician of Bandung City, interview, 2013)

The political affiliation of legislative members also influences the relationships between the provincial government of West Java and the city government of Bandung. When the same political parties hold office, local-provincial relationships improve. For example,

Now the Mayor is from PKS Party, and the head of house of representative is also from PKS Party. I believe that it has an influence in the decision-making process especially in the transport sector.

(Official of Planning Agency, Bandung City, interview, 2013)

The same political party is now ruling the city of Bandung and the provincial government of West Java, which will make it easier for communication about the transport programmes and activities.

(Transport planner 2, Bandung City, interview, 2013)

PKS Party now is taking the leadership roles for both the Mayor and the Governor, which is a good sign for better cooperation between provincial and local government.

(Media person 1 interview, 2013)

Tensions emerged from the pressures of central government to implement the BRT after more than two years' vacuum after the buses were delivered in 2006. However, the Mayor denied these pressures,

We just want to run the programme (BRT). We wish that TMB will be run like TransJakarta, but there are so many constraints so that the concept has not been perfected. If we delay, there is a possibility that the buses will be taken away by the MoT, but that is not the reason we precede the operation of TMB.

(Mayor Dada Rosada as cited in Pikiran Rakyat (2008c))

UPT TMB had to deal with the pressure from the legislative members who received complaints from people who were not satisfied with the BRT services (Pikiran Rakyat, 2012). The political leader from the local legislature claimed that “Bandung’s BRT is a project failure” (Pikiran Rakyat, 2012). Entang Suryaman, the head of Commission C of Bandung’s House of Representatives was concerned with the procurement processes of the BRT Project, which impacted upon the quality of services to the public. He has received many complaints regarding the reduction in the number of buses that operated in Corridor 1. He stated that

The operational failure of TMB Corridor 1 included the shelters’ operation and the procurement processes that had to be repeated again. We considered that the management of TMB was failed, due to the repetition of the procurement processes, which impacted upon the services and reduction of operational vehicles daily.

(Entang Suryaman as cited in Robin (2012))

Bandung has a strong lobby of traditional paratransit minibuses or *angkot* drivers and ORGANDA, which represents private bus operators and receives a government subsidy to make fares affordable. *Angkot* drivers established a union that protect the interests of its members against initiatives that will affect their livelihood. *Angkot* drivers’ union are linked with nation-wide public transport operator group, ORGANDA. *Angkot* drivers and ORGANDA receives a government subsidy to make fare affordable. Therefore, the implementation of the BRT system in Bandung has been resisted by the ORGANDA and

angkot's drivers. This is because of a fear of decreases in income; they were already struggling to compete with the growing number of motorcycles and motorcycle taxis and the BRT would make their income much worse. According to the head of ORGANDA (2013),

The public transport industry was already in a difficult situation, and with the introduction of the BRT project, it decreased the incomes, which threatens the livelihood of the drivers.

(The Chairwoman of ORGANDA Bandung interview, 2013)

There are some BRT corridors and routes that overlap with the existing routes of *angkot*, which resulted in the rejection of BRT by the drivers of *angkot*.

(The head of UPT TMB interview, 2013)

ORGANDA of West Java and Bandung City protested the BRT and put pressure on local government and politicians (see Figure.5.10). Their protest influenced the political decisions. Dada Rosada, the mayor of Bandung City, decided to hold back the BRT project's launching. He attempted to conciliate the protesting drivers and decided to postpone the operation of BRT for many months (Pikiran Rakyat, 2008d). This situation was also explained by Timbul Butar Butar, the head of Bandung's Transport Department, who stated that

We want to cool down first and not operate the buses, as the protesters demand.

(Timbul Butar Butar as cited in Suwarni (2008))

Frictions emerged due to fear and the perception that the BRT project threatened the livelihood of *angkot*'s drivers (the head of ORGANDA, West Java Province, interview, 2013). Due to the strong position taken by *angkot* drivers and ORGANDA, local politics became more complex. On one hand, the mayor would have liked to precede with the BRT projects in the light of central government directions, but on the other hand, he did not want to upset the local people who had voted for him to lead the city.



Figure.5.10 : The protest during the initial launch of Bandung's BRT
Source: Pikiran Rakyat (2008a)

The BRT system was perceived as a competitor that would threaten the existence of *angkot* as the main provider of public transport services in Bandung. Policy makers have different views about minibuses or *angkot* in Bandung. The BRT promoters have seen *angkot* as a source of uncontrolled traffic congestion in the cities (Pikiran Rakyat, 2008b). In contrast, *angkot* were seen to have a certain value when treated as “an indigenous form of public transport” (Transport Engineer 3, Bandung City, interview, 2013). It indicates that some groups in society favoured *angkot* to serve the transport needs of the community. The resistance to accept the BRT project was possibly due to perceived changes in the city's identity, where *angkot* had a history of serving the community (Indie, 2013).

The rise of community groups' movement to change urban development agenda and priorities is happening in Bandung. The Bandung Creative City Forum (BCCF) acts as an accelerator of urban mobility improvement (BCCF, 2014). The forum took a design-thinking approach to engage many participants from various government and non-government institutions to solve the problem of traffic congestion in Bandung. The BCCF includes other communities sharing the same interests and values, such as Riset Indie, Bikers, Sahabat Kota, and Dot Bdg. The BCCF has initiated learning processes across different communities, which related to issues of urban mobility in Bandung. The BCCF

also collaborated with these communities and conducted an “*Angkot Day*” on 20 September 2013 – one day free of payment for public using the *angkot*’s Kalapa-Dago route (Indie, 2013). In order to increase drivers’ incomes, this event attempted to promote the idea that *angkot* can be well managed. The event also aimed to strengthen the role of *angkot* as a popular mode of transport in Bandung and as a response to urban mobility issues in Bandung. It indicates that *angkot* are valued as an identity and part of the daily life of the people in Bandung City, while the recent BRT development, in 2008, did not gain a specific attention in these communities and their networks. In short, socio-political power is associated with the political resource owned by local leaders that can influence policy decisions and BRT policy implementation in Bandung.

5.6.3. Discourses in advancing BRT in Bandung

The Bandung BRT has been advanced by the promotion of progressive but low cost and environmentally friendly discourses. The BRT has been presenting as a “modern” mode of public transport that provides a ‘high quality service’ in planning and policy documents, media, and political statements. This is a strategy used as discourses in gaining more attention and acceptance of the BRT projects in Bandung. For example, BRT branding using ‘trans’ rather than ‘bus’ is designed to present a better and more modern image of public transport to local people. In Bandung, buses are associated with a low quality of service provided for poor people (Member of civil society organisation, interview, 2013). BRT was projected as a ‘high quality service’ that would increase speeds and reduces travel time due to having dedicated lanes on roads.

In Bandung, buses are owned and operated by private owners along with DAMRI buses. It is a deregulated environment run in ad-hoc and inefficient ways. The BRT operation was planned by the ‘modern management’ of public transport operations that had legal backing to implement high-quality services. The head of the UPT TMB (2013) stated that the operation of TMB would change the existing payment method from a cash basis into payment for kilometres travelled. This method would help to improve the quality of public transport because operators could focus on service provision (KPPU, 2009). However, this modern management discourse was not supported by a convincing business plan and an established consortium that would make the BRT investment more attractive to investors.

The BRT was projected as a ‘low-cost alternative’ to building rail-based public transport. Local consultants interviewed during the fieldwork argued that BRT is a ‘low-cost technology’ associated with less initial capital investment than trains require. The term ‘low-cost project’ is a powerful discourse because the Bandung government lacks the funding to build a modern transport system. A member of the local legislature supports a low-cost alternative;

The urban transport system in Bandung is predominantly tailored to expensive motorised means of transport such as building road networks rather than building the public transport.
(Legislative member 1 Bandung City, interview, 2013).

However, other members stress that

...Central government should increase the road length capacity of Bandung along with BRT bus programmes.
(Legislative member 2, Bandung City, interview, 2013).

If we look back to the story of BRT in Bandung, we should blame central government because they did not think about where to place BRT buses in the city like Bandung that was already crowded.

(Urban transport expert 3 interview, 2013)

The low-cost discourse is appealing to central government, but not to the local government. Therefore, the head of the UPT TMB (2013) concentrated on the role of the provincial government of West Java with its strong financial capacity and its ability to undertake wide coverage of public transport services.

The BRT project is associated with the promotion of a ‘sustainable urban transport’ discourse about reducing the impact of climate change. Having this discourse is important to obtain attention from international organisations. IGES, with financial support from the Japan’s Ministry of the Environment, focuses on the quantification of the GHG’s emission from the BRT in Indonesian cities including Bandung (Nugroho et al., 2014). The study shows a reduction of 3,196 tons of CO₂ emissions per year (Nugroho et al., 2014). However, an expert from the environment department argues that the Bandung BRT has been less effective in reducing carbon emissions because of the mixed traffic in which the BRT is operating. Mixed traffic still exists because of permission to change the right of way to designated BRT lanes was unavailable from the Ministry of Public Works.

He further mentioned that Bandung would be unlikely to get dedicated lanes for both Corridor 1 and Corridor 2 due to future plans for flyovers (Pikiran Rakyat, 2008a).

However, it has been argued that BRT buses are running on CNG fuel, which is contributing to a reduction in emissions from the transport sector (BRT expert/consultant, interview, 2013). DAMRI, which runs the BRT buses, has promoted a ‘Go-Green’ campaign by focusing on the conversion of transport energy from diesel to CNG (DAMRI, 2014). Elly Sinaga, the Director of BSTP/MoT stated that the use of BRT can save “the transport energy consumption of up to 40-50%” (Pikiran Rakyat, 2008b). Therefore, the BRT has been promoted by central government to city government as a solution to carbon emissions and climate change (Nugroho et al., 2014). The environmental discourse has advanced the implementation of the BRT project in Bandung.

5.6.4. Communication and participation gaps

The previous sections explain how central government selected and then directed Bandung City government to implement the BRT project. This top-down approach lacked community participation and led to violent protests during the initial launch of Bandung’s BRT project in December 2008. The BRT project was not accepted by local people who felt disadvantaged by the project, which threatened their livelihood.

The BRT started to gain more attention from Bandung City government after the violent protests. It established opportunities for face-to-face dialogue with stakeholders and a public discussion forum conducted by the Transport Department was held (Pikiran Rakyat, 2011). The chairwoman of ORGANDA claimed that *angkot* had helped the government to provide public transport services to the community.

Angkot had been major players in the public transport industry in Bandung, which made Bandung different from other cities that implemented the BRT system.
(The chairwoman of ORGANDA of Bandung, interview, 2013)

The participation of the existing public transport owners’ organisation, ORGANDA in the BRT project was crucial. However, this participation is difficult to establish in the initial introduction of the BRT project because the local public transport industry led by ORGANDA has felt threatened by the BRT project in Bandung. ORGANDA acts as a

formal association that represents the public transport industry. ORGANDA has a complex institutional structure composed of three different cooperatives (KOBANTER BARU, KOBUTRI, KOPAMAS), several control unit groups (KPU), and *angkot* drivers. The lack of participation to support the BRT project was also caused by the failures to negotiate compensation schemes requested by owners of *angkot*'s drivers to the Bandung City government. Funding limitation of Bandung's government is the main issue in responding well to the compensation schemes.

ORGANDA and its three cooperatives sought six conditions from the Bandung City government to accept the BRT project. At the formal meeting between ORGANDA and the Bandung City government on 27 August 2009 (Bandung City Government, 2009), ORGANDA required that:

- a) the Bandung government remove ten DAMRI buses from the BRT's routes
- b) the minimum distance between BRT's shelters should be one kilometre
- c) ORGANDA and its three cooperatives had to be involved in BRT management
- d) there should be control of motorcycle taxis and minibuses/buses on city and inter-city routes
- e) the Bandung government inform the BRT project with members of the cooperatives whose routes conflicted with the BRT's routes
- f) the Bandung government involve ORGANDA and the cooperatives in the operation of the 29 BRT buses.

The strong union of transport cooperatives in Bandung has been one of the distinguished features of public transport services as compared with many other medium-sized cities in Indonesia. These organisations form a social movement with many drivers involved in the union to protect their sources of incomes. The protesting *angkot*'s drivers were not involved in the consensus between the government of Bandung City and ORGANDA and its three cooperatives (The Jakarta Post, 2009a). In resolving the protest from the *angkot*'s drivers, the Bandung City government offered a consortium model as a platform for participation for disadvantaged groups, so that existing public transport owners could participate in the operations of the BRT. This consortium failed to establish itself because of unclear communication among all actors as stated below:

There are tensions within the ORGANDA's internal organisational management because of conflict of interests among members, which caused

problems in providing public transport services. This is making our life difficult especially when 8-10% of our local people are highly dependent on the transport sector.

(The head of ORGANDA of West Java Province, interview, 2013)

All board members of ORGANDA are competing to get the new position as director in the newly planned consortium because of financial benefits that the position can offer. This situation delays the progress of establishing the consortium as no one will take up the other position to form a genuine partnership with other actors in the public transport industry, outside ORGANDA.

(The head of UPT TMB interview, 2013)

Competition in securing revenues from the public transport industry led to conflict between the UPT TMB and ORGANDA and also little acceptance of the BRT development by existing public transport operators (Hermawan, Alamanda, Putro, & Utomo, 2010). In short, the planned consortium to manage the daily operational of the BRT buses was also failed to establish during the negotiation between the Bandung government and ORGANDA.

Before the initial launch of the BRT, the head of the UPT TMB stated that ORGANDA had been invited to the initial meeting of BRT but there was difficulty in engaging all the owners of existing public transport.

We talked directly to ORGANDA, and invited the organisations to the meeting discussing the BRT proposal. However, we faced difficulties in engaging all the many stakeholders of existing minibuses that run by a multiple numbers of public transport owners.

(The head of UPT TMB interview, 2013)

The chairwoman of ORGANDA claimed that the lack of participation was due to a lack of proper planning on the Bandung City government. The BRT project was perceived as being planned and implemented without a comprehensive discussion with many stakeholders, which resulted in the failure to establish a consortium that will manage the operation of the BRT buses.

The Transport Department of Bandung City did not well plan the BRT Project. As an organisation of the public transport association, we were involved in the preparation meeting. We have been trying to provide a good public service for the people, but we are in a difficult situation. The government has overlooked our needs such as tax reduction for licencing the routes, spare parts, the fuel price increase, and the falling number of passengers, due to the high rate of motorcycle ownership.

(The chairwoman of ORGANDA of Bandung, interview, 2013)

These views were supported by local transport engineers who mentioned that planning documents such as Bandung's Spatial Plan 2011-2031 (Bandung City Government, 2011c), Medium-term Development Plan of Bandung City (Bandung City Government, 2011b), and Transportation Master Plan of Bandung City (Bandung Development Planning Agency, 2009) lacked detailed designs of a BRT system that the community might be interested in and able to comment on (Transport Engineer 1, Bandung City, interview, 2013). A feasibility study and the economic, social, and environmental impact assessment reports were not prepared prior to the project being commenced (Transport engineer 2, Bandung City, interview, 2013). As a result, the BRT project and its impact on communities were less understood by all stakeholders, especially those who were directly affected by the development of the BRT.

The gaps in the consultation processes between the government and the private operators emerged from the breakdown in negotiations when 'replacing 3 minibuses with 1 BRT bus' (Transport planner 1, Bandung City, interview, 2013; the chairwoman of ORGANDA, interview, 2013). The uncertainty about benefits and risks had not been fully discussed and agreement reached. Communication was blocked by many private owners who had fewer than three minibuses. In parallel, Bandung's Department of Transport was unable to talk to individual owners, and managed to communicate only with the head of ORGANDA represented the public transport owners. In addition, the private owners asked for almost 100 million (IDR) from the city government as compensation for each existing minibus (KPPU, 2009). However, Bandung City government has limited funding and was unable to fulfil this requirement from the minibus drivers. As a result, the BRT's route for Corridor 1 was placed on the outskirts of the city to minimise conflict with existing *angkot* routes and to keep the BRT buses running as pressured by the MoT.

The participation of experts and academics in urban transport groups, which is called the epistemic community, informed the decision-makers by providing knowledge in resolving the urban transport problems (Corfee-Morlot et al., 2011; Dunlop, 2009). An epistemic community refers to the group of experts who studied and contributed to urban transport problems in Bandung. But little information is available about how the interactions between groups and the local government of Bandung could bring about

positive changes in urban transport planning. They participated by establishing research groups around transport and public policy and by conducting seminars to provide knowledge that would help the policy makers. However, the contents of their recommendations and the language used in the recommendations were based on a technocratic approach to planning, which hindered the implementation process.

The challenge is how to make public transport cheaper in Bandung. In designing urban transport planning systems, ORGANDA was not involved directly. There is no agreed clear blueprint among government organisations working on public transport systems at the national, provincial and city levels. The government used technical advice and recommendation from academics and transport experts. However, academic works are mostly influenced by theories that are not practical and easy to apply in the transport sector. (The head of ORGANDA of West Java Province, interview, 2013)

In addition, there is a lack of trust between the government of Bandung and local academics and transport experts. As stated by an urban transport expert,

Disharmony between the Bandung city government and local academics is a long-established problem. The local government suspects that the academics just seeking work on the projects, rather than truly contributing to urban transport development in Bandung. Some academics even complain that their expertise is highly valued more in other cities. (Urban transport expert 4 interview, 2013)

Along with this, the organisational culture of the administration systems within the government institutions was less flexible in adopting the recommendations from the epistemic community. The administration system comprises a lengthy bureaucratic mechanism with strong emphasis on top-down approach. This system has been gained less attention, which resulted in difficulties to implement urban transport solutions as mentioned in the recommendations (Spatial planning expert 1 interview, 2013).

Information and communication technologies and internet surveys were not sufficiently well-developed to engage society in the plan-making processes for the BRT in Bandung. According to the editor of *Pikiran Rakyat*, the local government of Bandung City has poorly managed available information technology as a tool to disseminate information and to gain support for development plans, programmes, and activities from the public.

Public participation in planning and public policy for transport was very limited. The government had a website, but few people trusted the site which was not regularly updated and the way in which information was conveyed was unreliable. (Media person 1 interview, 2013)

Local politicians used attractive slogans for the BRT project which can be found in the local newspapers in Bandung. This is mainly happened to attract people attention, and to gain the voters ‘trust. In the post decentralisation era, city government feels that they are no longer under the authority of the provincial government and supported these slogans.

(Urban transport expert 3 interview, 2013)

Government officials who hold high positions in the offices act as having more power and their subordinates must follow their commands. This situation leaves no space for arguments. There is no communication that is based on arguments to inform decision-making for public transport planning.

(Urban transport expert 4 interview, 2013)

Overall, Bandung’s BRT development project manifested shallow communication and participation arrangements with existing private public-transport operators and the local community. Participation of disadvantaged groups such as the *angkot*’s drivers who might lose their livelihood was not fully accommodated by the government. The community was not fully involved in the project design and their involvement appeared only in token form after the city-wide protest about the BRT project.

5.7. Summary

This chapter reviews urban transport planning and policies in Bandung and analyses how the BRT project was initiated by central government (ignoring provincial government), carried out by city government and resisted by local communities. The analysis shows that central government initially provided buses for the BRT operation as ‘a pilot project’ from which came an obligation for city government to find funding for a modern BRT infrastructure and advance the project as a modern, low-cost, and sustainable alternative. However, the whole BRT development did not take account the Bandung socio-political situation in which local politicians were keen to carry on a BRT project while local transport operators strongly resisted this initiative. As a result, the BRT project was moved to serve the urban periphery, making the project unattractive to residents.

This chapter clearly shows that tensions emerge at the horizontal level between the government of Bandung City and *angkot* drivers’ union in formalizing public transport system, which has long been dominated by the informal public transport operators. The Bandung BRT caused horizontal disintegration reflected in the poor negotiations of city government with local actors such as ORGANDA and DAMRI. ORGANDA and DAMRI

have long-standing roles in providing public transport in Bandung. While DAMRI is privileged to have the main routes within the inner city, ORGANDA has limited access to the routes in the inner-city area. ORGANDA and DAMRI were competing for more access to gain more passengers. Since DAMRI won the tender to operate the BRT system in its initial implementation, ORGANDA has been overlooked in the operation of the BRT in Bandung. ORGANDA was consulted in the first place, but lacked negotiated agreements with the Bandung government, resulting in tensions between ORGANDA, DAMRI, and the Bandung government.

Vertical disintegration is reflected in the urban transport strategies and tactics being implemented by central government in Bandung City, particularly the negotiations for more finance for the BRT project. In addition, this project did not represent the normal hierarchy in which provincial government plays an important role in providing transport infrastructure and services to its cities. The translation of national policy on BRT is responded differently in Bandung. This research identifies the role of local political dynamics and community organisations in policy implementation at the local level. Therefore, strengthening horizontal integration is important to manage problems of disorganised public transport systems in which local leadership in Bandung is essential to promote public transport use.

This chapter highlights the institutional-financial power of the central government, the socio-political power of local politicians and transport operators and the discursive power of storylines advanced in the BRT project in Bandung, along with communication and public participation challenges, which are crucial for an understanding of policy tensions in multi-level transport governance in Indonesia. The next chapter explores the BRT system in Surabaya to identify how power, communication and public participation concerns are different from or identical with those in Bandung.

Chapter 6 Transport planning and policies in Surabaya

6.1. Introduction

This chapter critically reviews urban transport planning and policy in Surabaya, East Java Province. The Surabaya Bus Rapid Transit (BRT) project was selected to analyse patterns in financial, socio-political and discursive power, communication and participation gaps to be seen in public transport governance. This chapter begins with my own experience of using public transport in Surabaya. The following section 6.3 identifies transport challenges and opportunities in Surabaya. Section 6.4 explains transport decision-making processes and key organisations involved in governing public transport. Section 6.5 describes transport and non-transport related policies and how this non-transport related policies have influenced the direction of transport policy in Surabaya. Final section shows tensions in public transport decision-making process for rejecting BRT project at the city level. This suggests power mechanism, communication and participation gaps that hinder the development of a decent public transport system in Surabaya.

6.2. Personal experience of commuting in Surabaya

In August-September 2013, I lived in Surabaya for four weeks to conduct fieldwork. I stayed in the central city where trade centres and government offices are located and used the minibuses to reach my destinations in the city. Twelve-seater minibuses (*lyn* or *angkot*) operate on specific routes. Due to the high frequency of minibuses, there is no printed timetable available for passengers. The bus service charges IDR 3,000 (NZD 0.30) per trip regardless of the distance travelled. Minibuses are overcrowded because of high demand and become uncomfortable for passengers. Standard bus services for Surabaya, called DAMRI, did not operate on the route I used.



Figure 6.1 : Minibuses (*lyn*) and road use by public
Source: Author, 2013

I could have chosen to ride in three-seater rickshaws, two-seater motorcycle taxis or standard taxis. These modes of transport provide flexibility but are more expensive than the *lyn*, with charges based on the distance travelled. Motorcycle taxis were not as common in Surabaya as in Bandung. I used taxi services only in cases of urgency; the unprofessional behaviour of taxi drivers made taxi use unattractive for females. I could walk to nearby offices, despite poor footpaths and amenities for walking because it was quicker than riding a motorized transport (see Figure 6.1). This experience gave me first-hand understanding of the public transport services and challenges, timetables, transport routes, travel distances and travel times in Surabaya.

6.3. Surabaya urban transport challenges and opportunities

6.3.1. Economic role of Surabaya

Surabaya is one of the fastest growing cities in Indonesia with more than 3 million residents in 2011, and estimated to reach 4 million people by 2030 (Surabaya City government, 2007). The city has a population density of 11,000 people per kilometre

(Ambarwati, 2013; World Bank, 2013). This city has multiple functions as the centres of trades and services at regional and national level, and in industry, education, and tourism, and as the provincial centre of government. The map of Surabaya is shown in Figure 6.2 which reflect the location of the city centre and its growing sub-centres that need an integrated urban transport system.

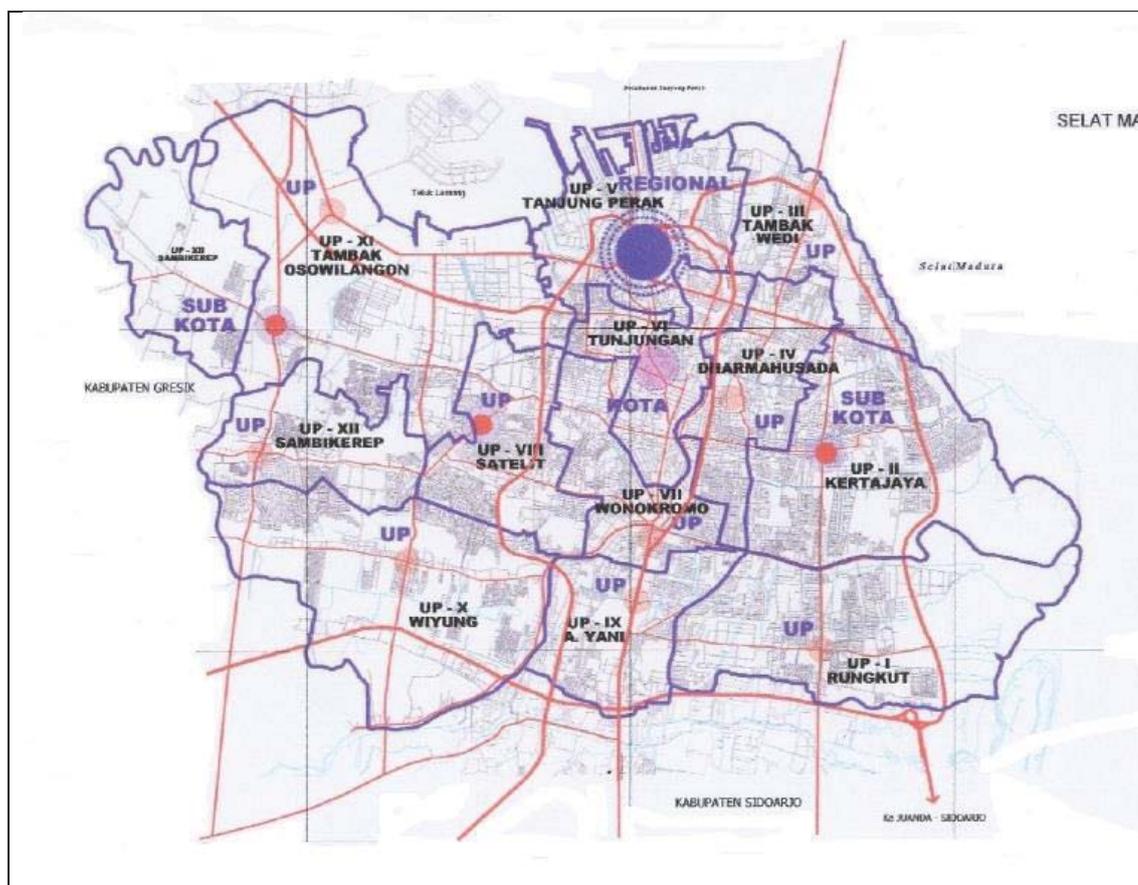


Figure 6.2 : Map of Surabaya

Source: Surabaya City government (2007)

Note:



Regional centre



City centre



Sub-centre



Centre of
development unit

Surabaya is experiencing rapid economic growth. In 2008, Surabaya's economy grew by 7%, higher than the 6.1% growth observed in the national economy (McKinsey Global Institute, 2012; World Bank, 2013). Surabaya's growth was driven by service- and trade-related employment as well as growth in the education and tourism sectors (Surabaya City government, 2007). These sectors were established in Surabaya because the city is located near three ports and alongside key transport nodes that connect the western and eastern parts of Indonesia (Japan Keirin Association, 2007). In 2012, a newly developed

seaport, Teluk Lamong, started contributing to the city's economy (Surabaya City government, 2007). Currently, land use for business and trade makes up around 11% of the total city area (Surabaya City government, 2007).

6.3.2. Urban form and transport system

The central city of Surabaya was designed and developed during the Dutch colonialization era. It was originally developed on compact city principles where walking, cycling and public transport domination on urban streets (Newman, 1996). In recent years, urban growth in Surabaya has expanded to outskirts of the city. People are living in the sub-urban and peri-urban areas and relying on cars as the main mode of transport.

Because of increasing employment opportunities, Surabaya's population has grown rapidly in the last four decades. During 1980-1990, the Surabaya Metropolitan Areas (SMA) experienced a 40% increase in population (Firman, 2004). Traditionally, housing in *the Kampung areas* has been concentrated in the central area, but the new population settled in new suburbs on the outskirts of the city. The compact nature of *Kampung* means trips are short and there is much walking, cycling and use of public transport services (World Bank, 2013). The Surabaya government has promoted a compact city model. However, the government has also invested significantly in road construction to connect all parts of the city. As a result, this strategy has benefitted the suburban housing market scattered in the northern, eastern and western parts of the city (Surabaya City government, 2007).

Surabaya shows a linear pattern in its road network, which connects the north and south parts of the city from Tanjung Perak (seaport) to Waru (Transport Department of Surabaya City, 2012b). The Surabaya government is building ring roads and adding to the lengths of toll-roads to further increase road density. Figure 6.3 shows the existing toll-roads (black lines), primary arterial roads (red lines), blue for secondary collector roads, and green for secondary artery roads.

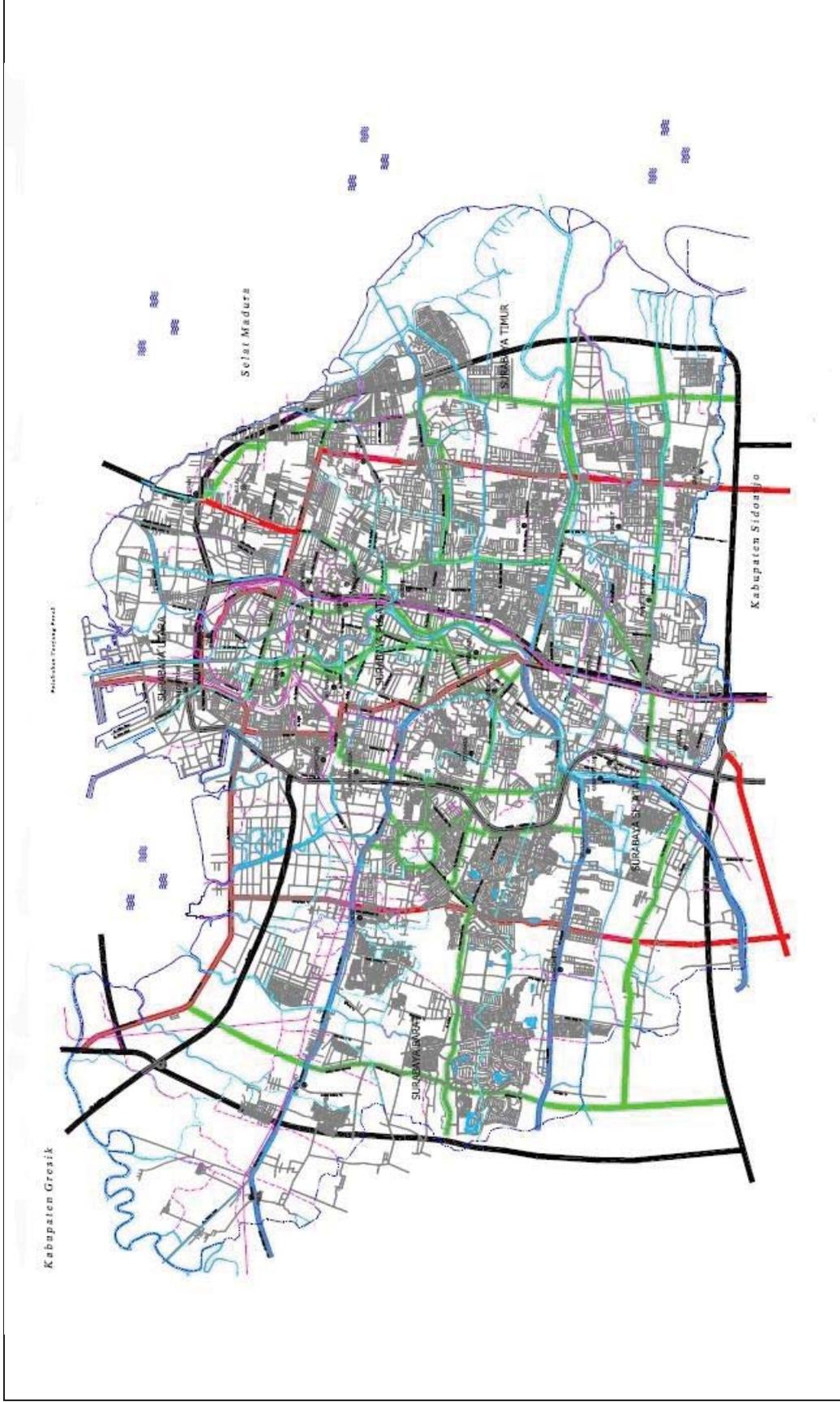


Figure 6.3 : Maps of toll roads in Surabaya
Source: Surabaya City government (2011)

Note: Colour lines show different types of road: Black for the toll roads, red for the primary arterial roads, blue for secondary collector roads, and green for secondary artery roads

Toll-roads in Surabaya were introduced in 1986 to connect Gempol (Teknomo & Gerilla, 1999), but toll-roads are continually increasing to connect the cities of Malang, Gresik Mojokerto, and Pasuruan cities (Japan Keirin Association, 2007; Parikesit, Djarwoningrum, & Setyaka, 2008). Road construction has encouraged 38% of the population to live on the city outskirts and commute daily to city centres (Ambarwati, 2013). Toll-roads in Surabaya are regulated by a central government agency called the Indonesian Toll-Road Authority (BPJT), under the Ministry of Public Works.

Large and continuous investment in Surabaya's roads increased motorisation. New roads were designed according to the American traffic engineering tradition of one-way systems, so vehicles have to travel long distances to reach their destinations. This system of roads makes non-motorised transport impractical in the metropolitan area. Moreover, economic growth brings higher incomes, which also increase the number of cars. According to GIZ (2001), middle to higher income groups in Surabaya use their private cars and motorcycles more often because of the unavailability of decent public transport. In 1998, it was estimated that to travel the same distance by motorcycle would take 30 minutes, by private car (35 minutes) and by public transport (40 minutes) (Purwadi, 1998 as quoted in Ambarawati, 2013, p.6). As a result, there has been a rapid increase in the amount of travel by motorcycle, which comprised 40% of total trips in 2007 (Ministry of Transport, 2008a). The lack of government control over the factory production of motorcycles has worsened the situation because the automotive industry has been contributed to national GDP and employment opportunity for low-skill workers. Car and motorcycle leasing policies have also had a significant effect in increasing motorisation. The numbers of motorcycles increased by 15% annually from 2000 to 2011 while the number of cars increased by 8% annually in Surabaya (see Figure 6.4).

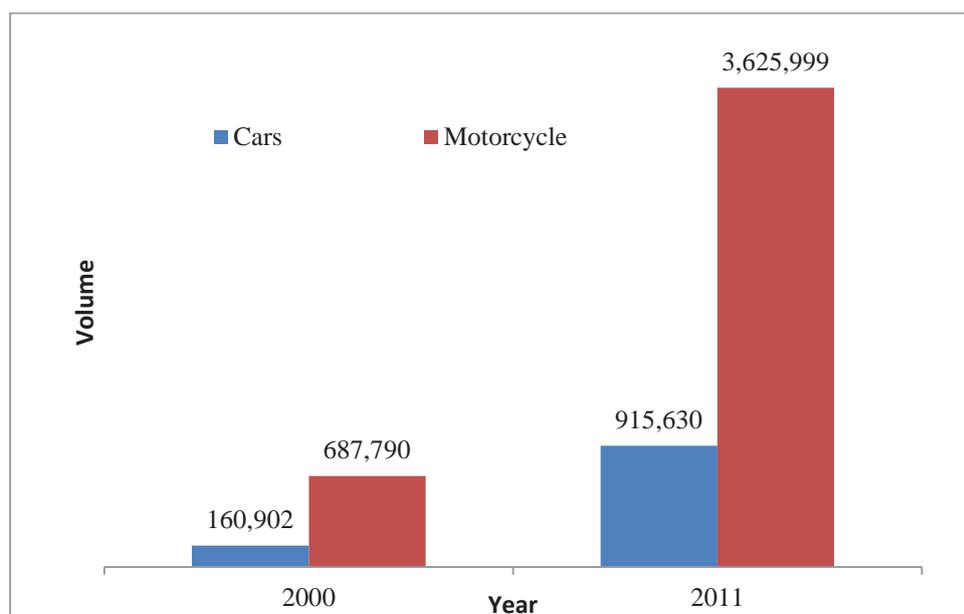


Figure 6.4 : Total numbers of cars and motorcycles during 2000 and 2011
 Source: ADB(2006a), Statistics Agency of Surabaya City(2004)

6.3.3. Transport externalities

The increase in roading and in private motorised transport over time has created significant air quality issues in Surabaya. ADB (2006) stated that in 1991 emissions from the transport sector was “more than 95% of carbon monoxide (CO) and hydrocarbons (HCs)” (ADB, 2006a, p. 4). A recent study of the carbon footprint of Surabaya shows that motorcycles (54%), private vehicles (24%) and trucks (11%) are the major contributors to carbon emissions from the transport sector (Environmental Agency of Surabaya City, 2011). This situation demands a specific transport policy for emissions’ reduction. The city government of Surabaya has no or limited data on both air quality and GHGs emission.

In response to the increasing air pollution, central government set up a Vehicle Emission Standard in 2001 and established testing stations, including five in Jakarta and one in Surabaya (Resosudarmo, 2002). This policy required all owners to test their vehicle emissions, in addition to undergoing random roadside inspections for checking compliance with this policy. However, because inspection requires only voluntary compliance, the outcome has not been very successful (CAI-Asia, 2009).

6.3.4. Urban public transport system

Urban public transport modes in Surabaya include buses, minibuses (*lyn/angkot*), trains, motorcycles taxis and cycle rickshaws (*becaks*). Public transport patronage has been declining continuously due to lack of decent public transport services (ITDP official, interview, 2013). The public transport mode share fell from 36% in 1980 to 15% in 2007 (GIZ, 2001, 2003; Ministry of Transport, 2008a). Despite the increase in population growth, rapid growth in the use of private vehicles, particularly motorcycle, has led to the decline in the use of public transport.

In 2011, the Transport Department of Surabaya conducted a household survey, which found that Surabaya citizens' travel trips are dominated by motorcycle (51%) and by cycle/rickshaw (12.6%) (Surabaya City government, 2011). The popularity of motorcycles and the decline of public transport has come about because of the difference in travel times (as discussed in the section 6.3.2) and the greater convenience of motorcycle transport (Transport Department of Surabaya City, 2012a). The 270 regular bus services operated by DAMRI run on 19 routes on the main roads with main terminal facilities (Transport Department of Surabaya City, 2012b). These buses have 85 seats and generally the fleet is twelve to fifteen years old (World Bank, 2014). Overall, public transport provides a low-quality service in Surabaya.

Unlike the bus system, minibuses run on 59 routes and approximately 5,600 units are in operation (Transport Department of Surabaya City, 2012b). Users of minibuses are mainly low- and middle-income people who accept longer travel times to save the money (Planning Agency of Surabaya City Government, 2007a). For example, to get from eastern to western parts of the city, public transport users have to travel longer routes within the local road networks (Planning Agency of Surabaya City Government, 2007a). The Transport Department of Surabaya and ORGANDA decided the longer travel networks for public transport buses.

Trains in Surabaya provide services to inter-city passengers and are administered by the state-owned PT KAI under the Directorate General of Railways. In recent years, a commuter train was established to accommodate the travel needs of people living in surrounding cities and districts (Transport Department of Surabaya City, 2012b).

Motorcycle taxis provide an informal and unregulated form of paratransit⁴, which services areas where there is a lack of public transport service in Surabaya. The fare is determined by the distance travelled and the routes are customised according to the needs of the customers. The door-to-door service makes the motorcycle taxi a feeder service for public transport users.

Cycle rickshaws (*becaks*) have been a popular mode of transport in Surabaya City since 1940 and are crucially important for unskilled labourers and migrants from surrounding areas. These unskilled labourers are mostly from surrounding rural areas with agricultural background who sought better job opportunities in Surabaya, but ride their *becaks* to sustain their livelihood. *Becaks* have also been part of the city's identity in Surabaya because of their high numbers. This service helps people within the local neighbourhood with a total of 40,000 units in 2001 (GTZ, 2001). *Becak* serves as part of the informal and unregulated paratransit mostly in compact *Kampung* (GTZ, 2009).

Declining public transport patronage provides an opportunity for improving the public transport system. Therefore, the Surabaya government has planned to introduce a BRT, tram and monorail in different corridors of the city (ADB, 2012; Surabaya City government, 2013). The BRT was initiated as one of the solutions to traffic congestion in the city. Prior to its implementation, many studies were undertaken with the support of international development agencies such as IndII, ITDP, World Bank, SIDA, JICA and ADB (ADB, 2012) (IndII, 2010a, 2010b; Meakin, 2004; Midgley, 2011; World Bank, 2012b). However, the implementation of the BRT project has been delayed until now (2015). The Surabaya BRT has been planned around an inner toll-road that connects Tanjung Perak and Waru in the northern and southern parts of the city respectively (Planning Agency of Surabaya City Government, 2007b). The details of this project will be discussed in later part of this chapter.

⁴ Paratransit is an informal public transport that is very common in Asian and African cities. It takes many different forms from minibuses to motorcycle taxis. It has a specific local names, such as *Bajaj* in Jakarta, *Ojek* in Indonesian cities, *Angkot* in Bandung, *Lyn* in Surabaya, *Tuktuk* in Bangkok, *Jeepney* in Manila, *Tro-tros* in Accra, *Dala dalas* in Dar es Salaam, *Danfoss* in Lagos, and *Matatus* in Nairobi (Behrens, McCormick, & Mfinanga, 2012; Joewono & Kubota, 2005).

6.4. Transport decision-making process

Several organisations at different levels are involved, formally and informally, in transport decision-making in Surabaya. Transport planning is a responsibility of the Surabaya government, but their decisions have been influenced by the active involvement and the directions set by the central government and international development partners.

6.4.1. Stakeholders in the decision-making

6.4.1.1. International development agencies

The role of international development agencies is influential in preparing policy and planning instruments for sustainable urban transport development in Surabaya. Many international development agencies have been involved in setting transport directions in Surabaya. The Cities Development Initiative for Asia (CDIA) assisted Surabaya to close the gaps between planning urban infrastructure projects and their implementation. UN-Habitat and ICLEI prepared Surabaya urban's low-carbon emission development strategies. The OECD initiated a programme for Urban Green Growth for Surabaya in 2006. The French Government, through the French National Railway (SNCF) assisted the Surabaya government in conducting studies for the development of an urban rail system. Australian Aid (AusAID) funded the Surabaya Urban Mobility Project (SUMP), which has prepared a transport master plan.

Since 1998, GIZ and ITDP, under the Sustainable Urban Transport Project (SUTP) have helped Surabaya to prepare a public transport and non-motorised transport plan. In 2010, JICA provided a technical assistance to study the potential for a rapid train system between Jakarta and Surabaya. Under Sustainable Urban Mobility in Asia (SUMA) and the Clean Air Project (CAP), the Swedish International Development Agency (SIDA) assisted the Surabaya government with sustainable urban transport projects. The Institute for Global Environmental Strategies (IGES) facilitated cooperation between the Surabaya government and the Japanese Kitakyushu City government for better low-carbon and environmentally sustainable city planning. Under the Urban Resilience programme, World Bank consultants prepared a BRT study in Surabaya, with a strong focus on adopting Ahmedabad's BRT project in India and bringing it to Surabaya's BRT development (World Bank, 2013, p. 143). In addition, the Surabaya government is actively engaged in networks regarding sustainable transport at international and Asia-

Pacific levels to shape transport decision-making and priority setting in Surabaya. In short, international development agencies and their networks are involved mainly in technical assistance and in setting priorities in Surabaya, while central, provincial and city governments are involved in implementing projects. This is exemplified by the history of the BRT project in Surabaya.

6.4.1.2. Central government organisations

At central government level, the Ministry of National Development Planning, the Ministry of Transport, the Ministry of Public Works, the Ministry of Home Affairs, and the Ministry for the Environment are responsible for planning, policy and implementation functions of relevant transport in Surabaya. Table 6.1 shows the functions of the central government organisations related to urban transport policy in Surabaya.

Table 6.1 : Functions of central government organisations in transport policy

Organisation	Functions
Ministry of National Development Planning <ul style="list-style-type: none"> • Directorate of Transport 	<ul style="list-style-type: none"> • Assists the Surabaya government in preparing urban transport projects • Seeks funding from central government to make up for a lack of funds for transport projects in the Surabaya's government budget • Assists in seeking funds from international development organisations
Ministry of Transport <ul style="list-style-type: none"> • Directorate General of Land Transport • Directorate General of Railways 	<ul style="list-style-type: none"> • Organises central government transport programmes in Indonesia • Supervises the development and maintenance of the State-owned Railway, PT KAI
Ministry of Public Works <ul style="list-style-type: none"> • Directorate General of Highways and Toll-road Development Authority • Directorate General of Spatial Planning 	<ul style="list-style-type: none"> • Responsible for planning and implementing national roads programme • Responsible for coordinating and supervising the development of spatial plans for subnational government
Ministry of Home Affairs <ul style="list-style-type: none"> • Directorate General of Regional Development 	<ul style="list-style-type: none"> • Responsible for strengthening coordination among central, provincial and city/district government development programmes and partnerships in urban development projects
Ministry of the Environment ⁵	<ul style="list-style-type: none"> • Responsible for preparing guidelines for emissions standards

⁵ The Ministry of the Environment has been merged with the Ministry of Forests under the new name Ministry of Environment and Forestry based on the new Presidential Regulation No, 16/2015, since Joko Widodo was elected President of Indonesia in 2014. The term Deputy of Environmental Degradation Control and Climate Change is now changed to the Directorate General Climate Change Control.

Organisation	Functions
<ul style="list-style-type: none"> Deputy of Environmental Degradation Control and Climate Change 	<ul style="list-style-type: none"> Assists subnational government in preparing for the local climate change actions plan to comply with the national government target

Source: Ministry for National Development Planning ; Ministry of Public Works ; Ministry of Home Affairs ; Republic of Indonesia (2014)

6.4.1.3. Provincial government organisations

The Provincial Government of East Java coordinates central government transport development policies with city- and district-level policies. The Development Planning Agency of East Java Province (BAPPEDA) coordinates development plans and formulates regional development plans and spatial plans. The Department of Transport of East Java Province works closely with the Police Department in setting rules and regulations for traffic management and road safety. The Provincial Highways Department prepares the plans for construction and maintenance of provincial roads in urban and rural areas for regional connectivity. The Environmental Agency implements emission standards and evaluates the implementation of Environmental Impact Assessment (EIA) reports required for development projects. Alongside its safety function, the Police Department registers vehicles and collects vehicle taxes. In addition to these formal provincial government departments, the House of Representative of East Java Province (DPRD) controls budget allocation and monitors infrastructure projects. Figure 6.5 shows provincial government organisations according to the areas of their responsibilities and tasks.

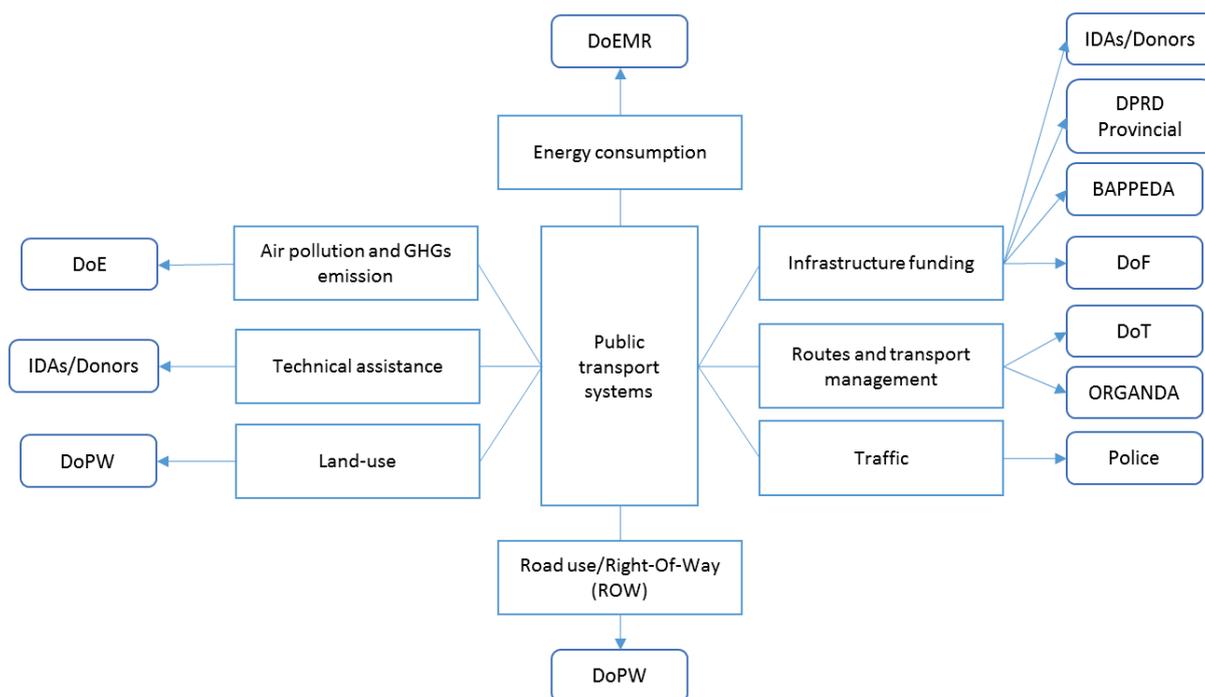


Figure 6.5 : Provincial government organisations

Source: Author from fieldwork

6.4.1.4. City government organisations

Like the Provincial East Java government, Surabaya has a Development Planning Agency (BAPPEKO), Highway Department, Transport Department, Housing and City Planning Department and Traffic Policy Department. BAPPEKO formulates the urban policy of Surabaya in collaboration with provincial, central, and international organisations. BAPPEKO also actively engages universities and reports to the mayoral office. The Surabaya Transport Department designs public transport network plans, issues licenses for public transport operations and liaises with the Land Transport Owners Association (ORGANDA). However, the City Highway Department managed the road infrastructure for public transport. Surabaya also has a Housing and City Planning Department and an Environmental Agency, responsible the use of land for urban development projects and environmental measurements respectively. The House of Representative (DPRD) of the Surabaya government brings the ‘voices’ of the citizens’ to the monitoring of development projects. Figure 6.6 shows city government organisations in governing public transport systems. The Department of Energy and Mineral Resources (DoEMR) is unavailable at the city level because the provincial government must manage transport and energy consumption.

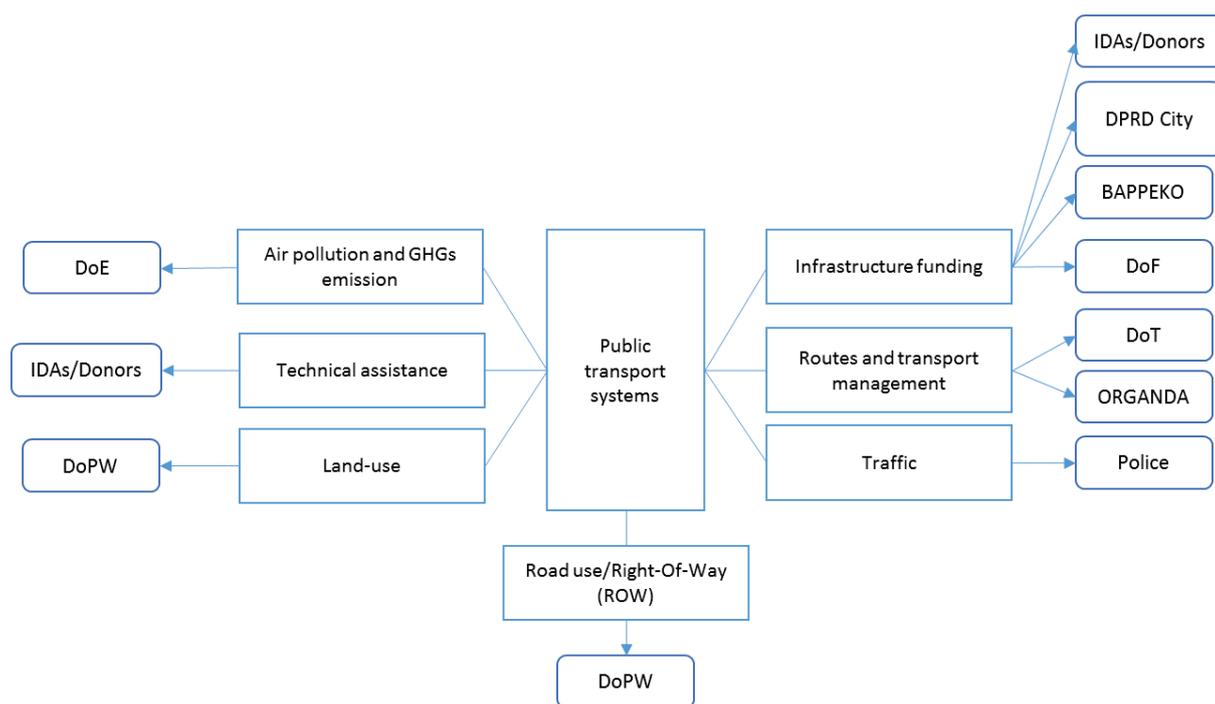


Figure 6.6 : City government organisations
Source: Author from fieldwork

The Planning Agency (BAPPEKO) plays a major role in formulating urban development plans, with sections on transport and climate change. For the transport section, BAPPEKO collaborates with the Transport and the Public Works Departments and accommodates the priorities of organisations from their higher levels of government organisations' (the Ministry of National Planning, the Ministry of Transport, the Ministry of Public Works, and the Ministry of Home Affairs). Similarly, BAPPEKO works closely with the Environmental Agency in preparing the transport-related GHG emission strategies in the plan. In addition, BAPPEKO gets input from provincial and central government departments and ministries in preparing urban development plans. It is important for BAPPEKO to prepare plans that align with those of the higher-level government departments.

6.4.1.5. Public transport operators

The state-owned public transport operator DAMRI covers 60% of bus services. DAMRI has a considerable voice in public transport policy and planning. Similarly, ORGANDA, the public transport owners' association, works closely with the Transport Department in designing the routes, setting up fares and negotiating subsidies. *Paguyuban lyn*, an informal association of paratransit operator, helps drivers to get their driving licenses.

These organisations have very little say in the formal transport decision-making process despite their socio-political influence. Their concerns and needs are paid little attention by government at city level and their direct involvement in policy decision-making is little accommodated by local government.

6.4.1.6. Non-government organisations

Non-government organisations are becoming more visible in raising their concerns on urban transport development agenda posed by the central government to Surabaya city. These groups conducted public demonstration for rejecting inner-toll roads and BRT projects. For example, a group called “the Coalition to free inner toll-roads development” was created by a civil society organisation (Surabaya Community Movement), academics (University of Airlangga, ITS University), transport experts, media (Jawa Pos newspaper) and non-government organisations (Green Indonesia). Other groups, called ‘Masyarakat Surabaya Menggugat (MSM)’ and ‘Gerakan Masyarakat Surabaya (GEMAS)’ also actively engaged in confronting central and local government decisions.

6.4.2. BRT decision-making in Surabaya

Surabaya has experiences complex decision-making processes and results from the involvement of national, regional and city level government, a limited formal planning mechanism and presence of informal planning practices. Central government (through the Ministry of Transport and Ministry of Planning) supported the BRT project after GIZ and ITDP involvement in preparing guidelines and technical design for the BRT. The BRT project was perceived as the solution to relieving urban traffic congestion and for mitigating the impact of climate change from the transport sector in Indonesian cities, including Surabaya. The East Java Provincial government (through the Regional Development Planning Agency and Department of Transport) followed central government’s direction and supported the BRT project, but left its implementation responsibilities to the Surabaya government without formal consultation. The Mayor of Surabaya and the city government were obliged to make decisions about transport projects (including the BRT) based on the city’s spatial plan, with its regulation and funding approved by the House of Representatives (DPRD) of Surabaya.

Funding for urban transport projects is based on negotiation and compromise between the three main city government organisations: The Planning Agency of Surabaya (BAPPEKO), the Development Programme (*Bina Program*) and the Financial Department, called *Satuan Tiga*. However, the Transport Department of Surabaya is responsible for project implementation and finalising operational details, without much input from *Satuan Tiga*. The Police Department was absent from the formal process but an important organisation during implementation stages.

Above mentioned organisations have related to each other within the top-down approach. The lower levels of government are required to involve local stakeholders and negotiate budgets with the local House of Representative (DPRD), where political and local actors facilitate or obstruct higher-level transport decision. In the case of the BRT projects, the Ministry of Transport requested the Surabaya government to comply with the national urban transport projects by implementing a BRT system. The Surabaya government needs approval from the House of Representatives (DPRD) before allocating budgets for this project. If the DPRD disagrees with the plan, then the local budget will be unavailable for the BRT project. The decisions to opt for the BRT are based on negotiation and compromises between the Surabaya government and the members of DPRD. The negotiation process reflects the political situation in making decisions for accepting and allocating public funding for the BRT project. The Surabaya government must convince and ensure that enough budget is allocated for this project. This is related to the function of *Satuan Tiga* in assessing the performance of the BRT project and ensuring the Transport Department can undertake the project. In short, formal planning processes in Surabaya are determined by a top-down approach in which higher-levels of government set policy directions, while lower-levels of government implement them.

The Mayor of Surabaya has an informal advisory team with a strong background in community planning and community development. The advisory team is responsible for bringing the opinions of private minibus owners to the Mayor of Surabaya. The informal advisory committee also negotiates the level of subsidy with the private bus owners. The subsidy is changed every year and subject to the approval of the House of Representatives (DPRD). Subsidy negotiations are based on economic, social, cultural, and environmental criteria, but are also influenced by the political process. In short, transport decision-making in Surabaya is determined by a complex formal and top-down government

process and by informal negotiations and compromises at local level. The feasibility study of BRT in Surabaya had decided to establish a Public Service Authority (BLU) to manage the daily operation of BRT system (Transport Department of Surabaya City, 2012a). However, this unit failed to establish due to instability of transport decisions under the leadership of Mayor Risma.

6.5. Surabaya transport policy review

This section reviews transport planning provisions in spatial, urban development, climate change and transport and infrastructure policies prepared for Surabaya. The review shows that other transport-related policies highly affect transport policy due to cross cutting issues. Surabaya BRT studies is also reviewed in the last section.

6.5.1. Urban spatial planning policy

The central government has designated Surabaya as a centre of national activities (PKN) in the National Spatial Plan (Republic of Indonesia, 2008). Being a PKN means that Surabaya should be well connected with the surrounding regions of Gresik, Bangkalan, Mojokerto, Sidoarjo and Lamongan. The Central government proposed several new toll-road projects to improve economic growth with regard to the agriculture, fisheries, industry and tourism sectors in the region (Republic of Indonesia, 2008, p. 6). The plan also emphasises improving the quality and coverage of the existing transport network, based on a multi-modal concept (Republic of Indonesia, 2008, p. 6).

The East Java Province accommodated central government's concept of the National Center of Activities (PKN) in its spatial plan. This plan enacted as Local Regulation No. 5/2012 of East Java Province Spatial Plan 2011-2013 (East Java Provincial government, 2012b). Its main aim is to improve integration between transport and regional development by promoting the inter-mode and intra-mode transport facilities. The plan emphasises the development of inner city toll-roads (Article 26) and a mass public transport system comprising inter- and intra-city public transport (see Article 33). The plan proposes to develop four railway corridors to connect Surabaya with surrounding districts (See Article 29 of Local Regulation No. 5/2012 of East Java Province Spatial Plan 2011-2013).

Surabaya city prepared a revised spatial plan, which covers different strategies for 2010 to 2030. The plan comprises three layers: 1) general planning principles and vision – RTRW, 2) detailed City Spatial Plan – RDTRK, and 3) technical documents – RTRK. The plan needs statutory approval from the Mayor and the House of Representatives (Surabaya City government, 2007). Surabaya is a historical city that was designed by the Dutch during the colonialism era and some historical buildings are preserved to maintain its existing condition but the functions have been adjusted to the needs of the city, especially the buildings that are in the central city. The detailed City Spatial Plan covers land use zoning and functions and will be adopted by the Planning Agency for issuing permits and licenses for land use proposals. In contrast to the provincial's government spatial plan, which favoured railway development, Surabaya's government spatial plan proposed the BRT project, connecting eight different areas of Surabaya. However, the transport proposals in this plan have not so far been approved and the integration of land use and urban transport networks has become difficult to achieve (Urban planner, interview, 2013). Similarly, it has been difficult to adapt central government's inner toll-road project to the Surabaya spatial plan and its proposed policies.

6.5.2. Urban development planning policy

The East Java Province has approved Local Regulation No. 1/2009 for a long-term development plan for the province from 2005-2025 (East Java Provincial government, 2009a). The vision is to develop the province as a globally competitive agribusiness centre by balancing infrastructure development in the province's regions. In this plan, Surabaya is seen as part of the agglomeration area of Gerbang Kerta Susila (East Java Provincial government, 2012b). Transport policy focuses on improving and developing road networks in an integrated way to achieve economic growth in the province. The plan proposes public-private partnerships (PPP) and a cost-sharing model among central, provincial and city governments to fund transport and infrastructure projects. Based on the long-term plan, the first RPJMD of East Java Province was enacted with Local Regulation No. 38/2009 between 2009 and 2014 (East Java Provincial government, 2009b). These regulations are for establishing polycentric urban regions connected with roads and railways to produce economic growth. The plan considered climate change issues, but did not incorporate them in its transport strategies (p.66).

The Surabaya Planning Agency prepared a long-term urban development plan (RPJPD) in 2005. The vision statement focuses on making the city “smart, clean and ecologically friendly” (Surabaya City government, 2012a). The long-term plan suggested medium-term planning policies – RPJMD (2005-2009) and RPJMD (2010-2015), which aspire to build sustainable transport in Surabaya by promoting integration between public transport and spatial planning (Page VI-6). The plan suggested developing the mass transit systems that provide affordability, safety, convenience, efficiency, and reliability to city residents. The importance of non-motorised transport and Transit Oriented Development (TOD) is acknowledged as part of low-carbon development in Surabaya. The total road length and lighting facilities have been considered as key indicators of performance in the urban development sector (p. IX-6). Three months after the appointment of a new Mayor in 2010, the city finalised the medium-term development plan and enacted it as a local regulation (East Java Government, 2010). Since then, the long-term and medium-term development plans have been revised and were enacted as a legal regulations on 26 June 2012 (Surabaya City government, 2012a, 2012b).

6.5.3. Climate change policy

The Climate change policy for East Java Province (Governor Regulation No. 67/2012 on Local Actions Plan on GHG emissions, or RAD-GRK) and Surabaya are derived from the national climate change policy (Presidential Regulation No. 61/2011 on the National Action Plan for GHG emissions). RAD-GRK aims to explain the local government commitment to support the national target for emission reduction. Proposed actions are divided into main activities (with a direct contribution to GHG reduction) and supporting activities (with an indirect contribution to GHG reduction). The transport sector was marked as the main contributor to the increase of GHG emissions and it was estimated that GHG emissions would increase from around 11 million ton CO₂eq to 18 million ton CO₂eq in 2020 (East Java Provincial government, 2012a).

The policy emphasises the need to reduce travel, turn private vehicle users into public transport users or users of non-motorised transport and to reduce GHG emissions from motorised vehicles. The central government policy on climate change issues confirm that subnational government at provincial and city levels are made compulsory to formulate local policy on GHG emissions, which accommodate in climate change action plan at

subnational government levels. There were 13 activities under the transport sector, including a transit system with BRT/semi-BRT and mass public transport based on a rail system. The document does not provide details of the 13 transport-sector activities, because the data and information on the baseline and trend of GHG emissions from the transport sector is undergoing the trial calculation processes. The measurement of baseline GHG emissions is an important issue due to the initial stage of climate change policy enactment at both central and subnational levels in which the governments are lacking in measurement instruments, tools, and institutions. At this initial stage, the document emphasised the need for provincial and city governments to collect GHG emissions data. As a result, the planning process for integrating climate change policy into the transport policy has been blocked by the lack of essential baseline data of GHG emissions from the transport sector. These knowledge gaps effect the decisions to select the appropriate options and solutions to formulate specific strategies and tactics that are efficient to support the national target of GHG emissions in general.

Responding to climate change policy in 2008, the Environmental Agency of the Surabaya government, in collaboration with central government and internal development organisations formulated a local regulation for controlling air pollution (Local regulation No. 3/2008). This initiative provides an opportunity for Surabaya to get significant technical assistance in measuring the city's air quality. In 2011, the Surabaya government developed its climate change action plan by calculating the carbon footprint from the transport sector (Environmental Agency of Surabaya City, 2011). This plan sets the reduction of GHG emissions regarding mitigation of climate change in the transport sector.

6.5.4. Infrastructure development policy

Surabaya prepared an infrastructure plan in 2005 in the light of provincial and central government infrastructure plans. The plan aims to ensure that every resident has access to basic infrastructure, including transport. The plan stresses the integration of road networks with toll-roads and railways. The plan also proposes improvements to pedestrian facilities. The Surabaya Vision Plan is an investment document prepared by BAPPEKO with the local business consortium in 2005 (Surabaya City government, 2005, 2007). This document proposed a mechanism for infrastructure investments and

environmental protection (AECOM, 2005; Surabaya City government, 2005). Regardless of these policies, transport infrastructure, especially public transport investment, is stagnant while inner toll-road construction has been delayed after facing difficulties in securing land in the city centre (World Bank, 2012a).

6.5.5. Urban transport policy

Surabaya was initially designed as a transit city with an emphasis on the railway as an inter-city mode while walking, cycling and paratransit served the urban areas. Currently central government is focusing on building the Trans-Java Expressway to connect Surabaya with Jakarta, and building a series of toll-roads (Republic of Indonesia, 2011a). Central government is also advancing a Surabaya high-speed project for intercity transport. For within the city, central government proposed a 50 km Surabaya inner-city railway development project that would connect the CBD and Juanda airport (Republic of Indonesia, 2011a). The inter-city and intra-city railway projects in Surabaya have been placed in a category with potential for public-private partnerships (PPP) (Ministry of National Development Planning, 2013). The East Java Provincial government also connects Surabaya with its surrounding districts with a railway in accordance with central government policies (Transport Department of Surabaya City, 2012a).

Over the last two decades, Surabaya has undertaken a series of studies to develop a distinct transport policy for the city. For example, in 2001, Surabaya's BAPPEKO conducted a study promoting sustainable urban transport to reduce air pollution in the city. In 2002, Togar Arifin Silaban, with ADB funding, studied how different forms of transport could contribute to reducing congestion and air pollution in Surabaya. In 2003, Kitakyushu (KITA) and GTZ studies found there was potential for non-motorised forms of transport in the city to reduce congestion, lessen energy consumption and improve air quality (Hook, 2003). In 2006, Surabaya prepared public transport policy regulations (Regulation No. 7/2006) that aimed to improve the condition of public transport vehicles and redesign services as per the hierarchy of roads (CAI-Asia, 2009).

In 2010, the BRT project was rejected in favour of monorail and tram development. The decision was based on the capacity needed to move people in and out of the city and with the development of technology fitting the existing urban form of Surabaya. Monorails

and trams are local ideas promoted by the Mayor of Surabaya and are in contrast with JICA's study (JICA, 2011) and with the 2012 Transport Plan whose main focus is implementing the BRT system in conjunction with the existing public transport network and transport-demand management (TDM) measures. In 2013, Surabaya prepared a feasibility study and detailed engineering design (DED) for monorail and tram-based mass rapid transport with technical support and grants from the World Bank (World Bank, 2014). Mass rapid transit in Surabaya has been registered in the 2013 PPP-Infrastructure projects plan in Indonesia with an estimated total cost US\$ of 1,170 million under the railway sector (Ministry of National Development Planning, 2013). In 2014, the Surabaya government conducted many workshops to disseminate information about the transport development plan for building monorail and tram networks. The workshop on 3 December 2014 promoted the concept of Surabaya Mass Rapid Transit (SMART) (Jajeli, 2014). The Ministry of Planning (BAPPENAS) official stated that

... central government has supported the initiative of the Mayor of Surabaya who is eager to implement mass rapid transit in Surabaya. The plan has been included in the political document of the National Medium-term Development Plan (RPJMN) 2015-2019.

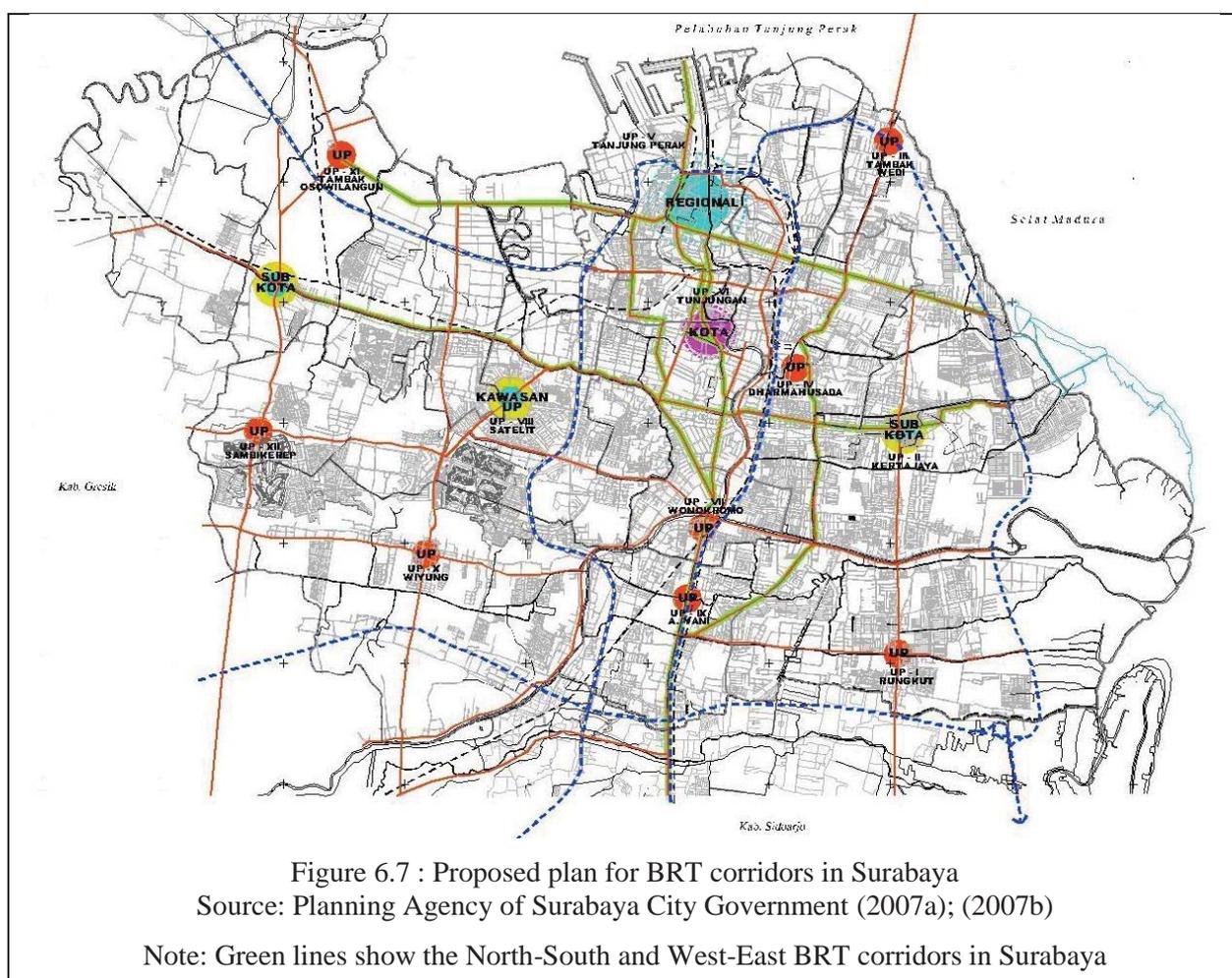
Official of the Ministry of Planning (BAPPENAS) (Jajeli, 2014)

Once the transport projects were accommodated in the RPJMN document, the higher the chance of getting funding from central government budget and international development agencies. These studies show how transport planning in Surabaya has become locked into a debate about BRT versus monorail and tram projects rather than the preparation of a comprehensive urban transport policy for the people of Surabaya City. Until now the SMART project has received most political attention at the local level. There is an opportunity to organise public transport around the extensive network and supporting infrastructure of existing railway tracks in Surabaya. However, the railway tracks are under the operation and management of central government PT KAI, and currently used for intercity trains only. In short, there is a lack of a clear transport policy for Surabaya but there are several transport plans, which focus on roads and transport projects.

6.5.6. Surabaya BRT studies

Surabaya has conducted many studies related to BRT since 2007. The Planning Agency of Surabaya prepared the feasibility studies for the North-South and West-East corridors in Surabaya, as part of the central government policy (Planning Agency of Surabaya City

Government, 2007a, 2007b). The studies proposed to establish a Public Service Authority (BLU) with the head of BLU act as general manager and the institution is a semi-government organisation. Unlike Bandung's BRT organisational structure with the form of Technical Implementation Unit (UPT), the authority of BLU is not only limited to the Transport Department at the city level. In the form of BLU, the General Manager of BLU can have direct access of communication with the Mayor and is given more authority to run the daily operations of BRT system. Further, the history of the BRT project in Surabaya is presented in Figure 6.7.



2005

Central government and Surabaya Mayor Bambang signed the MoU, which offered the provision of 80 buses by central government. The House of Representatives (DPRD) has allocated IDR 100 trillion for the BRT development project (Satiti, 2014).

2006

Central government asked TransJakarta to help the Surabaya project team, composed of representatives from BAPPEKO, Transport and Environment Departments, with BRT development.

<p>2007 IndII, GIZ, and the World Bank prepared the BRT plan for Surabaya, which emphasises building the first line on the north-south and eastern part of the city. It was proposed that the BRT construction budget would be shared on the basis of 60:40 (central: city) (Pikiran Rakyat, 2007).</p>	<p>2008-2010 Due to a local leadership change, road construction and practical difficulties in securing right-of-ways (ROW), the BRT project was delayed, even though the proposed plan for BRT corridors were prepared</p>
<p>2011 The World Bank facilitated a study tour by the Mayor of Surabaya along with officials from Surabaya, provincial and central governments to learn from the BRT in Ahmedabad, India (World Bank, 2012b). Despite this tour, the BRT project was rejected by the Mayor for technical (buses vs rail debate) and aesthetic (harm to existing trees and parks) reasons (Satiti, 2014).</p>	<p>2012-2014 The studies for mass rapid transit (monorail and tram) were prepared with financial help from the World Bank (Surabaya City government, 2013). The BRT is seen as the short-term solution, while the MRT project has been advanced as a medium- to long-term solution for Surabaya.</p>

In short, transport policy in Surabaya plays a crucial role in policies and planning around spatial development, urban development, climate change and infrastructure investments estimation for the transport sector in both roads and public transport infrastructure. However, the studies have adopted ‘one size fits all’ strategies aiming to build expressways, toll-roads, a high-speed train network, BRT, and now monorail and tram networks in Surabaya and its surrounding regions. There is a danger that such an approach is based on the belief of promoting economic growth and productivity by providing an unlimited supply of investments in infrastructure and uncontrolled consumption of natural resource.

6.6. Policy tensions in urban transport in Surabaya

The section aims to identify multi-level tensions in policy-making, plan-making and implementation of BRT in Surabaya to highlight the complexity of public transport governance. The section examines how global, national, provincial and city level departments and actors promoted their goals and how the national and local politics impact upon the planning and implementation of BRT.

The policy tensions section is divided into four subsections. Sub-section 6.6.1 identifies the role of institutional and financial power at different levels in creating policy tensions

in Surabaya. Sub-section 6.6.2 discusses socio-political factors present in Surabaya and their role in the acceptance and rejection of the BRT project. Sub-section 6.6.3 sets out different storylines that are present in planning and policy documents and the mind set of policy makers in advancing or rejecting the BRT project in Surabaya. Sub-section 6.6.4 focuses on community participation and consultation gaps during planning and policy decision-making processes in Surabaya.

6.6.1. Institutional and financial power at different levels

a) Role of international development agencies

International development agencies and their consultants have played a large part in setting transport directions in Surabaya. In the last two decades, transport planning studies in Surabaya have been completed with the financial and technical help of the World Bank, ADB, CDIA, ESCAP, UNCRD, GTZ, JICA, SIDA, USAID and inter-city networks (CITYNET, ICLEI, CAI-Asia). A description of these studies, in chronological order, follows.

2000 - GIZ-SUTP study: GIZ assisted the Surabaya government in designing a sustainable urban transport system. The study, entitled “Surabaya Sustainable Urban Transport Project (SUTP)” was prepared in 2000. The study uncovered the existing condition of public transport in Surabaya from the perspectives of users, operators, drivers, and transport management practices (GTZ, 2001). The study provided specific recommendations to improve policy, legislation, institutional development and an action plan for public transport development. The study focused on the building of the BRT and improvement of non-motorised transport. It highlighted the importance of political commitment, licensing, consolidation of the public transport industry, transport facilities and infrastructure improvement. At the global level, BRT transport experts followed the planning guidelines for the BRT that were made available in October 2004 by GTZ (Wright, 2004a) and further revised in collaboration with ITDP in 2007 (ITDP, 2007).

2005 – Road-based mass public transport development plan in Surabaya (PUSTRAL-UGM): PUSTRAL-UGM consultants, with funding from the Asian Development Bank (ADB) conducted a study that proposed 17 BRT routes in Surabaya (Transport Department of Surabaya City, 2012a). The integration of BRT with seven existing train

stations and Juanda airport was also recommended to get full benefit from the BRT (Transport Department of Surabaya City, 2012a). The BRT was designed to have both busway and bus priority systems depending upon the availability of physical space available on the roads.

2011- IndII study: The IndII, AusAid initiative prepared the urban mobility guidelines for Surabaya as a part of a Surabaya urban mobility project (SUMP) (Midgley, 2011). The guidelines came from lessons learned from Ahmedabad's experience of BRT. This document assumes that the transfer of Ahmedabad's BRT design module is "readily adaptable to Surabaya" (Midgley, 2011, p. 24). A three-month trial was suggested to allow people to travel freely and gain a perspective on BRT services.

Cities Development Initiative for Asia (CDIA): CDIA was established by the Asian Development Bank (ADB) and the Government of Germany in 2007. CDIA assisted the Surabaya government with its transport project during 2012 with the support of the governments of Sweden, Austria and the Shanghai Municipal government, the aim being to reduce the gaps between the planning and implementation of urban infrastructure projects.

2013 – The World Bank Study: The World Bank facilitated technical assistance for a feasibility study of a mass rapid transit system (monorail and tram) in Surabaya (World Bank, 2014). With a total budget of US\$ 1.25 million in the form of a grant, the study team comprised international consultants and officials from the central and Surabaya governments, totally ignoring the provincial government of East Java. Under the World Bank Urban resilience programme, the Surabaya government would get support for BRT studies and hosting the eco-cities programme. This assistance was to help to improve the local capacity for urban planning, management and funding (World Bank, 2013, p. 143). The World Bank also organised a fact-finding trip to Ahmedabad's BRT project for Indonesian officials including the Mayor of Surabaya (World Bank, 2012b).

Several important international development agencies are also influenced the direction of urban transport in Surabaya. These agencies mainly promoting rail-based and bus-based public transport and other transport supporting mechanisms, such as inter-city transport, air pollution and roading (see Table 6.2). This data presents that promoting public

transport such as BRT need a collaborative effort to align all international development agencies to set up strategies and projects that respond to the need of the local people in Surabaya. The role of BAPPEKO as planning institution at the city level needs to be able to improve the coordination among different international development agencies.

Table 6.2 : Comparison of rail-based and bus-based

Mode of transport	Details
Rail-based	The French Government (Direction Generale du Tresor or Agence Francaise de Development): the French Government, through the French National Railway (SNCF) conducted two studies, in 2006 and 2009, for the development of an urban rail system in Surabaya (ADB, 2012).
Bus-based	Institute of Transportation and Development Policy (ITDP): The ITDP acts mainly as partner agencies for bilateral and multilateral agencies. The ITDP in collaboration with GIZ prepared studies regarding non-motorised transport in Surabaya (ITDP, 2000).
Other transport supporting mechanisms	Japan International Cooperation Agency (JICA): The JICA conducted a study in 2010, but the study was limited to inter-city transport (JICA, 2011). Swedish International Development Agency (SIDA): SIDA, with a total fund of US\$ 5 million, assisted Surabaya with the sustainable urban mobility in Asia (SUMA) project and the clean air project (CAP) (SIDA, 2007) Asian Development Bank (ADB): The ADB is assisting Surabaya with a number of roading projects to improve the competitiveness of the city (ADB, 2006a).

Source: ADB(2012), ITDP(2000), JICA(2011), SIDA(2007), ADB(2006a)

In addition, Surabaya is an active member of sustainable-transport networks at international and Asia-Pacific levels. The knowledge-sharing and capacity-building networks include Clean Air Asia (CAI-Asia), ICLEI, the World Bank's South-South programme and CITYNET. CAI-Asia has initiated improvements in air quality in Surabaya (Huizenga, 2007). In 2004, the Surabaya government joined ICLEI with its main programmes called Cities Climate Change Protection, which help the government in urban planning to foresee impacts of climate change.

A brief review of studies assisted by international development agencies show that most of their assistance is limited to technical assistance in preparing transport plans and in proposing the BRT project in Surabaya. They also organised BRT study trips and helped Surabaya build networks with other cities and relevant organisations. International

development agencies also provide the platforms for private companies to market their products and services towards technological solutions.

The strong intellectual and catalyst role of international development agencies has influence local decision-makers in setting transport priorities, especially with initial support for the BRT project. Moreover, international development agencies gave directions to use international climate funds for the BRT projects, which made the BRT attractive to local politicians.

b) Role of central government ministries

The idea of promoting the BRT as a solution to urban mobility in Indonesian cities emerged in a document entitled 'Medium-term National Development Planning' (RPJMD) produced by the Ministry of National Planning (BAPPENAS) in 2005 (Ministry of National Development Planning, 2009b). This idea was derived from successful BRT implementation in Jakarta in 2004 (Matsumoto, 2007). This led to the revision of public transport law in 2009 (Republic of Indonesia, 2009a). Since then, the central government has used BRT as part of a national policy agenda for urban mobility in Surabaya. With the help of central government, international development agencies conducted many studies (as discussed in the previous section) that justified the BRT project and later produced a detailed project design. The BRT has also become part of Indonesia's national spatial plan. Therefore, the BRT project in Surabaya was following the national spatial plan's direction.

In 2008, the Ministry of Transport allocated IDR 18 billion from central government funding to support Surabaya's BRT (Silaban, 2008). However, there was a revision of the annual budget allocation of public funding, which resulted in the misallocation of IDR 92 billion of the local city budget for the detailed engineering design (DED) of Surabaya and its physical infrastructure. After that budget revision took place, central government decided to reallocate the total IDR 18 billion to other projects. As a result, further development of the BRT has stopped since the budget revision took place (Silaban, 2008).

However, the rejection of the BRT project in its later stages by Mayor Risma created tension with central government ministries. An official from the Ministry of Public Works said that the central government had spent a substantial amount of time and investment

on the BRT in Surabaya. “It will be a great loss if Surabaya rejects our offers” (Official from Ministry of Public Works, interview, 2013).

It is also argued that the central government did not properly communicate the BRT project to the Surabaya government. The BRT project was buried amongst general public transport improvement programme. However, a provincial politician (Politician at the East Java Province level interview, 2013) thought it was a strategic way of dealing with the consequences and risks of the BRT project.

Pressure from central government compelled the Mayor to rethink the BRT project. For example, an official from the Ministry of Transport stated that the BRT was proposed as the best transport solution for Surabaya:

The Mayor has now realised the BRT (along with monorail and tram) is also important for Surabaya. She is willing to work with the central government to develop a good quality public transport for residents.
(Official from Ministry of Transport, interview, 2013)

c) Role of East Java provincial government departments

The provincial government’s role was limited in Surabaya’s BRT project, in spite of its role in developing an integrated transport system in the wider Surabaya region. An official from the Transport Department at Surabaya argued that the role of urban transport management should be in the hands of the provincial government. He said:

The provincial government of East Java should play an important role in urban transport because Surabaya is only a small fraction of the provincial area. Surabaya is not a province and it has limited capacity. This is the difference with public transport planning in Jakarta. Jakarta can plan its own transport because it has the full authority to manage its local revenues, transport planning and policies. Surabaya cannot undertake transport studies and investment outside of its administrative boundaries.
(Official of Surabaya Transport Department, interview, 2013)

In Surabaya, the problems with urban transport become complex at the provincial government level because of several reasons related to authority division in the decentralisation era, land-use change, and the movement of people. One of the research participants stated that

Here in Indonesia we have scattered authority to manage public transport among central, provincial and city government. This partial authority leads to unclear division of roles among different government levels.

(Politician at East Java Province interview, 2013)

Urban transport planners from provincial and city government felt that the role of provincial government was vital in managing urban transport in Surabaya. This is because of the provincial government's strong financial capacity and its wider coverage of the transport network systems. Urban transport planners from the Transport Department at both city and provincial government level acknowledged the utmost importance of urban and regional transport planning networks:

The Transport Department of East Java Province is the one who should be responsible for the urban transport in Surabaya because the provincial government collects vehicle taxes and distributes finance among different organisations at the city government.

(Urban transport planner from Transport Department of Surabaya City, interview, 2013)

Actually, it's our [Provincial government] job to take care of urban transport systems in Surabaya. We should be responsible for preparing the policy and investment decisions.

(Urban transport planning from Transport Department of East Java Province, interview, 2013)

However, an official from the Surabaya Transport Department explained that this was not happening at present because it requires a proactive role by the provincial government, which is absent. East Java Province and the Surabaya government do not have a good relationship because of their differences concerning inner-city toll-road construction (Official from Surabaya City Transport Department interview, 2013). On the other hand, a politician from East Java Province stated:

Our governance system in Indonesia has been split-up into three different government entities, where various government levels hold some elements of power. While provincial government has designed the general spatial plan for the city and inter-city connections, the Mayor of Surabaya might be the only mayor in Indonesia who is not following the spatial plan set up by the provincial government as per the guidance of the central government.

(Politician at the East Java Province level, interview, 2013)

The provincial government is responsible to collect vehicle taxes from city and district government level in accordance with the regulation stated in Law No. 28/2009 on Local taxes and local retribution (Republic of Indonesia, 2009b). After collecting these taxes, the provincial government received 70% and all cities and districts government received 30%. The amount received by the city and district government is limited because the 30% of vehicle tax must be shared with other cities and district level government. From this 30% shared, 70% is allocated for Surabaya and the rest are divided among other city and

district governments under the East Java Province's administrative areas. Surabaya can collect its own local taxes from hotels, restaurants, advertising, parking and others (Article 2) to support its urban development programmes and projects. In Article 8 of the Law No. 28/2009, it stated that at least 10% of these vehicle taxes including the shared for city and district-level government, has to be allocated to road construction, road maintenance and public transport infrastructure and facilities (Republic of Indonesia, 2009b). Both road and public transport have gained the same attention in funding allocation for urban transport system. However, with the funding limitations, Surabaya has less capacity to support its urban transport projects.

The poor relationship between the provincial government of East Java and the Surabaya government has not helped in integrating urban and regional transport planning system. Traffic in Surabaya is mostly commuters living in Sidoarjo, Gresik, Madura, Mojokerto, Lamongan, Malang and surrounding districts (Vincent, 2011, p. 15). This provides potential for reducing the cost to the city government side and utilising the high vehicle taxes paid to East Java Province side. However, the provincial government keeps its profits from vehicle taxes and determines the amounts given city and district governments. As a result, city government has been unable to utilise vehicles taxes since it does not receive enough to cover the cost of building a public transport system in the city.

d) Role of Surabaya government and its capacity

During the past fifteen years, the Surabaya government has been proactive in conducting transport planning studies and feasibility studies for sustainable urban transport system. The planning process for the BRT project is started after signing the MoU with central government in 2005. Besides providing close assistance to international development organisations and their consultants, in 2006, the Urban Planning Agency of Surabaya (BAPPEKO) conducted a feasibility study for the development of mass transport on the North-South Corridor (Transport Department of Surabaya City, 2012a). The main aim was to replace existing minibuses with the BRT system. It was estimated that it would cost around IDR 241.3 trillion for buses, road construction, terminals, pedestrian walkways, a fuel depot, a public campaign, planning and project supervision (Transport Department of Surabaya City, 2012a) and recommended that the city should seek funds from central government and international development agencies, along with spending its

own funds. The department also conducted a feasibility studies for the East-West Corridor (Planning Agency of Surabaya City Government, 2007a). The study cautioned that there was resistance from existing operators of public transport and minibuses (*lyn/angkot*) towards a BRT system in this corridor (Transport Department of Surabaya City, 2012a). The study showed the potential impacts of a BRT on on-road parking, informal food vendors/stalls, *angkot*'s routes and showed there would be reduced road capacity if one lane was dedicated for BRT buses (Planning Agency of Surabaya City Government, 2007a, pp. IV-21).

Due to its adverse impact on traffic flow and because it would create narrower roads, the Police Department rejected the BRT project for the North-South and East-West Corridors. These studies were undertaken by the local consultants, which made the results seem less reliable to funding agencies. In the studies, private sector contribution is one strategy for operating buses and developing the storehouse or terminals for bus maintenance and fuel supply (Planning Agency of Surabaya City Government, 2007a, pp. V-20). A BRT business model was not well developed in the study, which made the study less attractive to the private sector. This stemmed from a lack of regulatory framework to accommodate the institutional development for forging cooperation and partnership between the government and public sectors. A specific arrangement for the BRT was not mentioned in Government Regulation No. 67/2005 on cooperation between the government and the private sector (Planning Agency of Surabaya City Government, 2007a, pp. VI-10). In addition, it is interesting that city government studies identify the possible resistance of existing public transport operators, especially those whose routes are in conflict with the BRT's routes (Planning Agency of Surabaya City Government, 2007a, pp. VII-6). However, the report does not contain a detailed social impact assessment (SIA).

The central government has policy to develop mass transport development, which further apply to the provincial government in connecting between urban and rural areas as part of the authority of provincial government. However, provincial government has played a limited role in planning for urban transport in Surabaya, because the new regulation on road transport and public transport emerged in 2009 (Urban transport planner at East Java Province, 2013). City government has limited capacity in developing policy and develop transport projects for connecting urban and rural areas because of limited funding available and capacities constraints that only work for the city administrative boundaries.

Although the BRT initiative began in 2004 in Indonesia, the local consultants lacked comprehensive knowledge and practical understanding of the BRT system, which resulted in their being less able to assist the Surabaya government (ITDP official, interview, 2013). The time difference in the planning stages for an urban transit system has affected the institutional development of a BRT system.

The Transport Department of Surabaya conducted mass rapid transit feasibility study in 2012 (Transport Department of Surabaya City, 2012a). The study defined the strategic corridors of East-West using monorail and North-South using tram. However, the main issue is funding to build this modern public transport system and the Surabaya City government has limited financial capacity to implement this project (Transport expert, interview, 2013).

Surabaya's government uses taxes from advertisements as their main source of local revenues because it is not obliged to share the revenues from these taxes with the provincial government or the governments of other cities or districts. Within three months of her appointment Mayor of Surabaya in 2010, Mayor Risma modified the advertisement taxes (Surabaya City government, 2010a, 2010b). An official stated that

Our advertisement taxes are 25% higher than the taxes in Jakarta. This is because our Mayor wants to clear the city roads of big advertisements that make the city look unpleasant.
(Official from the Development Programme Department of Surabaya, interview, 2013)

The Mayor's regulations No. 56/2010 on the calculation of advertisement taxes and regulation No. 57/2010 were perceived as formulated according to Law No. 28/2009 on Local Taxes and Local Retribution (Official from the Development Programme Department of Surabaya, interview, 2013). However, these regulations were revised in December 2010 after receiving the amendments from the East Java Provincial government (Surabaya City government, 2010c) and consequently advertisement taxes were reduced (Surabaya Pagi, 2010).

The active engagement of Surabaya's government with international and national levels organisations has helped the city to increase its technical knowledge regarding urban transport issues. This engagement also enabled the Surabaya government to move swiftly from the BRT project to the monorail and tram proposal with a change of leadership. In 2014, the Surabaya government conducted many workshops to disseminate information

about a transport development plan for building monorail and tram networks. The workshop on 3 December 2014 promoted the concept of Surabaya Mass Rapid Transit (SMART). Officials from the Ministry of Planning (BAPPENAS) were invited to this workshop and announced the integration of the plan into the national medium-term development plan. Central government has supported the initiative of the Mayor of Surabaya who is eager to implement mass rapid transit in Surabaya. The plan has been included in the political document of the National Medium-term Development Plan (RPJMN) 2015-2019 (Jajeli, 2014).

In short, international development organisations and the central government have influenced the BRT initiative at the city level. The Surabaya government, with the strong support from various international development agencies and central government ministries has built up its technical knowledge about urban transport issues and solutions in Surabaya. Although the BRT proposal in Surabaya shows a top-down approach regarding urban transport issues, the middle level of provincial government was bypassed by central government and the international development agencies, which missed the opportunity to consider the wider regional perspective on transport investment. Bypassing provincial government has led to challenges in building government-to-government partnerships.

6.6.2. Socio-political power in Surabaya

Socio-political power in Surabaya is characterised in the local political dynamics of complex relationships between politicians and their local communities. In the case of Surabaya, the internal relationship between the Mayor and Vice-Mayor, and the external relationships between the Mayor and the legislature and the Mayor and local communities, media and civil society organisations are important in exploring the BRT decision-making process.

a) Relationship between Mayor and Vice-Mayor

According to Law No. 32/2004 on Regional Administration (Republic of Indonesia, 2004c), the Mayor and Vice Mayor of Surabaya are elected directly, with elections in every five years (Article 24). It is ideal if both the Mayor and Vice-Mayor belong to the

same political party or have a strong relationship in formulating vision for urban development. However, this is not the case in Surabaya.

In 2010, Tri Rismaharini was elected as Mayor of Surabaya, while Bambang Dwi Hartono was selected as Vice-Mayor. Bambang Dwi Hartono was Mayor from 2002 to 2010. During his first two terms, Mayor Bambang was a champion of the BRT Project in Surabaya. From 2005, he worked closely with central government organisations, GIZ, ITDP and IndII to initiate BRT studies and to carry out planning to implement the project as soon as possible.

In 2005, elected Mayor Risma was the head of the Planning Agency of Surabaya (BAPPEKO) before starting her political career (Urban transport planner of Surabaya, interview, 2013), so she understood the complexity of BRT project implementation under a new spatial plan prepared by Surabaya government. With the change of spatial planning regulations at central government level, the Surabaya government's new spatial plan proposed to eliminate the development of inner toll-roads and the BRT plan was replaced with plans for monorail and tram. Although Surabaya's new spatial plan has not been approved by central government, the changes have created tension between Mayor Risma and current Vice-Mayor Bambang regarding the BRT project. The Mayor and Vice-Mayor differing views on Surabaya's urban issues in general and the BRT project in particular have resulted in different approaches and policies to solve urban transport problems. An expert who assisted Surabaya's BRT studies stated:

The change of political leaders had led to the change of the public transport modes. The previous Mayor, Bambang Dwi Hartono was very supportive for BRT at that time and the existing Mayor now, Tri Rismaharini, she completely rejected the idea of BRT.

(NGO-Transport expert, interview, 2013)

The challenging division of roles and responsibilities between Mayor and Vice-Mayor created issues in Surabaya. Moreover, Mayor and Vice-Mayor appointments were not well accepted by many members of the legislature, which led to scrutiny of the Mayor's political decisions. In short, the change in the political leadership and style has contributed to the adoption or rejection of the BRT project in Surabaya.

b) Relationship between Mayor and the legislature

Under the leadership of Mayor Risma, the Surabaya government prepared a revision of the existing spatial plan that was enacted as Local Regulation No. 3/2007 (Surabaya City government, 2007), which has to accommodate the direction of Law No. 26/2007 on Spatial Planning (Republic of Indonesia, 2007a) and Government regulation No. 26/2008 on National Spatial Plan (Republic of Indonesia, 2008). Since 2010, in the draft revision of its spatial plan, the Surabaya City government decided to eliminate the development proposal of inner toll-road development, which has been decided and written down in the provincial and central government's spatial plans. Hierarchically, Surabaya's spatial plan must follow the guidelines, proposed spatial arrangements and transport project proposals written in the provincial and central government's spatial plans. However, Surabaya has not agreed upon the central and provincial government's spatial plans. In 2012, the provincial government of East Java finally agreed to the draft revision, and handed over the elimination of inner toll-road development to central government. This spatial plan draft revision replaced the BRT proposal with rail-based public transport (monorail and tram) and rejected the inner toll-road development. However, the House of Representatives (DPRD) felt it had not been properly consulted before radical changes were made regarding public transport issues (politician at Surabaya, interview, 2013). The funding for the initial BRT project was approved for the financial year 2007, while the legislature and executive were negotiating further budgets with central government. It was estimated that 20% of local funding would be allocated annually for running the BRT project (Ministry of Transport, 2008b). However, people from Sidoarjo would gain more benefit than those living in Surabaya.

New transport initiatives on the spatial plan led the Mayor into political conflict with the members of DPRD, reflected in an impeachment process in 2011 to bring down the Mayor (Local politician, interview, 2013; Local media, interview, 2013). The political controversy between the Mayor and legislative members became heated during the implementation of two local government regulations concerning advertisement taxes (Politik Indonesia, 2010; Surabaya Pagi, 2010; Suwastoyo, 2013). This conflict has put political pressure on the Mayor/executive on the BRT project; the Mayor of Surabaya has become more careful about making decisions. According to an official:

The Mayor is afraid of the DPRD members. She has no courage to implement BRT because of the pressures from the legislative.
(Official from the Ministry of Transport, interview, 2013)

The House of Representatives (DPRD) of Surabaya is the organisation that represents the voice of the citizens, with a direct election process for the election of members from various political parties. The former head of the Transport Department of Surabaya was sentenced to prison on corruption charges along with a few members of the DPRD. Even though the sentence was not directly linked with the BRT project, local media suspected that local legislative members were paid to pass on the BRT project in Surabaya (Transport expert, interview, 2013). As a result, the image of the BRT project became ‘dodgy’ which ultimately led to support for the new Mayor’s decisions on rail-based public transport. An ITDP’s official in Jakarta in personal communication (2013) said: “Unfortunately, Surabaya has lost its belief in BRT and has put more trust for monorail and tram.”

The transport expert (2013) stated that after the corruption allegations “the legal problems that are associated with the BRT project makes it on hold and rejected”. However, a transport engineer of the Public Works Department of Surabaya (2013) believed that

Legal regulatory should not be considered as barrier as BRT is still in the planning stage. The change from BRT to monorail and tram is basically Mayor’s policy.
(Transport engineer of the Public Works Department of Surabaya, interview, 2013)

Problems in managing public transport also stemmed from differences in setting the priorities for transport projects. According to a politician in Surabaya,

The executive proposed to have BRT in place during Mayor Bambang term, but the trial of the BRT project was not working well. Railways are more important as we do not have to put a huge investment for land acquisition from public funding.

(Politician Surabaya interview, 2013)

In short, the differences between the executive and the legislative members in Surabaya have had an impact on the BRT decision-making process.

c) Relationship between Mayor and local communities

Mayor Risma has developed strong relationships with local communities. She stated that gender, social and cultural issues were the main reasons for BRT rejection. In her November 2013 speech in Jakarta⁶, she stated:

We do not want to see ladies with high heels and disabled people crossing the bridge to reach the BRT station in the middle of the roads.
(Mayor Risma speech, 2013)

She believes that transport planning culture has been dominated by a technological approach and does not consider users' requirements in technical designs. It is important to build the trust and value of public transport before building a reliable and integrated transit system (Urban transport planner, interview, 2013; Socio-political expert, interview, 2013).

Mayor Risma and her team justify their decision by pointing out that Surabaya's socio-economic and physical structure is different from that of Jakarta and needs a different solution to urban transport problems. According to the Head of the Infrastructure division of BAPPEKO, the BRT was rejected because of "its low capacity and physical layout and characteristics of roads". He emphasised that

GIZ and PUSTRAL-UGM recommended both the rail-based and bus-based public transport in their reports. However, it is better to start with high capacity public transport system, which can fulfil people needs in Surabaya.
(The Head of the Infrastructure Division of BAPPEKO Surabaya, interview, 2013)

Mayor Risma's leadership role concerning rail-based public transport and her opinion about an inner toll-road are supported by the local communities. A group called "the Coalition to free inner toll-roads development" was created by a civil society organisation (Surabaya Community Movement), academics (University of Airlangga, ITS University), transport experts, media (Jawa Pos newspaper) and non-government organisations (Green Indonesia) to support the Mayor's actions. Another group, called 'Masyarakat Surabaya Menggugat (MSM)' and coordinated by Prof. Dr. Daniel M. Rosyid complained to the DPRD about a lack of consideration for the needs of society, and just considering profits

⁶ The Ministry of National Development Planning (BAPPENAS) conducted a national workshop on urban transport development with the support from Sustainable Urban Transport and Improvement Programme (SUTIP)-GIZ on 20 November 2013 in Jakarta, in which Mayor Risma from Surabaya and Mayor Ridwan from Bandung were invited to deliver their speech on urban transport challenges and opportunities.

for investors (Effendi, 2010b). Another group called ‘Gerakan Masyarakat Surabaya (GEMAS)’ also rejected the idea of the BRT and the inner toll-road development (Effendi, 2010b).

Mayor Risma is working closely with local universities to produce details of rail-based public transport projects. During her term, the Surabaya government has signed an agreement with local experts in transport, economics, socio-political studies, law, spatial planning, and the environment, from different universities. The experts’ groups were consulted for their knowledge and research outcomes when actively involved in decision-making processes as advisors and technical teams in collaboration with local government organisations such as the Planning Agency of Surabaya (BAPPEKO) and the Transport Department of Surabaya. Cooperation with local universities undertaking research to improve local public policy has been reflected in the involvement of academics in the urban transport development programmes. However, most team members come from the disciplines of engineering and economics.

Local media also think that the Mayor’s decision to reject the BRT is based on her views about retaining existing trees: “not to cut down the trees in Jalan Ahmad Yani for a BRT bus lane” (Media person 2, interview, 2013). Media personnel also think “she is the first female Mayor of Surabaya and therefore her opponents are reluctant to attack her.” She is just in “a fortunate position”. She has attempted to step down from her position as the Mayor (see Figure 6.8). The role of media is beyond the capacity of information distribution, as stated by a media person:

Well, here in Surabaya, we have worked with the Mayor [Risma] since she had the position as the head of Sanitary Service and City Parks of Surabaya back in 2005. Not only that we provide recent news and information for public in general, we are also involved in taking action. I understand that perhaps theoretically it is not allowed, but we have been part of the show in Surabaya. I am not sure what it calls, but we feel that we are part of the community so we have to take actions and involve in whatever happen in Surabaya. We are involved in the community programmes and activities.

(Media person 1 interview, 2013)

Mayor Risma's local popularity is reflected by her gaining wider public attention (Kompas, 2014a). The popularity of Mayor Risma with her political decisions for the poor has resulted in strong community support for her leadership role and style. When

her motivations to lead the city was low because of political pressures and several attacks on her political decisions, civil society organisations and community groups conducted public demonstrations and campaigns to give her more support and ask her to keep on leading the city.



KOMPAS.com/Achmad Faizal

Figure 6.8 : Local public demonstration to save Mayor Risma
Source: Kompas (2014a)

Media groups (Jawa Pos and local newspapers) play an important role in policy advocacy by putting forward information regarding transport conditions and policy decisions made by local government. Jawa Pos is not only acting as media, but also as local business elite or economic elite, with corporate power in the media to support and build the image of the local political leader. Mayor Risma has gained popularity as an ideal local leader, with an image and reputation developed and supported by the media (Media person 2, interview, 2013). National and local media reported that the Mayor would like to showcase local initiatives (the monorail and tram projects) (Boediwardhana, 2013; Jawa Pos, 2014) rather than being a person who accepted the central government directives about the BRT. This point was also made in an interview with a media person:

Local media has a strong connection with the existing Mayor that works to disseminate information achievements of Surabaya's Mayor in leading the city at many events and competition at international, regional, and national levels.
(Media person 2, interview, 2013).

However, an urban planner from the East Java Development Planning Agency in 2013 stated that

The media are promulgating the perspectives of the city's elites who want to secure the development of properties in the city centres.
(Urban planner 2 at East Java Province, interview, 2013).

It was believed that the BRT project was disestablished for the public transport industry. ORGANDA represents informal paratransit operators, who also support the Mayor's decision to reject the BRT proposal (The head of ORGANDA Surabaya, interview, 2013). ORGANDA is concerned with the livelihood of local minibuses drivers who would receive less income once BRT buses were in place to replace minibuses.

This section shows that transport priorities have changed with a change of local political leadership and under the influence of certain stakeholder groups, which also known as 'local strongmen' in the city. Unlike in the development of Bandung's BRT project, socio-political power in Surabaya has strongly affected the BRT project and the proposals from central government and international development agencies have been rejected.

6.6.3. Discursive power in the selection and rejection of the BRT in Surabaya

Discourse analysis of the BRT project in Surabaya reveals conflicting storylines at various stages. Three major storylines, namely low-cost, modern and practical, and environmentally sustainable are identified in policy documents and interviews by analysis of language and statements in their respective contexts. These storylines are further categorised into sub-storylines to explain the discursive realities that caused the BRT project in Surabaya to be advanced and later rejected.

6.6.3.1 Low-cost storyline

The cost of the project was one of the most important storylines associated with the BRT project in Surabaya. 'Cost' refers to total capital investment required to build the BRT. Because there are many levels of planning, design, construction, and financing for a BRT, it is always projected as a *low-cost* option when compared with railway in the cities of developing countries, including in Surabaya. Many reports compared the cost of BRT per kilometre with the cost of rail-based public transport to justify their choice.

As discussed in the previous section, international development agencies provided technical assistance in the BRT project, and construction costs were planned to be shared in a 60:40 ratio between central and local governments⁷. Because of the cost-sharing model and complex negotiations between executive and legislature, it was seen as beneficial for central government and the Surabaya government to adopt the project, which was low-cost.

The *low-cost* storylines were further strengthened by *affordability and poverty alleviation* storylines. It was argued that the low-cost of the BRT would make its operation economical and fares affordable. Affordable fares provide opportunities for the urban poor to access jobs and can ultimately alleviate poverty (Planning Agency of Surabaya City Government, 2007a, 2007b). In addition, the project would provide job opportunities for poor people during the construction process (Planning Agency of Surabaya City Government, 2007a, 2007b).

However, this storyline is opposed by *angkot* drivers who are most concerned about their living.

BRT will not be affordable as compared to *angkot*. BRT will not be able to alleviate poverty but increase poverty as a lot of *angkot* drivers will lose jobs.

(The head of Paguyuban *angkot* Surabaya interview, 2013)

The *low-cost* storyline is opposed by the politician who prioritised the development of railways in Surabaya.

Surabaya has already developed the railways since the Dutch colonialization. Some of the railways still exist, we need to rebuild this facility again. It will cost us less money because there is not much land acquisition problem, except for certain sections of the railways that are now missing and local people start build houses in these areas.

(Local politician 2 interview, 2013)

The *low-cost* storyline was challenged and later defeated by *passenger-carrying capacity* and *life-cycle cost* storylines. In BRT studies conducted by several international development agencies, the BRT was expected to have a similar passenger-carrying

⁷ This figure is extracted from Vice-Mayor Surabaya's speech, Arif Affandi, *Pikiran Rakyat*, 27 April 2007, "Busway" model will be applied in nine cities, Bandung.

capacity to the railway but cost less. However, implementation of the BRT project in Jakarta raised questions about this justification. For example, a local politician from DPRD Surabaya (2013) stated that:

Initially we [DPRD] agreed to build BRT in Surabaya, however, lessons from Jakarta [TransJakarta] shows that BRT is not solving traffic congestion problems. That's why we decided to have monorail and tram, even though it is more expensive than BRT.

(Local politician from DPRD Surabaya, interview, 2013)

BRT was also seen as a short-term solution to urban transport needs, being able to carry only one-third of the passengers a railway could carry. According to Mayor Risma (2013),

I look forward to a long-term [20-30 years] solution, because if we did not choose the right public transport system, I am afraid that Jakarta's BRT failure will repeat itself in Surabaya ['second Jakarta'].

(Mayor Risma, interview, 2013)

The *passenger-carrying capacity* storyline was supported by arguments about the comfort and reliability of rail systems in rejecting the BRT project in Surabaya. These storylines are acknowledged by politicians, and by transport planners from BAPPEKO.

In the past, we did have trial with the BRT systems; however, the outcome reveals that the BRT has only a little influence in the provision of good quality public transport services in Surabaya. We planned to have rail-based public transport as medium- and long-term solution to traffic congestion, because BRT is just a short-term solution to traffic congestion.

(Local politician from DPRD Surabaya, interview, 2013)

BRT has limited capacity as compared to monorail and trams, because the numbers of people who commute from areas surrounding Surabaya.

(Transport planner of Surabaya 1 interview, 2013)

The *passenger-carrying capacity* storyline was also challenged by *life-cycle* and *land-acquisition cost* sub-storylines. The perceived low-cost of the BRT compared with railway generally considered the initial capital cost and ignored costs over the life-cycle. Blanchard (2008, p.420) described the life-cycle costing as the future cost components of system development: acquisition costs, operation costs, maintenance costs, product distribution costs, training costs, test and support equipment costs, software costs, technical data costs, supply support costs, and retirement and disposal costs.

Because there were existing railway tracks, it was argued that the rail option did not require land acquisition and would be less expensive than it appeared. The presence of a

railway track was seen as a making the project low risk compared with the large-scale land acquisition needed for the BRT. This is evident from a statement:

The North-South Corridor is planned for tram because we already had the tram system in the era of Dutch colonialism, and for the East-West Corridor is planned for monorail. In the intersections, we can build elevated railways, if required. This option did not require land acquisition.
(Urban planner, BAPPEKO Surabaya, interview, 2013)

The proposed route for the BRT, on an inner toll-road, also created tension between central and local governments and ultimately worked against the development of the BRT. According to a transport planner of East Java Province:

Inner toll-road development is part of the toll-road systems in Java Island and its functions are to carry regional traffic flow to connect Sidoarjo District and Surabaya with Tanjung Perak Port, rather than urban passengers of BRT.
(Transport planner of East Java Province, interview, 2013).

Central government's Ministry of Public Works also objected having the BRT on an inner toll-road because it would occupy two lanes of the road (Effendi, 2010a). In short, the *low-cost* storyline received strong challenges from the *passenger-carrying capacity* and *life-cycle* storylines and ultimately led to the rejection of the BRT project in favour of rail-based public transport.

6.6.3.2 Modern and practical storylines

The *modern and practical* storylines strengthened the BRT option initially and then worked against this option. The *modern and practical* storylines refer to the technological attributes of the BRT as a popular solution to traffic congestion.

Central government perceived the BRT as a modern method of public mass transport that would alleviate traffic congestion in Surabaya (Sinaga, 2007). The BRT is believed to have good performance and quality, and to be easily operated in the field. The *modern* storyline brought out the attractiveness and benefits to users that was required to shift people from using private vehicles to using public transport (Vincent, 2011).

The *modern* storyline was supported by a sub-storyline about the improvement of existing public transport services. Having inefficient public transport services in Surabaya led to their decreased use (Transport Department of Surabaya City, 2012a, 2012b). The Ministry of Transport (2008a) found that a BRT would improve the average speed of a bus from

26 km/hour to 30-40 km/hour at different times of the day. It was expected that having a BRT, along with redesigning existing services, would increase patronage and make public transport more valued. It was argued that the BRT system could be easily adjusted for any changes of land use in the city in the future.

However, planning for such improvements created fear and uncertainty among existing local public transport operators. It was thought that many low-skilled drivers who worked in the transport industry would lose their jobs, regardless of proposed minibus-based feeder service in the new system. The BRT project was considered a central government project, unaware of challenges in the city of Surabaya. One aim of the BRT project was to move car travellers into public transport. Cars give individual status in Surabaya and shifting one's mode of transport from a private vehicle to public transport is perceived as lowering the status of the individual. Therefore, there was poor acceptance of the BRT in poor and middle class groups in Surabaya.

International development agencies advised the Surabaya government that the BRT system would be practical to implement and its benefits would be quickly seen. The BRT was projected as a quick-fix solution to traffic problems and less bureaucratic when in operation (Kogdenko, 2012). For example, planning and construction of the BRT was expected to take 12 to 18 months while building 'metros' would take from 3 to 30 years to develop sufficient infrastructure (Wright, 2011).

Implementation of Jakarta's BRT, TransJakarta, was presented as a good reason for hastening its implementation in Surabaya. An official from the Ministry of Transport (2013) in an interview stated that "If Jakarta can implement the BRT system, I am sure that other cities in Indonesia can do the same." Officials from the Surabaya government conducted a study tour in TransJakarta as a form of policy learning. The relatively short period of implementation (less than 3 years from planning to implementation) was considered positive by Surabaya's political candidates because local politicians are elected for a five-year term. A quick implementation of BRT project would provide political mileage, as happened in the case of Governor Sutiyoso in Jakarta.

Speedy implementation of a BRT in Indonesian cities is also possible because BRT projects do not follow standard regulatory processes. The Director of Urban Transport

Development Systems (BSTP) from the Ministry of Transport, Sinaga (2007) stated that “BRT is a short-term solution to public transport with good quality as good as railway.” However, the idea of its speedy implementation on existing roads made some people uneasy. Existing roads are considered narrow in Surabaya and taking bus lanes for a BRT was considered dangerous. An urban transport planner from BAPPEKO Surabaya (2013) stated that:

Our road characteristics are different from Jakarta. Our roads are narrow and we have a number of intersections due to semi-grid patterns between east-west corridors. This layout impacts upon BRT’s design and this project will become ineffective.

(Urban transport planner from BAPPEKO, interview, 2013)

The idea of BRT from central government has not taken into consideration the narrow roads we have in Surabaya. Surabaya is not Jakarta; we do not have wider road sections. If BRT is forced to be implemented in Surabaya, I can imagine how it will create more traffic congestion in the city.

(Transport planner of Surabaya 2 interview, 2013)

Local police also showed their uneasiness about running BRT on narrow roads.

According to a local transport expert (2013):

The Police Department questioned the traffic congestion that will take place after taking off two lanes on the narrow roads. Existing six lanes of road is already congested and after the BRT system, only four lanes will be available for through traffic. Traffic management is the responsibility of the police and they are afraid of having heavy workloads to relieve traffic congestion in the future.

(Local transport expert in Surabaya, email communication, 2013)

To address this issue, the Surabaya government started widening roads to secure a right-of-way (ROW) prior to BRT implementation (The Jakarta Post, 2009b). The BRT project design also made other uneasy. Many people expressed concerns about pedestrian safety and challenged the design of the BRT in Surabaya. Mayor Risma stated the following concern during an urban public transport workshop in Jakarta (November 2013):

We do not want to see ladies with high heels crossing the bridge to reach the BRT station in the middle of the road, and also for disabled people to cross the bridge, which are not convenience for them.

(Mayor Risma, speech, 2013)

The local Police Department also expressed concerns about potential congestion and safety during the construction of a BRT system. Due to issues of low capacity, the local police department was not willing to cooperate during the construction of the BRT. There was a fear that construction of the BRT would generate excess traffic and lead to congestion, which would be hard for police to manage.

6.6.3.3 Environmentally sustainable storyline

A BRT as *the environmentally sustainable* option received attention in studies prepared by international development agencies and central government. In these studies, BRT was advanced as a system that could contribute to reducing GHG emission by shifting people's travelling behaviour from private vehicles to public transport. A BRT was considered as part of the main strategies in dealing with the climate change issues from the transport sector. The GEF was directly involved in providing funding support for resolving transport issues for climate change (UNEP, 2010). GIZ also allocated Euro 14 million from 2014-2018 to central government as part of a new climate change initiative, called NAMA-SUTRI, for urban transport (GIZ, 2014). International development agencies encouraged the Surabayan government to engage in a climate change knowledge-sharing platform of global city networks that would increase the potential of getting BRT funding from global climate funds (Bakker & Huizenga, 2010).

Central government policies also supported the idea that a BRT would reduce emissions from fuel consumption. BRT projects are centrally institutionalised as part of the national programme for emissions reduction (National Development Planning Agency, 2010). In the Grand Design of Urban Transport document, the Ministry of Transport identified a 'Shift strategy' for reducing emissions from the transport sector by designing environmental friendly transport modes so that people could shift from private vehicles to public transport (Ministry of National Development Planning, 2010a, p. 6; Ministry of Transport, 2012a, p. 147). A BRT system would enhance emission reductions in Indonesian cities (National Development Planning Agency, 2010, p. 83). Therefore, central government allocated subsidies for BRT projects from its climate-change portfolio (Ministry of National Development Planning, 2010a). Central government and international development agencies proactively work on the development of sustainable urban transport from a climate change perspective. This *environmental* storyline was mostly provided by international development agencies and central government rather than the BRT studies conducted by the Surabaya government (Planning Agency of Surabaya City Government, 2007a, 2007b). Overall, *the low-cost, modern and practical*, and *environmentally sustainable* storylines provided discursive support to the BRT project initially and later were used to oppose this project.

6.6.4. Community participation and consultation gaps

Community participation and consultation gaps between different levels of organisation, political actors and communities were evident in decision-making concerning Surabaya's BRT. Since 2003, the Surabaya government began online communication by establishing an e-government website (<http://musrenbang.Surabaya.go.id>). The Surabaya government has attempted various public consultation methods (Adiwaluyo, 2014). The e-government website of Surabaya provides information to public about the activities of the city government. This new system covers planning, budgeting and procurement procedures, delivery of government projects, and control of development programmes. It has been stated having e-government has led to efficiencies that have saved the government budget about IDR 6.6 trillion (Adiwaluyo, 2014).

The Surabaya government has received many awards from various agencies at international, regional and national level. In 2013, the Surabaya government received the Future Government Awards 2013 from the Asia-Pacific Future Government in the field of data-centre and digital inclusion data (Africa, 2013). In 2014, Surabaya received the Socrates Award 2014 from the Europe Business Assembly (EBA) in London, UK, for Innovative City of the Future (Kompas, 2014b). However, the controversy emerged in questioning the Socrates Award. It was assumed that the Mayor received the United Europe Award, instead of the Socrates Award. The United Europe Award was seen as a recognition of her successful efforts in making the connection between her city and the European world and also it was part of personal contribution to the development of Europe integration (Kompas, 2014c). Apart from the controversy, this award has impact in increasing the political gains by showing the ability of the political leader to lead the city. Local media has supported the wider publication that enhances this political popularity to the voters, as a source of her political capital.

In addition, the e-government website is only a one-way informational-providing exercise that cannot engage all actors in the decision-making process. Citizens of Surabaya has limited access to use the internet in which 31.6 % of Surabaya's residents had internet access (APJII, 2012) and they could participate very little in transport projects. For example, there are several events have been organised by the city government to disseminate information, first about the BRT project and then about monorail and tram

projects. However, holding these events cannot provide the real input from the public transport industry and existing public transport operators that is necessary during project planning, design and implementation.

An urban sociologist interviewed in 2013 believed that true public involvement in policy issues has not been on the agenda of government officials because the policy-makers were not trained properly and they lack awareness of how to incorporate the needs of society. She mentioned that:

Our transport planning has focused too much on the technological and technocratic aspects of planning, which ignore the strategies for incorporating the people and society's needs and structure of the society in the decision-making.

(Urban sociologist from University of Indonesia, Jakarta, interview, 2013)

Public consultation is seen as tokenism and planning agencies in Surabaya are still struggling to define comprehensive methods of undertaking public consultation to get maximum benefits from people's involvement (Urban planner in Surabaya, interview, 2013). This is because of the planning culture that has evolved is derived from a top-down approach with little attention given to a participatory approach (Urban planner Surabaya, interview, 2013; Urban planner East Java, interview, 2013; Socio-political expert Surabaya, interview, 2013). One academic believes that while public consultation is important to gain legitimacy regarding proposed urban transport development projects. Surabaya government officials, politicians and policy makers are challenged by various demands and concerns that emerge from public consultation. Although Mayor Risma formed several groups including academics and civil society members, methods for interacting with and engaging the community or representatives of the community in decision-making about transport are still being extensively explored (Communication expert in Surabaya, interview, 2013).

Public transport services in Surabaya mostly run on an informal basis (ORGANDA), regardless of state-owned buses, DAMRI. The introduction of a BRT or monorail and tram means public transport services will become more formal in operation. This intention of the Surabaya government has created tension between the government and informal providers of public transport services, who believe that they have not been consulted. They are afraid the new system will bring new mechanisms for fare collection, calculating subsidies and defining routes of transport services. Currently individual

owners of the public transport vehicles collect fares according to the number of passengers on a trip basis and a daily basis. The new public transport system will charge fares according to distance-travelled.

The role of the Planning Agency (BAPPEKO) in Surabaya is crucial to reduce tensions and connect multiple actors with different goals and interests from various government levels and NGOs. As stated by the urban transport planner,

So far, active communication of Surabaya City is facilitated by BAPPEKO, they have access to central and provincial government officials, academic, transport experts and also with international development agencies. But because of job rotation, some well-trained officials moved into other departments.

(Urban transport planner Surabaya interview, 2013)

In addition, Surabaya city government has experienced a communication breakdown with the East Java Province. As stated by the urban transport planner,

Have you heard that the Surabaya City and the East Java Province had a fight? There are differences in seeing the city and its transport problems in a confined area and as a part of regional development. There is an ego problem among these government levels.

(Urban transport expert Surabaya interview, 2013)

The tension has grown because of lack consultation and communication between the Surabaya government and transport operators. In terms of funding, the Presidential regulation No. 67/2005 on the partnership between government and the private sector (Republic of Indonesia, 2005) contains the legal description of how the partnership between government and the private sector is to be conducted. However, public transport as a PPP is not covered in the regulation. The BRT project did not last and monorail and tram projects are in their initial stages so it is not clear whether these projects will be funded on a PPP basis. Moreover, ORGANDA is supported by members of political parties who see this as an opportunity for gaining voters' attention during political campaigning.

Establishing which residents to consult with is also difficult in Surabaya. The Surabaya government is supposed to consult with residents concerning its planning policies. However, most public transport users live on the outskirts of the city and by definition are not considered to be residents of the city. Similar issues are arising when deciding who to consult with regarding the BRT project. The gap might be bridged by the East

Java provincial government, which is looking after regional transport planning within the Surabaya Metropolitan Areas (SMA). In short, policy and planning for urban transport system have a strong technocratic dimension in Surabaya and public consultation is largely absent from the policy-making process. While there is some effort to provide information to the local public, there is no true involvement of and understanding by the public regarding transport issues.

6.7. Summary

This chapter reviews urban transport planning and policies in Surabaya. The chapter identifies financial-institutional, socio-political, discursive and communication tensions in the BRT project in Surabaya. The BRT project was initiated by central government and widely supported in studies conducted by international development agencies and their consultants. Initially the BRT project got support from the Surabaya government and local political leaders. However, after a change of local Mayor, the BRT project was rejected and replaced with monorail and tram projects. The BRT proposal was rejected by the new female Mayor of Surabaya for technical, political and aesthetic reasons. This rejection is also considered as the loss of opportunity by the central government and international development agencies as they are willing to provide funding for the BRT system. The rejection shows that local political dynamics are important and must be considered before undertaking large or mega transport projects in the city of a developing country.

The analysis shows that the priorities of central government and international development agencies priorities can be challenged at the city level, if local politicians get support from wider local communities, media and civil society organisations. Although some experts believe that the opportunity to improve public transport in Surabaya has been lost, analysis shows that a top-down ‘technocratic approach’ in dealing with public transport problems cannot be successful unless local socio-economic and socio-political conditions have been accommodated during decision-making. Public transport with a ‘human’ perspective that considers the needs of society in Surabaya should be considered and put in perspective before proposing any solutions to transport problems.

Obviously, Surabaya's decision to revoke the BRT concept exposed tensions between central and city government, but it also highlighted the importance of communication in developing partnerships among different levels of government. The provincial government is one of the most important victims of a lack of communication, and it was totally by-passed in all transport studies and plans. The development of communication channels is important for Surabaya because its local revenues are insufficient to cover future costs of new transport infrastructure. The city government of Surabaya has power to control land use for infrastructure development permits and licenses, but it needs the help of provincial and central government and international help in building a BRT, monorail and trams or all of them.

This chapter concludes that the socio-political power of local politicians along with the support of discursive storylines can challenge the institutional-financial power of central government and international development agencies. Horizontal coordination between politicians, media and universities gave the city government power to take a stand on its decision in the face of higher-levels of government, which is unique in the case of low-income Asian (LIA) cities.

Chapter 7 Discussion

7.1. Introduction

This chapter discusses the evidences and answers the research question as presented in the preceding chapters and returns to the theoretical framework outlined in Chapter 2 to address the research objectives, which are:

1. to draw on the literature on multi-level governance (MLG) theory to conceptualise and develop a framework for identifying tensions in LIA transport policy and planning,
2. to apply this framework to identify types of policy tensions in conducting an institutional analysis of Bus Rapid Transit (BRT) system in Bandung and Surabaya, two medium-sized Indonesian cities,
3. to refine the concept of MLG in the context of LIA cities based on the experiences of these two cities.

The key findings of previous chapter are the multi-level policy tensions in policy and planning for promoting public transport in Indonesian cities. These policy tensions emerged due to multiple level of goals (reduce economic costs of traffic congestion, reduce ambient air pollution and perceived GHGs emission reduction for attracting global climate change funds by responding to BRT development as introduce by global networks of BRT value chains) at different level of governance structure. These conflicting goals created tensions during the implementation of BRT in Bandung and Surabaya.

The Chapter firstly addresses tensions in transport and climate change policies in Indonesian cities between 2000 and 2012. Section 7.2 charts the policy tensions by analysing planning networks and policy-making processes in Bandung and Surabaya, focusing on first and second level of tensions that take place at central and provincial government levels. In particular, this section looks at relationships between central government and international development agencies promoting BRT as a product of policy transfer mechanisms to address transport and climate change issues in Indonesia. Section 7.3 focuses on third level of tensions related to the controversies that take place at the city level, between international development agencies, central, provincial and city government departments in BRT system in Bandung and Surabaya. Section 7.4 refines the MLG framework and assesses the validity of the framework and its utility in investigating policy tensions in medium-sized in Indonesia. Lastly, section 7.5 offers

some ways forward in anticipating the emerging of multi-level tensions in urban transport policy and planning.

7.2. Explaining the dynamics of transport and climate change policies

This study aims to identify policy tensions that might occur in transport and climate change policies in Indonesia. The dynamics of transport and climate change policies, their priorities and tensions in the institutional architecture in Indonesia are important for further discussion in this section. Previous chapters identified different goals, policy guidelines and interests of the central government and international development agencies related to urban transport issues in Indonesia. Central government policies regarding urban transport have been limited to providing infrastructure facilities. This is due to available funding for roads from international development agencies and strong beliefs that roads will bring economic growth and productivity. Therefore, the development of inner toll-roads development is seen as an ideal solution to solve traffic congestion in the presence of expensive urban land in many Indonesian cities. Chapter 1 has explained that building more roads leads to more traffic congestion and air pollution in many cities.

In the early 2000s, central government had not given attention to public transport because of the decentralisation of power at the local level. It was the responsibility of provincial and city governments to make their own decisions to promote public transport within their administrative boundaries. In 2004, Jakarta started to implement Bus Rapid Transit (BRT) based on strong advocacy and the technical help of ITDP. ITDP approached central government and convinced them of the importance of BRT in reducing traffic congestion. After some time, funding was made available and agreed upon between the executive and legislative at the Provincial government level. BRT has been perceived as part of policy innovations to improve the quality of the public transport system in Indonesia (Zusman & Sutomo, 2010). Therefore, ITDP and other international development agencies, such as GEF, UNEP, UNDP and local NGOs such as PELANGI and MTI started providing technical assistance for BRT as a part of policy transfer to Indonesia. Marsden and Stead (2011) argue that the transfer process involves the process of imitating, copying and modifying the original BRT practice from one city to adjust that practice to another city's existing structure and urban form. This has happened in the case

of Jakarta. The initial success of BRT in Jakarta compelled the central government to formulate a public transport policy in mid-2005 to promote BRT in provincial cities in Indonesia. During this time, central government signed a Memorandum of Understanding (MoU) with local government to build a BRT system in all provincial cities (including Bandung and Surabaya) of Indonesia by 2015.

The first level of policy tensions takes place at the central government level in formulating national laws, regulations and funding allocations for transport and climate change policies. For example, funding has never been earmarked for public transport in the past. Revenue from the transport sector such as from vehicle taxes and registration were never allocated directly to improve the public transport system. Climate change awareness among global networks has inspired the Indonesian government to contribute to emissions reduction. Transport becomes the sector to showcase that Indonesia can reduce its GHG emissions, even though it is not compulsory for Non-Annex members to reduce their emissions. The availability of a climate change fund and advocacy of ITDP compelled the central government to promote sustainable transport as a tool to reduce GHG emissions.

The central government's regulation has contributed to tensions at national level among ministries dealing with urban transport system. Some contributing factors include splitting responsibilities, competing administrative objectives, and also relative power of certain ministries. National politics from the executive side is favouring and committing to climate change concerns globally and attempting to show commitment to GHGs emission reduction with changes in national regulation, policy and planning instruments. Transport sector is using this opportunity to contribute to the effort of show-casing national commitment.

Climate change awareness has gained the central government's attention and has resulted in the enactment of government regulations as a national action plan for emissions reduction (Republic of Indonesia, 2011b). This plan was followed by guidelines for subnational government to create climate action plans at the local level (Ministry of National Development Planning, 2011). While this regulation of emissions reflected the concern of central government about the environmental issues, the implementation of the plans focuses on specific sectors such as transport and its infrastructure. This plan

provides an opportunity to connect transport with the environment to promote a sustainable and integrated transport system. However, central government ministries have a lack of understanding as to how climate change dimensions could be incorporated into transport policy and planning. While data and information about climate change are still undergoing many experiments in order to calculate the existing emissions level they create, subnational governments are required at the same time to comply with national action plans for climate change mitigation.

The central government emphasis on BRT has also developed tensions within different ministries. The Ministry of National Development Planning (BAPPENAS) issues the Indonesia climate change sectoral roadmap, in which the idea of having BRT in Indonesian cities has been seen as a response to climate change policy (Ministry of National Development Planning, 2010a). This BRT idea can possibly give credit to not only BAPPENAS, but also to the Ministry of Environment (MoE). Further, the BRT policy implementation passes on to the Ministry of Transport (MoT) and promote the leadership role of the Ministry of Transport (MoT), which had been long diminished by the strong dominance of the Ministry of Public Works (MoPW) in dealing with transport infrastructure. However, instead of making necessary strategic planning decisions, MoT officials have chosen to secure funding to smooth the implementation of BRT systems in provincial cities. The MoT has developed ambitious targets but has failed to provide proper planning guidelines and necessary planning tools to ease implementation at the local government level. Also, competition has arisen at the central government ministerial level, where the MoE, MoT and MoPW have overlapping responsibilities for the BRT project but at the same time lack of understanding of how to integrate transport planning into climate change action planning.

International development agencies compete to provide technical assistance for climate change action plans. These agencies have worked closely with the Ministry of National Development Planning (BAPPENAS), the Ministry of Environment (MoE) and the Ministry of Transport (MoT) to transfer climate change policy into sectoral development plans. However, tensions have emerged between international agencies and these ministries, which are evident in failure to complete planning documents and other initial pilot projects in urban transport. For example, the German development agency (GIZ) launched the Sustainable Urban Transport Project (SUTP) in collaboration with the

Ministry of Transport and the Ministry of National Development Planning (BAPPENAS) in 2000. Later, GIZ helped the MoT to formulate the Grand Design of Urban Transport in Indonesia. After several years, neither the SUTP project nor the grand design document has been finalised, due to difference of perspective between the MoT officials and GIZ experts (Urban transport planner, interview 2013). Therefore, GIZ started working with the Ministry of National Development Planning (BAPPENAS), instead of the MoT since 2012. Since 2007, the French Development Agency has offered funding and technical assistance for implementing railways in Bandung and Surabaya. In 2009, urban transport experts from France's SNCF produced a master plan for Bandung Metropolitan Area (BMA), seeking an opportunity to implement French technology in improving railway-based public transport in the metropolitan areas (Ministry of Transport, 2009). The ADB promoted a "Sustainable Transport Initiative" focusing on roads, domestic connectivity and including economic growth in the transport sector (ADB, 2012). Tensions also emerge between international agencies such as GIZ, SNCF, and ADB in promoting road and rail-based urban transport in Indonesian cities. International development agencies have employed international experts in the transport and environmental fields to translate the BRT and rail system (in the case of SNCF) into the Indonesian context. However, these experts lack understanding of local socio-political circumstances, and the reasons for people's travel behaviour in Indonesian cities. Tensions emerged when the BRT and rail system, as global urban transport products, collide with the local policy for the provision of public transport.

There is also a complaint that international development agencies and their strategies are not aligned with the central government development goals. In reality, the central government is trying to align its goals with the donors' preferred areas. Overall, international development agencies are influential in setting directions of transport and climate change policies at central and subnational government levels in Indonesia. Tensions at central government have impacted upon lower level government, the roles of central government are needed to define the ideas for changes that require coordinated power and authority poses by government and private actors.

The second level of policy tensions is associated with the dual roles of the provincial government as an extension of the central government authority and related policies on the one hand, and on the other as an independent regional government in the context of

decentralisation. The decision-making power of provincial government lies in managing the city and its transport connections with surrounding cities and districts as part of regional transport networks. This regional transport policy often conflicts with the priorities of individual cities and districts. In the case of conflicting priorities, the provincial governments have become less powerful in promoting their vision of sustainable urban transport in their areas of jurisdiction. Chapters 5 and 6 clearly shows that the role of provincial governments is undermined in the planning process, which makes the idea of BRT less accepted at metropolitan levels.

In dealing with transport, infrastructure and climate change issues within their own administrative boundaries, provincial government departments follow the structure of central government departments. However, transport is mostly seen from an engineering perspective, and the Provincial Public Works Department has greater authority than other departments of the provincial government and dominates public funding. The implementation of BRT requires fundamental changes on how to perceive this project in a way that is different from existing practices. As a result, it causes tensions between different departments at the provincial level.

The provincial government has the ability to integrate urban and regional transport networks. However, this ability has been blocked by the decentralisation of power at city government levels, which causes fragmentation of the regional level. Miharja (2010) argues that individual city government in Indonesia are not willing (and sometimes do not have the capacity) to cooperate with their neighbouring cities and districts, ultimately increasing the transaction cost of transport planning. He believes provincial government should have a strong role in achieving transport integration. Chapters 5 and 6 show that BRT project development has missed opportunities to integrate the project in the wider region simply by ignoring the role of provincial government. The provincial government has the ability to generate funding by integrating a wider regional perspective with transport investment (such as BRT). While the economic power of the provincial government relies on vehicle taxes, this fund is not accessible to city governments, which have fewer resources to generate funding. The provincial government also has an ability to develop partnerships between the central government and the city governments. However, variations in how each provincial government coordinates with central government and city government are influenced by the density of the population,

economic diversity and level of interactions with international development agencies (Jaeger et al., 2015). In short, the second level of tensions emerges by ignoring the role of the provincial governments in Bandung and Surabaya.

The third level of policy tensions is related to the controversies that have taken place at the city level, between international development agencies, central, provincial and city governments departments on BRT project in Bandung and Surabaya. This type of tensions can be classified as horizontal disintegration, which heavily influences by the local context, condition and circumstances that takes place and associates with urban politics and local actors. These tensions are discussed in the following section.

7.3. Explaining policy tensions in BRT projects in Bandung and Surabaya

This section focuses on financial-institutional, socio-political, discursive and communication tensions that appeared in interactions among government and non-government organisations governing urban transport system in Indonesian cities. The previous section discussed two levels of tension when Indonesia's government chose BRT as a solution to address transport and climate change issues in Indonesian provincial cities. This section shows deficiencies in translating this project at the design and implementation stages. While conceptually, the BRT system is seen as part of a fundamental change in the existing public transport system, its level of acceptance, planning, implementation and the operational process of BRT development has created four sources of tensions in Bandung and Surabaya that is discussed in the remainder of this section.

7.3.1. Financial-institutional tensions

Financial-institutional tensions refer to the relationships among different actors in relation to funding, rules, regulations and information, which influence the direction and priorities of the transport policies (Dimitriou, 2006; Dimitriou & Gakenheimer, 2011). The financial-institutional power of certain actors plays an important role in making decisions in favour of or against transport projects in Indonesian cities.

Chapter 4 showed how the availability of funding from international development agencies such as ADB and the World Bank influences the central government policies on building toll-roads in many cities of Indonesia. The central government saw the idea of inner toll-roads as an ideal solution for the expense of acquiring land and for the congestion of roads in the urban areas. However, traffic growth following the increase in amount of roading made congestion and air pollution worse than anticipated. The policy of building toll-roads took a turn when Jakarta started to implement a BRT project in collaboration with ITDP in 2004. ITDP presented BRT as a solution to traffic congestion, mobility and climate change in Jakarta. The central government bought these arguments and in 2005 announced the implementation of BRT in all provincial cities of Indonesia. Bandung and Surabaya have signed a Memorandum of Understanding (MoU) with the central government. However, the two cities had different experiences during the project implementation due to financial-institutional capacity, socio-political indicators and the discourse advanced for this project.

After signing a MoU, Bandung successfully implemented a BRT project in the city. Initially Bandung lacked the financial and human resource capacities required to build a BRT system. However, Bandung city government was able to network with the central government to provide access to funding and technical and management resources for this project. These resources were provided to city government by bypassing the provincial government of West Java. Moreover, the international development agencies played a limited role in building the initial BRT project in Bandung, due to the inability of the local government in Bandung to build networks with international agencies and limited funding availability (Damantoro interview 2014).

The government of Bandung City has relied upon the role of private funding for building the stations' construction, but it has failed to properly provide the expected designs that met the BRT standard. Similarly, Surabaya's mass rapid transit project was included to fund using PPP scheme (Ministry of National Development Planning, 2013), but later this project was excluded from the list in 2015 (Ministry of National Development Planning, 2015). The uncertainty of the central government funding and PPP mechanisms impact on project delivery in both cities. Indonesia has been experienced issues in urban transport projects, particularly in funding problems for public transport (Parikesit, Djarwoningrum, & Setyaka, 2009).

Like Bandung, Surabaya also lacked financial and human resource capacities to build a BRT system. However, Surabaya failed to resolve funding difficulties due to Surabaya's House of Representative's (DPRD) opposition to passing new regulations for public transport funding and the inability of the city government to secure central government funding. There was an opportunity to get funding from the provincial government by integrating the BRT project with the wider region, but this approach was not pursued actively. The central government and international development agencies provided technical assistance to the BRT project, but access to human resource capacities in the style of Bandung was lacking due to the strong role of Mayor Risma in controlling the licenses for central government projects in Surabaya.

There are some interesting similarities and differences of BRT development in Bandung and Surabaya. The BRT project was "a pilot project" from the central government with top-down planning approach and was heavily influenced by the successful implementation of TransJakarta in 2004. Chapters 5 and 6 show how central government provided buses to both cities without developing comprehensive guidelines for a BRT system in provincial cities. During this process, the provincial governments of West Java and East Java were bypassed, and that failure to work alongside provincial government resulted in a missed opportunity to develop a holistic vision of public transport in Bandung and Surabaya regional areas. Provincial governments have access to the vehicle taxes to generate transport funding. The central government's strategy of bypassing provincial government put local government in a difficult situation, as local government has no access, or limited access, to funding for BRT projects. Moreover, the Ministry of Transport tried to negotiate reduced import taxes with the Ministry of Finance for BRT buses import for provincial cities' BRT systems. This attempt failed due to strict fiscal policy on imported buses, and also because of regulation for heavy vehicles, as these taxes make an important contribution to central government revenues (Official of MoT interview, 2013).

The city government in Bandung and Surabaya had a crucial role in determining the smooth implementation of the BRT project. Bandung lacked of support from the international development agencies during the initial study of the BRT project's planning and policy. This is mainly because of the inability of the local government to build

networks and collaborate with the international development agencies. However, the role of the international development agencies was very strong in Surabaya in terms of transferring BRT knowledge, regardless of the fact that the project was not executed. After building two corridors, Bandung had just started to develop a network with ITDP in 2013, which is helping the city plan for its third corridor.

Each city adopted a different way of implementing its BRT project and to develop relationships with the central government. For example, Bandung set up the Technical Implementation Unit (UPT TMB) under the City Transport Department to speed up the implementation of the BRT project in the line with the central government's direction. This happened due to the personal interest of the Mayor Dada Rosada, approval from the House of Representatives (DPRD) and strong networking between the Bandung government and the central government. However, Surabaya acknowledged the need for a special implementation unit but decided to use the existing institutional structure of the Transport Department to implement the BRT system. BRT policy formulation and implementation involved a number of different departments and ministries at different levels, which affected the ownership of BRT at the local level.

There is a need to establish separate roles between regulation, management and operational functions of BRT (Ministry of Transport, 2008a). In Indonesian cities, these functions are run by a Technical Implementation Unit (UPT), a Public Service Authority (BLU) and Local Government Owned Enterprises (BUMD), which depend on local government decisions. In Bandung, UPT was established and received funding from the local government subsidy to support BRT's daily operation. However, the UPT TMB contributed to limited benefits to improve BRT-ridership. The UPT TMB is mainly an administrative body that lack strategies to improve the quality of service, attract more users and funding. The UPT TMB has limited authority to manage the dedicated lanes for BRT buses running on the national roads in Bandung. Unlike Bandung, TransJakarta established first a Public Service Authority (BLU) which later upgraded into a Local Government Owned Enterprise (BUMD), having more authority and funding autonomy to manage the operation of BRT as a semi-government entity. Surabaya wishes to establish either BLU or BUMD, but failed to finalize the BRT project.

The literature on financial power (Allen, 2004) shows how subnational level organisations align their priorities with the funding priorities of higher levels of government or other organisations. This finding is certainly true in the case of the relationship between central government and international development agencies that moved quickly to formulate BRT implementation policies for provincial cities in Indonesia. To some extent, it happened in the case of Bandung; but Surabaya as a case study reveals an entirely opposite story. Gaventa (2006) argues that economic power alone is not effective in determining that policy directions move in a particular direction. This is what happened in the case of Surabaya, even though the Surabaya city government successfully negotiated with the Ministry of Public Works to use a section of the national road for its first BRT corridor and with the local Police Department to manage traffic during the BRT construction phase.

Top-down BRT projects raise questions about reality of local government autonomy in the post-2000 era of decentralisation. Although it is generally believed that transport policy and financial power is devolved to the local government level, the BRT project shows that the policy and funding power of central government is still dominant. Local government executives in Bandung and Surabaya have advanced the central government BRT proposal to the legislature. This is due to funding allocation priorities, which need agreement between the executive and legislature. Initially, Bandung perceived BRT as a burden to local funding, but then used it as an opportunity to secure funding from the central government. This has resulted in ups and downs in central-local institutional relations, which has caused a vertical disintegration in policy and planning for public transport.

Horizontal disintegration also plays an important role in identifying the weakness of the BRT projects in Bandung and Surabaya. Horizontal disintegration emerges from the overlapping responsibilities of the City Planning Agency, City Transport Department, Public Works Department, the Police Department, and the Environmental Agency. In both Bandung and Surabaya, the City Planning Agency prepared the spatial plan and urban development plan, in which the BRT system was incorporated as part of the future transport development. However, detailed technical planning and implementation of the BRT system is the responsibility of the Transport Department at the city level and subject to the availability of a specific technical implementation unit to manage the operation of

the BRT system. According to Blanco, Lowndess and Pratchett (2011), whether or not there is disintegration in the policy network is a key factor in achieving or failing to achieve policy goals. In the case of Bandung and Surabaya, disintegration became a problem.

Planning and policy development for BRT in Bandung and Surabaya clearly show institutional barriers and opportunities during the struggle to improve public transport in both cities. Like other medium-sized LIA cities, the barriers included a serious deficiency of financial and human resource capacity to design and implement the BRT system at the local government level. However, opportunities could appear by a swift alignment and networking with higher levels of government to plan and implement the BRT system. The lesson for other medium-sized LIA cities to achieve their goals is to develop good policy networks with higher levels of governments to achieve their goals. There is a lesson for international development agencies and central governments who are promoting the BRT system as a model for climate change, mobility and economic growth; in developing or designing a planning process, notice should be taken of local sensitivities so that smooth implementation can be achieved.

Most medium-sized LIA cities are growing in all four directions without developing a strong Central Business District (CBD) and sub-CBDs. This intentional and unintentional urban growth is institutionalised as a solution to redistribute the traffic movements. The drawback of this strategy is that urban development is hard to integrate with a high quality trunk public transport network on a wider regional scale. The current effort to build the BRT system in Bandung, Surabaya and other medium-sized LIA cities does not take a holistic and regional perspective to integrate land use and investment in the BRT system.

The BRT development project presents a need for integration and connections within the urban transport systems. The BRT systems should be part of a multi-modal transport system that links urban transport and inter-city transport. The high-income population who are living in the outer suburbs still use their private vehicles to access their jobs. This is due to the low quality of feeder services to reach the BRT. The BRT should be considered as one component of a multi-modal transport system rather than a silver bullet to solve all problems in the transport system.

A theoretical framework based on MLG provides a useful tool to assess how the funding for BRT projects is distributed among the budgets of three different sources of government funding, and the imbalance in the proportion of the funding among these levels of government creates tensions. Despite it being a top-down pilot project, the central government relied on the provincial governments to facilitate a partnership between the chosen city and its surrounding districts (Official of MoT interview 2013) and on the city government to resolve licencing conflicts with existing routes being used by the local minibuses or *angkot*. The minimal role of provincial government raised questions in relation to generating additional funds for the BRT system and proper integration with regional level land uses. Jaeger et al. (2015) also emphasise the role of provincial government in bridging the coordination between central and city government for climate change action plans.

Despite the strong focus of MLG in higher levels of organisations, Bandung and Surabaya faced different socio-political challenges at the city levels during the design and implementation of this project. It is interesting that socio-political power played a stronger role in facilitating or opposing the BRT system in these cities as compared to the role of central government and international development agencies. This is discussed in the next section.

7.3.2. Socio-political tensions

Socio-political tensions refer to the influence of social and political factors that have facilitated or obstructed transport projects in Bandung and Surabaya. Social factors include the role of paratransit or minibuses (*angkot*) in providing transport services in both cities and their effect on the BRT project. Political factors include the role of local politicians, especially mayors, in advancing or objecting to the BRT projects in Bandung and Surabaya.

Paratransit (*angkot*) is an important social reality of all Indonesian cities, including Bandung. They not only provide transport services in congested built up areas, but also are a major source of livelihood for local drivers and their families. Chapter 5 shows that *angkot* is a social and informal response to transport problems in the city. Historically, the city government faced difficulties in managing the increasing number of *angkot* due

to a high level of informality in routes, bus stops and fare structure. On the other hand, *angkot* operators are well organised under the ORGANDA platform. Therefore, the city government perceived the BRT project as an opportunity to reorganise the public transport system in Bandung, based on modern practices. However, the *angkot* drivers reacted emotionally by organising public demonstrations. They saw BRT as a threat to their livelihood, especially after the failure of negotiations during the initial trial of the Trans Metro Bandung (TMB) in 2008. This demonstration reflects the weakness of public involvement in transport projects.

The smooth implementation of BRT relied also on cooperation between the executive of the Bandung government and local politicians who were members of the House of Representatives (DPRD) of Bandung. Due to one political party ruling in Bandung and in the province of West Java, the BRT policy and funding for infrastructure were quickly approved to align with the central government's direction. The DPRD members have control over the performance of the BRT's technical implementation unit (UPT TMB) and therefore address pressures from *angkot* unions and complaints from the wider community on UPT TMB. The role of a number of civil society organisations such as BCCF, who advocated quality urban mobility, also helped the local politicians to bear the pressure from the *angkot* operators and facilitated a decision in favour of the needs of wider society. There was no leadership change from the beginning to the implementation of the BRT project (2005-2009), which also helped in project implementation. In short, the role of local politicians in supporting and facilitating the BRT project was largely positive, except when the implementation was a little delayed and the members of DPRD blamed the inefficiency of UPT TMB. The successful implementation of the BRT project in Bandung confirms the findings from the existing literature (Buluran et al., 2013; Cervero, 2013; Wright, 2011) that local political leadership and commitments is important to finding appropriate solutions to a city's problems in spite of tough social realities.

Like Bandung, Surabaya has also had difficulties in managing *angkot*, even though their numbers are decreasing in the 'city of motorcycles' (see Barter et al. (2003) due to the need to travel long distances on motorcycles to reach at work. This fact left ORGANDA with a much weaker status in Surabaya compared to its status in Bandung. However, numbers of community and civil society groups launched social movements to promote

people's right to decent public transport in Surabaya. These active social movements helped later, first in facilitating and then in obstructing the BRT project in the city. Jones and Lucas (2012) argue that the policy-makers generally ignore the social impacts of mega transport projects, which provides an opportunity for civil society organisations to launch social movements against these projects. Surabaya provides an excellent case study where local people fought to save their livelihood and stopped the BRT project and other central government's projects.

The role of local politicians in debating the BRT project was most evident in Surabaya. The Mayor of Surabaya in 2010 – Risma - had a good reputation in terms of working with local community groups, professionals and academics to solve urban planning issues in the city. The Mayor not only approached local universities, but also universities in Jakarta, Bandung and Yogyakarta to get advice on urban transport issues. The Mayor was also a champion of bringing gender, social and cultural debates into transport decision-making. Such a leadership style and stand on social issues are new in the Indonesian context, but received a wide level of popularity among people and support from the local media. However, the new leadership style also created conflicts with the vice-mayor, members of the legislature (DPRD) and provincial and central government officials, and eventually led to the dismissal of the Mayor from her office before completing her tenure. The head of Surabaya's local legislature, Sachiroel Alim Anwar (2013) once stated that the development paradigm had been changed and should address the sustainability perspective in transport. However, other members of the DPRD disagreed with his statement due to the lack of revision of the local Spatial Plan and considered his statement to be a part of an image-building exercise. These political ups and downs have seriously affected the delivery of the BRT project in Surabaya. Hidalgo (2013), Hossain (2006), Cervero (2013), EMBARQ (2011) and Satiennam (2013) argue that political stability is an important factor in designing and implementing mega transport projects. This is true in the case of Surabaya, which has suffered due to political instability.

The socio-political situation in Bandung and Surabaya exhibits three similarities in undertaking a BRT project. First, the dynamics of local politics, and the capacity to deal with issues arising from the BRT project is key. For example, the BRT project in both Bandung and Surabaya triggered sentiments among the existing public transport operators and paratransit or minibuses (*angkot*) drivers. In a personal communication in 2014, the

paratransit expert, Joewono (2014) stated that paratransit needs a management model to integrate it with BRT. Angkot has to be placed in the hierarchical structure of public transport based on operational characteristics and capacity to carry passengers. *Angkot* would be more appropriate if drivers had a role in feeding passengers to the BRT in high-density areas, because currently their users are captive riders. However, due to the absence of strategic public transport documents, *Angkot* and BRT compete with each other rather than complimenting their roles. In personal communication with transport expert, according to Wibowo (2014), institutional arrangements for a smooth transition from *angkot* to BRT management were discussed between Bandung's government and ORGANDA. The Transport Department of Bandung offered the solution of establishing a company or cooperative for all the owners of *angkot* whose routes are affected by or overlap with BRT's corridors. Although the concept was agreed with ORGANDA, it was difficult to implement because of the lack of trust between the two parties, and negotiation regarding the formation of consortiums and employment of *angkot* drivers on BRT remains unfinished (Urban transport planner, personal communication, 2014).

It is also important to remember that the long presence of existing public transport operators has developed beneficiaries of the system, also known as the "local strongmen" (Migdal, 1988). The local strongmen are usually linked with local politicians and can influence political dynamics and the status of mega transport projects. According to Sidel (2005), the presence of local strongmen in Indonesian cities and a low political capacity to resolve conflicts determined the direction of urban development. This is certainly true in the case of Bandung and Surabaya, which chose very different BRT projects due to the presence of these socio-political factors.

Second, the strong role of local community organisations in raising their concerns about urban development was evident in Bandung and Surabaya. The Bandung Creative City Forum (BCCF) and its allies raised concerns about urban development agenda, whereas many civil society organisations such as *Masyarakat Surabaya Menggugat* (MSM) and *Gerakan Masyarakat Surabaya* (GEMAS) raised concern about the development of inner toll-roads in Surabaya. According to Migdal (1988), this reflects the condition of the relationships between the state and society, and whether and how the state is capable of addressing concerns raised by the civil society and social movements. This situation is also known as "community driven development" to oppose the dominance of top-down

governance mechanism (Dasgupta & Beard, 2007). In the case of Bandung, the relationship between the state (city government) and society translated into the successful implementation of BRT. However, the relationship between the state and society in Surabaya took many positive and negative turns and eventually obstructed the BRT project.

Third, the relationship between city government and provincial government is important and often facilitates projects when similar political parties are in power at both levels of government. The capacity of political actors in both levels of government is limited in Bandung and Surabaya when different political parties are in power at each level of government. This is because decentralisation in 2000 brought into existence a new set of local politicians, who are new to making decisions and who can find it difficult to work together to achieve common goals (Alm, 2001). Sandbukt (2013), who studied the BRT project in Denpasar (which was run by the provincial government), communicated to the researcher of this thesis in a 2014 email that rejection of the BRT project by existing local public transport operators is not as great as it was in Bandung and Surabaya. Sandbukt (2014) argues that Indonesian transport governance is so complicated and so messy that matters are very difficult to deal with. She finds that Indonesian cities need a clear national, provincial and local transport policy to complete broker chains.

Despite these similarities, differences exist in the socio-political situation of Bandung and Surabaya. First, stability in political leadership is important during policy formulation and implementation. In the case of Bandung, political leadership did not change, while because of the change in the political leadership of Surabaya, the BRT project lost its champion, which ultimately affected implementation of this project. The strategic value of BRT was embraced by a few political leaders, who viewed this project to influence their voters and gain political capital. Banister (2007) argued that political stability helps to create the public acceptability of transport projects in European cities. This was also the case in the Bandung BRT project.

Second, the controversial aspects of the BRT project in Bandung made headlines due to the objections of a strong union of existing public transport operators. Transport operators opposed the BRT project because if it also brought transport reforms the monopoly of these operators would ultimately be broken. The BRT project became the symbol of

innovation and of the modernisation of the public transport industry in the city. In contrast to Bandung, the controversy over BRT in Surabaya mainly happened due to conflicts between the Mayor and the vice-Mayor and local politicians (members of DPRD) in setting priorities from a bus-based to a rail-based public transport system, as discussed in Chapter 6. Rail-based public transport is perceived to be more pleasing to politicians rather than bus-based public transport (Ernst and Young Shin Nihon, 2011) and therefore, Surabaya politics turned to rail-based public transport.

Third, the role and ability of the Mayor in approaching the formal and informal processes of the BRT projects in Bandung and Surabaya were different. The Mayor in Bandung successfully worked with formal and informal processes to get a BRT project for the city despite the limited benefits of BRT to its residents after change of alignment (see Chapter 5). In contrast, the Mayor of Surabaya was more focussed on an image-building style, taking popular positions to get credibility for the next election. Both case studies show that political leadership and leadership style are important in facilitating or obstructing transport projects. This reality confirms the findings of Wright (2004b) who stresses the need to study political leadership in making cities sustainable in the future.

Fourth, the role of the media is important in shaping people's perception of transport projects. The local media in Surabaya played a more active role in influencing public opinion on the BRT project than did the media in Bandung. Local media continuously spread images of corrupt practices in relation to the BRT project in Surabaya. Analysis of corruption in the Surabaya BRT project is beyond the scope of this research, but certainly, headlines about corruption influenced the decision of the Mayor in promoting the BRT project. In Bandung, the role of the media was limited to providing public information rather than steering the direction of urban transport, as in Surabaya. Flyvbjerg (2012) studied the role of media in development projects, and found it was important to develop a good relationship with local media to implement complex projects. The story of the BRT projects in Bandung and Surabaya confirms these findings.

The discussion of Bandung and Surabaya demonstrates that socio-political power contributes to policy tensions in BRT projects. Like Bandung and Surabaya, a large number of medium-sized LIA cities experience low-quality informal public transport and paratransit services. The providers of these services are also linked with local politicians

and sometime are in a position to play a catalyst role in local politics. The findings from Bandung and Surabaya emphasise the need to develop an in-depth understanding of local contextual situations and facts and related political dynamics before proposing transport projects in medium-sized LIA cities. Transport projects are highly political and in need of a political champion to deal with the socio-cultural realities which exist in medium-sized LIA cities. Collaborative efforts in preparing strategic planning can potentially help to reduce tensions between local politicians and social actors in medium-sized LIA cities. Many large LIA cities have recently prepared strategic planning documents, such as Mumbai 2040 and Honai 2035, but Friedmann (2004, p. 49) argued that strategic planning is “a process, the output of which should be much more than merely a plan document or a vision statement”. These plans in medium-sized LIA cities are not prepared on the “collaborative planning” principles suggested by Healey (2003) and therefore have limited values in dealing with the socio-political tensions that appear in mega transport projects. Moreover, there are many LIA cities for which strategic planning documents, are totally missing. Therefore, there is a need to develop a strategic plan based on collaborative and participatory principles, where lower socio-economic actors have opportunities to negotiate projects that affects their livelihood. This is one of the best ways to acknowledge socio-political power and the realities of medium-sized LIA cities.

The concept of MLG provides a useful tool in analysing socio-political tensions in Bandung and Surabaya. It shows that each level and context has its own importance and dynamic. While it is important to city government to align with higher levels of government or actors to be chosen for a project and to access funding, without addressing horizontal conflicts and tensions it is nearly impossible to execute such a project. Horizontal integration is as important as vertical integration and its influence should not be underestimated. The socio-political power of local actors has the ability to influence transport projects as happened in Bandung and Surabaya. Regardless of the funding support of the central government and technical support of ITDP, the outcome of the BRT projects in Bandung and Surabaya was different due to the role of socio-political actors in both cities. The central government controlled the transport policies and planning through funding. However, in terms of project planning and implementation, the role of the central government has slowly diminished. MLG provides flexibility in assessing the roles of government organisations and other actors at different levels. The MLG concept

in assessing the socio-political power of transport actors is useful in the study of other medium-sized LIA cities as well.

7.3.3. Discursive tensions

Discursive tensions refer to types of discourses advanced by different actors to make a particular project or policy successful (Flyvbjerg, 1998, 2002; Hajer & Versteeg, 2005). Storylines that appear to sound like philosophical and rational arguments are utilised to influence subnational government to accept and implement the preferred projects (Flyvbjerg, 1998; Healey, 1999, 2012). The case study of Bandung and Surabaya shows that the idea of using BRT as part of the public transport improvement programmes to respond to climate change issues is surrounded by conflicting discourses that are not aligned with the needs of both cities. Different actors at different levels use language politically so BRT becomes the preferred options for resolving social, economic and environmental problems caused by transport.

Chapter 5 shows that the BRT project was advanced through *low-cost alternative*, *environmentally friendly* and *modern management of public transport* system storylines in Bandung. The low-cost of the BRT alternative is compared with the capital cost of building railways or metro systems and the services of BRT are promoted as being like rail services. For example, BRT branding used the term “Trans” rather than “bus” to offer a better and modern image of public transport to local people. The deregulated DAMRI and private buses provide an opportunity to advance *modern look and management* storylines of BRT. *Environmentally friendly* image of BRT was advanced to gain the attention of international organisations such as GEF, UNDP, UNEP and IGES. However, it was proposed to transfer BRT from diesel buses to CNG buses to reduce carbon emissions and promote energy conservation. These storylines are advanced mainly by the central government, followed by the local government in some documents and campaigns, to showcase the leadership role of the country and a city on climate change issues; but at the same time to gain greater attention for potential international funding under the banner of climate change funds (Hook, Kost, Navarro, Replogle, & Baranda, 2010). Bandung experienced a large number of minibuses (*Angkot*), which gave a distinct *identity* to the city. The introduction of BRT created fear and uncertainty among minibuses drivers, who rely on the public transport industry for their livelihood.

Therefore, the storylines for advancing the BRT project gained less acceptance among minibus drivers. They forced the government to develop BRT on the outskirts of the city, which ultimately made the overall project becomes less successful than it would otherwise have been.

Like Bandung, the Surabaya government advanced the BRT project with a number of *low-cost, modern, practical and environmentally sustainable* storylines. These storylines were further supported with *affordability* and *poverty alleviation* sub-storylines, offered as being required to improve existing public transport services. Chapter 6 has provided a detailed explanation of these storylines, which reflects how the idea of a BRT project was promoted to get acceptance from the public. However, *low-cost* storylines are challenged by *life-cycle* and *land acquisition cost* sub-storylines. It is interesting to find who promotes of these storylines. For example, the central government and international development agencies focus on environmental discourses and BRT as a solution to climate change and energy depletion. However, the Surabaya city government did not own *environmental* storylines and focussed on *low-cost, affordable* storylines required for poverty alleviation in the city. Moreover, feasibility studies of the BRT project prepared by the Surabaya city government documented the economic benefits of the project. The Surabaya government focussed wholly on the local issues of transport that associated with the economic dimension, rather than on climate change issues. In short, each actor at different government levels has their own storylines to advance and used the BRT project to achieve their own objectives.

The BRT projects in Bandung and Surabaya were advanced by identical storylines. Both cities' experienced funding difficulties to implement this project. Therefore, the *low-cost* storyline provided a strong narrative to get attention from local politicians and the House of Representatives (DPRD), who have the power to approve public funding. Although, *modern look and management* storylines are advanced to get public attention, there storylines faced challenges from local public transport operators. They projected BRT as a killer of their livelihood and a transport system that could not fulfil the needs of local people at a reasonable price. Their commitment to their storylines compelled the Bandung government to change the routes and location of the BRT. Such commitments were absent from the city government and central government to their storylines. This is reflected in

the future plan of the central government to build flyovers in Bandung and inner-toll development in Surabaya.

Bandung and Surabaya responded differently to the identical central government storylines about BRT. To some extent, the Bandung government accepted the storylines with half-heartedly and implemented the project in such a way that it was difficult for it to be successful. On the other hand, the Surabaya government initially accepted these storylines, but then deleted the BRT project from its urban transport agenda. They argued that the carrying capacity of existing roads and intersections were insufficient to accommodate BRT.

Bandung's BRT project has been placed in the mixed traffic on the outskirts of the city, which does not support the argument that BRT is a solution that will reduce GHG emissions. The conflicting agenda of the central government to build the flyovers on the BRT corridor contributes to the mixed traffic of the BRT. Similarly, the central government has proposed inner toll-road in Surabaya, which will ultimately increase traffic and will contribute to transport-related emissions.

The *modern* BRT project builds on comprehensive network planning principles promoted by a regional or metropolitan authority (Imran & Matthews, 2011). The absence of provincial government input weakens the ability to develop an integrated network in both cities. For a BRT project to be accepted widely, public transport users' preferences and travel needs, together with the needs of the existing public transport operators, should be considered in the selection of public transport modes. The Mayor of Surabaya focussed on humanising public transport by considering pedestrian safety in BRT design.

BRT is considered as a quick-fix technological solution to resolve transport, social, economic and environmental issues in medium-sized low-income Asian cities. Several storylines have developed and been promoted to advance BRT in these cities. Often these storylines are conflicting in nature and do not match the socio-economic and political realities of medium-sized LIA cities. Wright (2001) argued that "local context matters" and a successful BRT project must seriously consider geography, demography, and the social-economic and political conditions of the chosen city. Storylines in all directions generally never help to sell the idea to local actors (ITDP, 2007; Wright, 2004b). The case

studies of Bandung and Surabaya provide a stark contrast of how city government responded differently to identical storylines advanced by the central government and international development agencies. It is important for the central government and international development agencies to develop and prioritise site-specific discourses if they wish to promote BRT in medium-sized LIA cities. Otherwise, technology transfer and modern management of BRT will face resistance and rejection from other medium-sized LIA cities as well.

The discursive dimension of the MLG concept provides a useful lens to identify identical and contested discourses in planning and policy documents and in relation to the beliefs of decision-makers. The above discussion shows how discourses are advanced by different levels of actors in such a way that BRT is presented as the only viable solution to all problems in both cities. The advanced storylines association with BRT are part of a global approach or global beliefs designed to influence local actors (Sengers & Raven, 2015). In the case of Indonesia, the Ministry of Transport has been influenced by these storylines, especially after the success of Jakarta's BRT. Therefore, the MoT reproduced identical discourses for both Bandung and Surabaya, regardless of these cities having different transport and environmental issues.

Changing discourses in national spatial plans are evident from toll-road development to BRT as a policy. The national discourses are in conflict with the local or site specific discourses as discussed earlier. These changes and conflict in discourse resulted in the rejection of BRT in many Indonesian cities. However, the discourses that surround the idea of BRT as the only solution for urban transport issues are not very helpful in overcoming the difficulties that the local government has to deal with. Imran and Pearce (2015) also find different storylines in Auckland, Wellington and Christchurch even though they are promoting similar transport agenda. Low and Astle (2009) argued that discursive barriers can be overcome by promoting alternative storylines in transport projects. Alternative storylines were absent in the case of Bandung and Surabaya, but the discursive dimension of MLG sheds light on how policymakers have constructed the problems of and solutions to urban transport in these cities.

7.3.4. Communication and public participation tensions

Communication tensions refer to positive and negative patterns of interaction between different levels of actors in a transport decision-making process. Generally, different actors hold unequal power in transport planning, but a high level of interaction provide the opportunity for less powerful actors to raise their concerns, while providing legitimacy to powerful actors (Moravcsik, 2002). A lot of communication at different levels develops legitimacy and provides acceptance to a project that is being put forward (Bernstein, 2011; Kash & Hidalgo, 2014). Therefore, it is important to identify and discuss communication patterns employed in the BRT decision-making process in Bandung and Surabaya.

Chapter 5 shows that Bandung had several issues of community participation and consultation on the BRT project. The idea of BRT as “a pilot project” was based solely on the agreement between the national Ministry of Transport and the Transport Department of Bandung. The initial understanding was to test the success of a BRT project rather than to overhaul the transport system of the city (Damantoro interview, 2014). However, the Bandung government faced challenges in communicating this intention to local transport operators and community organisations, who perceived this project as a threat to the livelihood of existing operators. These groups were not involved in the early stage of the BRT planning and were consulted later as part of the information transfer phase. This communication gap created confusion and misinformation among members of the local community and was hard to overcome in later stages. The Bandung government’s reluctance to consult local transport operators and its community in the early stage is understandable, as the BRT project lacked planning and feasibility documents to provide precise information. Moreover, it is practically difficult in practice to consult a large number of minibus owners and other groups and therefore the city government mainly dealt with ORGANDA representatives. However, this deficiency created communication tensions and resulted in violent protest.

Like Bandung, local transport providers and community groups were not consulted at the early stage of BRT planning in Surabaya. During the planning stage, heavy emphasis was placed on building relationships with international development agencies and consultants in order to produce feasibility studies and technical documents. As the BRT project was

directed by the central government, the Surabaya government attempted to comply with the requirements being set by the central government, including the proportion agreed for public funding. In spite of the outstanding e-government website of the Surabaya government, consultation with the ordinary public was limited to disseminating information. Although the Mayor established committees to get inputs from various experts in the city, these committees were not a substitute of public input on the BRT project. Moreover, consultation with ORGANDA and DAMRI was not clear enough and both groups perceived the BRT project as bringing a new mechanism for fare collection, calculating subsidies and the routes of transport services, which would eventually be harmful to their livelihood and individual businesses. This tension increased overtime because of the lack of consultation and the communication gap between the Surabaya government and transport operators. In short, transport planning in Surabaya focussed on the technological (BRT versus Monorail/Tram) aspects, and failed to devise methods to involve people in the transport project.

Bandung and Surabaya present similar issues of the dominating top-down planning approach and a lack of community involvement in transport planning projects. Bandung is relatively highly populated with minibuses (*angkot*) compared to Surabaya, but both cities provide an easy entrance to the job market for low-wage labour. Minibus drivers rely on this for supporting their livelihoods. The public transport industry has complex layers of union cooperatives, where a number of local strongmen own most of the minibuses and offer employment to low-wage drivers. The domination of strongmen and individual drivers poses challenges to both the Bandung and Surabaya government to get genuine inputs on their transport projects. Both city governments assumed that ORGANDA represented the voices of the drivers and therefore tried to develop a relationship with ORGANDA. However, the complexity of ORGANDA's structure and its internal tensions hindered meaningful participation, and negotiation on compensation matters. As a result, participation was seen as tokenism to comply with the formal planning procedure of transport project planning. Gaventa (2006, p. 29) argued for "the importance of establishing the preconditions of participation in order for new institutional spaces to lead to change in the *status quo*". In Bandung and Surabaya, these preconditions were not established due to moving too quickly to BRT implementation; and therefore there was strong resistance to change in the *status quo*.

BRT offers an opportunity to enhance the strategic value of promoting public transport and breaking the vicious circle of forced car and motorcycle ownership in both cities. However, it was perceived as a mode of transport that would bring unaffordable fares for locals and badly impact the livelihood of some of the local population. Local transport operators offer low-fares to their passengers by compromising on the quality of their vehicle and safety. BRT was perceived as an expensive mode of public transport. This perception can be overcome by educating local people and drivers as a part of a communication strategy. However, poor communication caused misinformation about fares as well.

In the US, Hess and Bitterman(2008) argued for the importance of branding of BRT systems in creating identity to make public familiar with the systems. The authors indicate the important role of media in promoting these three different type of identities such as visual identifiers, nominal identifiers and colour palette. This effort helps to bring positive perception about BRT services and increase the image of public transport in the eyes of the public. This attempt has not been found in the case of BRT development in Bandung and Surabaya. It is clear that gaining public acceptance of the BRT systems need to incorporate branding strategy, identity building and effective communication to make local people feel that BRT is part of their daily lives.

To some extent, Bandung and Surabaya city governments tried to involve academics and professionals in BRT planning and design. However, there was an internal tension among this group about the nature of the problems and their solutions (Damantoro interview, 2013). For example, academics and professionals who were trained in European countries were more open to a public transport-based solution to traffic congestion and climate change than were others. Experts who were trained in the US universities were more inclined to find solutions on toll-roads and intelligent transport systems. The public also criticised the contribution of these experts, who played a limited role in influencing BRT planning in both cities. It is also interesting that similar tensions and a similar communication gap in Bandung and Surabaya resulted in different outcomes in terms of the implementation of the BRT project in the two cities. BRT was implemented in Bandung, regardless of its unsuccessful location; but Surabaya failed to implement its BRT project in spite of support from academics and international development agencies.

Bandung and Surabaya provide good lessons for medium-sized LIA cities. For example, BRT and other similar infrastructure projects are still perceived and advanced from higher levels of governments and with the help of international development agencies. There is very limited communication with city governments in devising such projects. However, city governments have an opportunity to involve local communities, academics and wider stakeholders to negotiate details of these projects with higher level of governments. If city governments continuously practice tokenistic community involvements, they face difficulties and protest from local communities, as happened in the case of Bandung and Surabaya. The genuine involvement of communities in medium-sized LIA cities is not easy, because communities are fragmented, have no history of involvement in the past, and because transport planning and policy are complex issues. Therefore, it is important to develop enabling situations and continuous participation, so conflicting goals and the unequal power of actors can be neutralised. Participatory budgeting in Brazilian cities and devising a way for each different city to involve its own people, as happened in Curitiba, help to change the centralised decision-making into people-oriented solutions (Syrett & Baldock, 2003).

The MLG concept provides a useful theoretical angle to see transport decision-making as a web of plural actors. These actors have their own language and pitch of voice. Cities that provided opportunities, or at least a forum, where actors can raise their voices would improve the legitimacy of their urban transport decisions. Communication patterns during the planning process are the most important channels to develop. Currently, different medium-sized LIA cities have adopted different planning processes and communication strategies to advance solutions similar to the BRT. The findings from the examples of Bandung and Surabaya provide good evidence that there is no substitute for good communication patterns to connect a web of plural actors. MLG theory calls for more democratic and participatory processes in formulating and implementing urban transport policy in medium-sized LIA cities. The challenges lie in finding methods of tapping wider audiences that are significant to transport projects such as BRT. Connecting individual and fragmented actors in the web is the most difficult task. Therefore, it would be useful for the city governments to encourage or establish “a public transport lobby” group, which would not only develop awareness of the importance of public transport for all, but also would organise individual actors to strengthen their voices in respect of overall transport governance.

BRT systems in highly dense medium-sized LIA cities create pressures on local governments' designated bus lanes or dedicated Right of Way (ROW) for BRT, as suggested by Vuchic (2007). The lack of communication to improve legitimacy has made it hard to convince local stakeholders to take lanes on congested roads for BRT. Socio-political actors can help with this issue of communication if city governments become more inclusive and democratic in transport planning and policy. It would also help them to bargain with central government and international development agencies in relation to city-specific requirement of BRT. With the increasing number of climate change issues and the integration of responses to climate change with urban transport, it is vital to ensure all stakeholders in medium-sized LIA cities are meaningfully involved. Unless proper mechanisms for public participation are developed to support the formal planning process in medium-sized LIA cities, marginal voices will be discriminated against. Good decision-making will help to identify who will get benefits from development projects, such as BRT, and who will be impacted upon by the policy decisions, ultimately improving legitimacy and ownership. The main lesson for medium-sized LIA cities is to focus on improving communication in transport decision-making.

7.4. The importance of multi-level governance framework

The examples of Bandung and Surabaya in this thesis show that urban transport issues in medium-sized LIAs are very complex due to multiple objectives and unclear roles of organisations involved in the decision-making process. Different organisations at different levels want to achieve various economic, social, political, and environmental objectives through urban transport policies and projects proposed in these cities. In addition, the socio-political situation in all LIA cities, even cities within one country such as Indonesia are entirely different and generally responded differently to the BRT projects imposed by the central government and international development agencies.

A key finding of this study shows that different organisations at multi-level have different and sometime conflicting goals such as reducing economic costs of traffic congestions, reducing ambient air pollution and carbon emissions at the same time providing low-cost mobility to their residents. Every organization used BRT projects as a silver bullet to achieve their goals which created tensions at the ground level. This study uses the concept

of MLG that provides a useful theoretical lens to explain this process, looking across different government levels in Indonesia, and to see how government departments interact with each other and with non-government actors (civil society organisations, transport professionals etc.) and international development agencies to justify BRT projects. Section 7.3 discussed how the tensions related to BRT projects originate in the high level of mutual dependency of city governments, central government, and international development agencies on identifying, funding and implementing the projects. While the city governments are dependent on the central government and international development agencies to identify and fund BRT projects due to the limited financial and technical capacity of city governments, higher levels of governments are dependent on the city government to implement the project by negotiating with local level actors such as paratransit operators. The presence of financial, socio-political and discursive power among these relationships has created conflicting goals and multi-level tensions in LIA cities.

Matsumoto et al. (2007) see BRT as part of sustainable transport policy transfer, due to the involvement of international development agencies. Currently, there are more than 167 cities worldwide that have or are implementing BRT systems as a part of international policy transfer, but many of them have been unsuccessful (Agyemang, 2015). For example, the failure of BRT in Bangkok was caused by the lack of a coordination mechanism between national and city-level actors, despite the active involvement of international development agencies from Germany, the US and Britain (Sengers & Raven, 2015). Marsden, Frick, May, and Deakin (2011) claim that cities which emphasise innovation and learning during this policy transfer process have an ability to overcome, or at least to lower, these tensions. Imran (2014) finds that the success of BRT in Curitiba relies on continuous innovation by the city authorities and local actors. According to Dolowitz and Marsh (2000), the question of “who learns what from whom” explains how well all the skills required to design, plan and implement a BRT project can be transferred. The research in this thesis shows that while international development agencies play a role as catalysts in promoting BRT as a solution to urban and environmental problems, the innovation and learning capacity of local government during the policy transfer process is a key to making BRT successful (or partially successful in the case of Bandung) or unsuccessful (in the case of Surabaya).

The BRT case studies of Bandung and Surabaya points to the importance of ‘the lay-man’s knowledge’ or local or practical knowledge and wisdom in making BRT successful. The lay-man’s knowledge is rich because of day-to-day personal experiences in using the public transport system. On the other hand, expert knowledge associated with the national and international standards, guidelines and regulations often overlooks people-centric experiences. The gaps are becoming even larger due to the complexity of transport objectives, which can make it necessary to achieve conflicting goals at the same time. According to Polanyi (1967), knowledge can be classified as explicit knowledge (formal knowledge) and tacit knowledge (practical know-how or experiences). Te Brömmelstroet and Bertolini (2010) argue that planners need to combine both explicit and tacit knowledge in generating a comprehensive policy for the local transport problems. Such a combination of knowledge will reduce differences in, or improve trade-off between conflicting transport objectives. Tennøy (2010) argues that conflict appears when powerful actors define and validate knowledge in favour of their objectives. Flyvbjerg (2002) argues that power, values and praxis vary in different contexts.

Dimitriou (2006) finds that the ‘power of context’ should be accommodated in identifying problems and generating their solutions. The MLG framework in this research shows that the lay-man’s knowledge is generally not recognised and is displaced by expert knowledge, from which experience has been coined the term “overseas expertitus”. Therefore, the friction between the lay-man’s knowledge and expert knowledge contributes to tensions in planning and implementing BRT in LIA cities.

The science and policy interface within a complex policy environment is full of tensions because of the presence of multiple actors and institutions with different rules and responsibilities (Hermans & Cunningham, 2013). BRT policy that originated at international and national government levels, poses challenges to the local political situation. In the top-down planning approach, it is crucial that higher level actors engage with local political dynamics and have full knowledge as to where power are located. Planning processes should be designed to provide space for accommodating local public inputs in the development of BRT because of variations in local circumstances. This is also means that the design of BRT projects should support the existing local public transport industry and local *angkot* drivers’ livelihood.

The use of MLG in this research provides a useful lens not only in analysing vertical links, but also in examining horizontal links in Bandung and Surabaya. The research finds a ‘democratic deficit’ and ‘communication gap’ between horizontal actors. Marsden and Stead (2011) argue that the policy-making process should not compromise legitimacy at national and local levels, otherwise it is hard to implement transfer projects such as BRT. Chapters 5 and 6 clearly show that communication was not considered properly during the BRT policy process for Bandung and Surabaya, which created tensions in both case study cities. There is no established forum in which local government officials and politicians can discuss the needs of their city transport system with provincial and central government officials and international development agencies. Similarly, there is no forum in which local stakeholders and professionals can discuss the future of a city’s transport system. In the absence of such forums, there is a serious problem of legitimacy deficit among the different levels of government and with stakeholders. It is very important for medium-sized in Indonesia and LIA cities to establish such forums, which improve the communication gap that exists between different actors. Communication between different actors improves the possibility of innovation and learning, as happened in the case of Curitiba (Imran, 2014). Therefore, communication is also crucial for increasing the status of public transport in Indonesian cities because public transport represents mobility for low-income people. BRT has certainly the capacity to improve the image of the public transport by adopting proper branding and active engagement of local actors.

The practices of MLG in EU-based and Asian-based are different due to variations in social, economic, political and environmental conditions. From political perspective, most local government in Europe has a long tradition of democratic leadership, involvement of local communities and formal channels of funding resources, which further developed after the establishment of the EU. Unlike European context, local government in LIA cities has only recently experienced democratic leadership (in the case of Indonesia, from 2000 onward), have a total absence of technical and funding capacity and a history of lack of communication with local communities. There is a lack of strategic relationships between city governments and provincial governments (as discussed in the cases of Bandung and Surabaya), which hinders the ability of stakeholders to see a bigger picture in a region. Zusman and Soetomo (2010) argue for empowering the role of provincial government in coordinating transport policies, design, plans, and implementation in a mega-city region. In contrast, urban transport expert from

Bandung, Idwan Santoso argues for the importance of the establishment of one single transport authority for each one-mega city region within a province (Urban transport expert interview, 2013). In either case, the role of provincial government is vital in governing urban and regional planning in cities and districts. Following the mandates of the National Spatial Plan, the provincial government has to support the formation of agglomeration areas as part of the main strategy in spatial development. The West Java and East Java Provinces have to support the development of Bandung Metropolitan Area (BMA) and Gerbang Kerto Susila (GKS) respectively. Such development is happening in other LIA cities as well and confirms the importance of the strategic regional spatial plan suggested by Friedmann (2004).

The variation between EU-based and Asian-based MLG practices is shown in the establishment of a strategic partnership. A strategic partnership is also needed between cities in LIA countries, of the type that happened in Europe. Huizenga (2007) argues for the importance of forming partnerships for urban air quality improvement in Asian cities. Dirgahayani (2012) emphasises fostering partnerships in sustainable urban transport in Japanese and Indonesian cities. In the European context, partnership has been regarded heavily as an essential tool for policy integration at both spatial and sector levels in a MLG system (Bache, 2010c). However, such partnerships are missing in LIA cities due to the absence of formal and informal mechanisms and therefore, south-south learning is limited. South-south learning is important because a large number of LIA cities and regions are experiencing strong population and economic growth without the presence of formal urban planning tools. In the absence of formal urban planning tools and regulatory arrangements, policy actors exercise their power when they interact with each other (Allen, 2004, 2009). MLG has added values in explaining the power of these actors in this research. Despite strengths and weakness of MLG (as discussed in Chapter 2), this research finds the MLG concept useful when explaining the transport decision-making process in LIA cities.

Bandung and Surabaya represent the medium-sized low-income Asian cities that struggle to provide an efficient public transport system for their people instead of high population, employment density and strong economic growth, key indicators for the development of public transport as suggested by Newman and Kenworthy (1999). This deficiency is reflected in the growing numbers of private motor vehicles, which contribute to climate

change issues (Bulkeley, 2010). BRT has been used as a means of sustainable transport policy transfer by the international development agencies and central government of Indonesia to overcome this deficiency.

However, the limited financial and human resource capacity of local government, the socio-political tensions emergent at the city levels and discursive and communication gaps have hindered the successful implementation of BRT systems in Bandung and Surabaya. This progress raises a question mark over the National Climate Change Actions Plan (Republic of Indonesia, 2011b), which proposed a GHGs emissions reduction target of 0.69 million tonne of CO₂e for the transport sector. The next chapter concludes the discussion of multi-level policy tensions in transport and climate change governance and suggests some areas of research for the future.

Chapter 8 Conclusion

8.1. Introduction

This research investigates multi-level policy tensions by analysing transport and climate change policies in general and BRT project in particular in medium-sized Indonesian cities. The focus on Indonesian cities as a representative of LIA cities was chosen due to the presence of a large proportion of walking, cycling and public transport trips, mixed land use, high density city structure and fast economic growth rate, prerequisite for sustainable transport. In spite of ideal indicators for the development of good quality public transport, these cities first started investing in high quality road networks and then chose the Bus Rapid Transit (BRT) as a solution to all urban transport and environmental problems. By using the multi-level governance (MLG) framework in two medium-sized Indonesian cities, Bandung and Surabaya (which have the potential to represent other medium-sized LIA cities), the research identifies types of policy tensions that occurs in the BRT policy-making, plan-making and implementation processes. The research particularly investigates power and communication gaps within institutional relationships among different levels of government, non-government and international development organisations in BRT projects.

BRT analysis identifies tensions between top-down approaches and bottom-up expectations in the project preparation and implementation process. This chapter offers four conclusions to answer the research question of how the multi-level policy tensions in medium-sized Indonesian cities are addressed.

1. The research identifies a large number of government, non-government and international actors involved in multifaceted BRT policy-making and implementation processes in Indonesian cities. The research particularly finds top-down BRT policy and funding mechanisms cause tensions in intergovernmental relationships, in complex and overlapping organisational structure and responsibilities. The absence of comprehensive planning processes and clear communication between different levels of government organisations further adds to that complexity. International development agencies (such as GIZ, UNEP, EMBARQ, WRI, the World Bank and the ADB) and international NGOs (such as ITDP) promoted BRT as a solution to climate change in Indonesia. The central government of Indonesia, which was initially interested in toll-road construction,

adopted BRT as a solution to climate change, transport and congestion problems in Indonesian cities. Therefore, BRT began as of a process of international policy transfer to Jakarta and then became a process of national policy transfer to 23 cities, including Bandung and Surabaya. While the international development agencies provided technical assistance for BRT development, the central government failed to formulate national guidelines on BRT planning and implementation.

Indonesian cities are financially dependent on provincial and central governments. Bandung and Surabaya welcome central government financial commitments to BRT, but later found difficulties in organising extra funds to implement this project. Bypassing of provincial governments in this process created imbalance or weak relationships between city governments, central government and international development agencies in planning and implementation of BRT system in their respective cities. The direct connection between central and city government is perceived as an attempt to reduce the long-time taken to establish bureaucratic arrangements and to shorten administrative procedures for implementation of BRT systems. However, this arrangement has resulted in a loss of opportunities for getting provincial funds for developing BRT systems in wider metropolitan or regional areas as a holistic response to wider metropolitan or regional transport problems.

The process by which the central government and international development agencies promoted standardised BRT totally ignores contradictions, variations and lack of capacity in the local context in Indonesia. The partial success of BRT in Bandung and the failure to implement BRT in Surabaya reflect tensions caused by establishing BRT Technical Implementation Units under the Transport Department in their respective cities. Bandung established this unit, while Surabaya failed to establish this unit and later bore the consequences of this failure. Local knowledge of BRT has been shared unequally due to a lack of human resource skills and the absence of platforms. It would be useful if technical assistance from international development agencies accompanied knowledge-sharing activities among local actors.

2. Top-down solutions generated socio-political tensions in Bandung and Surabaya. Social tensions include the socio-economic realities of both cities, which shaped city structure and mobility patterns over time. Political tensions refer to the local political dynamic and political leadership style in dealing with conflicts and delivering the project on time. The research shows that the local political dynamic positively or negatively influenced institutional relationships. In the decentralisation era, direct election of the city Mayor provides necessary power to lead the city. However, the elected Mayor is to consider the interests of central and provincial government and the aspirations of their voters when negotiating with the executive and legislature in their cities. Complex lobbying and negotiation bring many compromises in the Mayor's role and therefore personal leadership style is important to consider in this discussion. Political leadership and its style in Bandung and Surabaya affected transport policy decisions, in one case accepting and in the other case rejecting BRT systems. Political leadership in Bandung has developed good vertical (central government) and horizontal (member of legislature) relationships during the BRT development process, which ultimately provided political stability in the city. In contrast, political leadership in Surabaya adopted a popular style to win voters and created tensions with vertical and horizontal relationships. These tensions affect political stability and the city experiences changes in the Mayoral position regularly.

Informal public transport or *angkot* is a fundamental part of everyday life in Bandung and Surabaya. *Angkot* has not only filled the vacuum in formal public transport services, but also has provided a livelihood to low-income people in both cities. Competition with a quickly growing number of private vehicles has provided challenges to *angkot* operators. Therefore, the initial launch of BRT in Bandung was rejected with public protests and demonstrations organised by the influential ORGANDA. The need to offer an alternative livelihood for *angkot* operators before the development of BRT shows a difference between MLG in Asia and in the European context. The role of media, universities and local NGOs has increasingly become crucial in raising their voices and developing new values in the Indonesian context. However, these actors have not been recognised at the level they deserve in BRT policy formulation and implementation. In short, no development project can be successful in the LIA context if social-political power

in a particular city is not considered from the early stage of the development process.

3. Discursive tensions in BRT projects emerge because of conflicting discourses being advanced by the international development agencies and central government, which are not aligned with local economic, social, and environmental issues. The findings show that economic (low-cost), environmental (environmentally friendly), social (modern public transport systems) discourses are supported to gain public acceptance for BRT system. However, the low-cost discourse did not get momentum in the case studies due to lack of funding at the local level to build full-standard BRT projects. The *low-cost* discourse is also perceived in the context of the rail vs BRT debate while ignoring narrow roads and intersection improvements for BRT operation in Bandung and Surabaya. The *environmentally friendly* discourse as a solution to urban transport problems focuses on shifting people from private vehicles to public transport. However, private vehicles are more than a mode of transport in the Indonesian context, where people perceive private vehicles as a status symbol. Therefore, people have not shown any willingness to accept this argument. The *modern public transport* discourse gets some attention due to a desire to improve the quality of public transport and improve options for all travellers in Bandung and Surabaya.

However, these discourses were overpowered by a ‘people or contested’ discourse (*livelihood of angkot drivers*) in Bandung and Surabaya. The alternative discourse was mismatched with the official discourse and highlighted the need to develop public transport with consideration of local circumstances and site-specific realities. The alternative discourse also highlighted weaknesses in BRT policy-making processes, which failed to develop contingency plans during the BRT transformation stage. The contested discourse shows that the central government is interested in building a pilot project only, rather than improving the operations of whole public transport systems. As a result, there is a lack of commitment and of comprehensive plans for modernising the public transport systems, which further shows flaws in official discourses. Therefore, it is important to develop people-centred and site-specific discourses to advance projects in developing countries.

4. Top-down BRT projects lack communication between various levels of government and non-government actors in general, and local public and transport operators in particular. This is due to a lack of history and associated skills of open communication between different actors. The violent protest in the initial stage of BRT implementation in Bandung revealed these tensions. In Surabaya, the rejection of the BRT system was based on miscommunication between the Mayor and the central government and local legislature. Building proactive public participation and reducing the communication gaps are challenging tasks for successfully implementing BRT projects. So far, public involvement in planning and decision making is tokenistic in Indonesia. There is no established public forum, where communities, professionals and local politicians can debate local issues. City governments emphasised the need to develop institutional capacity for BRT development in Bandung and Surabaya. However, in the eyes of city governments improving institutional capacity means upgrading the technical skills of their staff, rather than improving soft skills. While professional skills are important for BRT development, soft skills such as communication, creativity, interpersonal skills, cultural sensitivity, empathy and diplomacy are as important as technical competence during the planning and implementing stages of BRT development. Soft skills are totally missing and largely ignored in Bandung and Surabaya. The research concludes that open communication and an open participatory process is important to address potential tensions of development projects in their later stages.

This research finds that the MLG theory is useful in theorising and later identifying the policy tensions that hinder the successful implementation of development projects. MLG theory helped to understand the dynamics of decision-making, types of power and its display, and the gap between actors and people. Most urban development projects by nature are complex due to the involvement of multiple actors with different goals and interests. The ways to capture and identify these multi-level tensions may vary, but these elements provide a foundation to refine the MLG theory in a different context.

This research finds that the integration between transport and climate change policies in the urban areas is vital for sustainable urban development. However, such integration is

still in its infancy in the context of LIA cities. There is some leadership and policy development at the international and central government levels, but translating this policy at the local level is locked into a one-size-fits-all solution in the form of BRT. It is important to provide more independence for provincial and local governments to translate climate change and transport policies in the light of their socio-political situation. Besides giving local authorities a freer hand, it is important to build the capacity of these governments because medium-sized LIA cities will become large metropolitan cities in the next 20 to 30 years. It is possible to learn from the mistakes of Jakarta, Bangkok and Manila. These cities have a serious lack of capacity to undertake comprehensive urban policy and planning, especially in regard to urban public transport systems. An opportunity is still wide open to develop the existing medium-sized LIA cities as transit cities with high-quality public transport and non-motorised transport (NMT) for increased accessibility and mobility. However, multi-level policy tensions should be addressed before attempting to design transit-friendly cities.

The research outcomes reveal that multi-level policy tensions need to be carefully considered in policies and projects which connect public policy, planning, political and urban development disciplines. It would help to rebalance the power structure in the existing institutional structure and devise a mechanism to improve the legitimacy of the chosen policy. The application of MLG theory in the LIA context shows a difference from the European context, in which there is the established role of the EU and a relatively strong, open and transparent local government structure. In contrast, the role of ASEAN has not been as strong as that of the European Union and this vacuum has been filled by the World Bank, the ADB, other multilateral agencies and international NGOs. Moreover, local and provincial governments have a lack of capacity to deal with one-off or fragile relationships with these international agencies. In the LIA context, the intersection of climate change and transport policy lacks both vertical and horizontal coherences. Vertical coherence is disrupted by the lack of connection of central government policies and projects with lower hierarchical levels. The issue of horizontal coherence is caused by the lack of synergy between city governments and local actors. There is a need to develop clear policy, funding and communication mechanisms, including attending to the socio-political realities of the site/city, and to develop people-centred discourse to design site-specific BRT or any other public transport in LIA cities.

8.2. Directions for future research

This research contributes to the refinement of MLG theory and practice in the context of medium-sized LIA cities. The research finds complex and interdependent relationships between different actors in dealing with cross-cutting policies of transport and climate change, and with the importance and uniqueness of social-political realities, contested discourses and the need for more open and constructive communication to understand the complex tensions that emerge in BRT development projects. There is a need for further research at the lower level (probably provincial and local level) on what kind of package policies help to develop site-specific BRT projects that can reduce the GHG emissions, while providing mobility and prosperity for local people. The proposed research will help to find a transition from MLG policy tensions to MLG policy development.

In medium-sized low-income Asian (LIA) cities, provincial and local governments have a lack of institutional capacity to plan and implement transport and climate change policies. In the recent literature, the role of provincial government has started to gain attention in terms of the great importance of transport in the formulation, planning and implementation of climate change action plans (Jaeger et al., 2015). It is important to recognise the role of provincial and city governments and to develop a clear policy framework and funding models where the lowest two tiers of MLG work together to integrate transport and climate change policies on the ground. The recently introduced of new regulation (Law No. 23/2014) on regional government in Indonesia has accommodated concerns over the ineffective roles of provincial government (Republic of Indonesia, 2014). This new regulation provides an opportunity to strengthen institutional arrangements that will reconfigure the rules, roles and responsibilities of provincial government within the system of multi-level government. This is to ensure that mutual dependence, intergovernmental cooperation and integration between urban and regional transport planning and the policy environment are well connected with urban transport development plans. Local governments in LIA cities are continuously facing challenges to develop innovation, learning, and funding capacity for transport projects. It is important to build greater capacity in order to tailor standardised BRT into site-specific BRT to accommodate differences in local circumstances. During the transition phase, other package policies are needed to support the improvement of public transport services from non-BRT to BRT systems in these cities. Some cities such as Curitiba and Bogotá

have come up with creativity and innovative ideas in dealing with limited resources and pressures from high-level government to achieve urban development goals (Kunzmann, 2005). Therefore, it is important to understand how these cities successfully transformed themselves in the presence of limited financial capacity.

The success of Curitiba and Bogotá also highlights the importance of political leadership (Imran, 2014). The current research also finds political will and leadership style are important attributes in making BRT successful. The leadership style of political leaders helps to structure and design institutions through which the city government interacts with a society with multiple interests and goals to promote public transport. The role of urban and transport planners in formulating comprehensive planning strategies and tactics that can convince the political leaders may strengthen political will and change the leadership style to gain more political supports from voters during direct elections. The limited research findings on how to enhance political will and leadership style provide an opportunity for future research. Comparative studies of LIA cities that have gone through a decentralisation process would help to identify the key attributes of leadership that could deal with existing public transport operators. Future research should focus on how leadership of place in LIA cities can be developed and mobilised to generate multi-level collaborative modes of governance in transport planning.

This research finds existing discourses in promoting the idea of BRT system is weak and that there are powerful alternative discourses. Official discourse has been derived from professional knowledge and has advanced different policy objectives for BRT development. However, these discourses missed people-centred issues in their storylines. There is an opportunity to build a relationship where experts and civil society organisations can share their knowledge in order to bridge the gap between expert knowledge and lay-man knowledge (the knowledge of the lay-person). The creation of genuine discourse is a continuous process, which needs to use the people's language instead of professional jargon and an appropriate platform to empower local people and community groups. A consensus on language and the building of an empowering platform would also help to translate the efforts of social movements and media into positive and tangible goals.

BRT development requires a more democratic and participatory process to gain a high-level of acceptance during policy implementation. EU cities have a long tradition of public consultation but Asian cities should devise their own ways of public consultation to improve policy outcomes. For achieving a better democratic and participatory process, the roles of planning institutions should be strengthened to build trust and connect the web of plural actors in the transport sector and to integrate policy goals and strategies with other transport-related sectors. The legitimacy of the BRT decision-making process is supported by democratic and participatory processes. This area is in need of investigation in terms of the soft attributes city level government can use to improve legitimacy and implement BRT in a complex MLG network.

The effectiveness of BRT for actively contributing to climate change issues is in question due to the lack of full implementation in Indonesian cities. The difficulties lie in data collection and methods of calculating the emissions resulting from the operational BRT system. The operational of BRT buses in many Indonesian cities is not based on the standard operating procedure promoted by the international development agencies such as GIZ and ITDP. Therefore, it is difficult to claim that the BRT system contributes to the reduction of GHG emissions. Further research should be able to clarify how the BRT system can contribute significantly to the reduction of GHG emissions from the transport sector, a goal that currently remains largely elusive.

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Appendices

Appendix 1 the notification of low risk from MUHEC



MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA

1 August 2013

Suryani Eka Wijaya
3/5 Ada Street
Hokowhitu
PALMERSTON NORTH 4410

Dear Eka

Re: Multi-Level Policy Tensions in Medium-Sized Low Income Asian Cities: The Governance of Climate Change and Transport in Indonesia

Thank you for your Low Risk Notification which was received on 8 July 2013.

Your project has been recorded on the Low Risk Database which is reported in the Annual Report of the Massey University Human Ethics Committees.

The low risk notification for this project is valid for a maximum of three years.

Please notify me if situations subsequently occur which cause you to reconsider your initial ethical analysis that it is safe to proceed without approval by one of the University's Human Ethics Committees.

Please note that travel undertaken by students must be approved by the supervisor and the relevant Pro Vice-Chancellor and be in accordance with the Policy and Procedures for Course-Related Student Travel Overseas. In addition, the supervisor must advise the University's Insurance Officer.

A reminder to include the following statement on all public documents:

"This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher(s) named above are responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher(s), please contact Professor John O'Neill, Director (Research Ethics), telephone 06 350 5249, e-mail humanethics@massey.ac.nz".

Please note that if a sponsoring organisation, funding authority or a journal in which you wish to publish requires evidence of committee approval (with an approval number), you will have to provide a full application to one of the University's Human Ethics Committees. You should also note that such an approval can only be provided prior to the commencement of the research.

Yours sincerely

John G O'Neill (Professor)
Chair, Human Ethics Chairs' Committee and
Director (Research Ethics)

cc Dr Imran Muhammed
School of People, Environment and Planning
PN331

Dr Jeff McNeill
School of People, Environment and Planning
PN331

Mrs Mary Roberts, HoS Secretary
School of People, Environment and Planning
PN331

Massey University Human Ethics Committee
Accredited by the Health Research Council

Research Ethics Office

Massey University, Private Bag 11222, Palmerston North 4442, New Zealand T +64 6 350 5573 +64 6 350 5575 F +64 6 350 5622
E humanethics@massey.ac.nz animalethics@massey.ac.nz gtc@massey.ac.nz www.massey.ac.nz

Appendix 2 research permit at provincial and city level government

East Java Province



PEMERINTAH PROVINSI JAWA TIMUR
BADAN KESATUAN BANGSA DAN POLITIK
 JALAN PUTAT INDAH NO.1 TELP. (031) - 5677935, 5681297, 5675493
 SURABAYA - (60189)

Surabaya, 9 September 2013

Kepada

Nomor : 070/6679/203.3/2013
 Sifat : Biasa
 Lampiran : 1 (satu) berkas
 Perihal : Rekomendasi Penelitian

Yth. Kepala Bi:ro/Badan/Dinas Provinsi Jawa Timur
 (Daftar terlampir)
 di
TEMPAT

Menunjuk surat Kepala Badan Lingkungan Hidup dan Penelitian Provinsi Nusa Tenggara Barat tanggal 6 Agustus 2013 Nomor : 050.7/1451/III/BLHP/2013 perihal Permohonan Ijin Penelitian dan Pengumpulan Data, bersama ini terlampir disampaikan dengan hormat Rekomendasi Penelitian dari Badan Kesatuan Bangsa dan Politik Provinsi Jawa Timur tanggal 9 September 2013 Nomor : 070/6678/203.3/2013 atas nama Hj. Suryaani Eka Wijaya, ST. MBA dengan judul proposal "Kebijakan Penanganan Perubahan iklim dan Transportasi Perkotaan di Indonesia", untuk mendapatkan tindak lanjut dari instansi tujuan.

Demikian untuk menjadikan maklum dan terima kasih.

an. KEPALA BADAN KESATUAN BANGSA DAN POLITIK
 PROVINSI JAWA TIMUR
 Kepala Bidang Budaya Politik

EDDY SUPRIYANTO, S.STP., M.PsDM.
 Pembina
 NIP. 19750319 199511 1 002

Tembusan :

- Yth. 1. Kepala Badan Kesatuan Bangsa dan Politik
 Provinsi Jawa Timur (sebagai laporan);
 2. Kepala Badan Lingkungan Hidup dan Penelitian
 Provinsi Nusa Tenggara Barat di Mataram.

West Java Province



**PEMERINTAH PROVINSI JAWA BARAT
BADAN KESATUAN BANGSA DAN POLITIK**

Jalan Supratman No. 44 Telp. (022) 7206174 – 7205759
Faksimil : (022) 7106286 website : www.bakesbangpolinmasda.jabarprov.go.id
e-mail : bakesbangpolinmasda@jabarprov.go.id
BANDUNG

Kode Pos 40121

SURAT KETERANGAN

Nomor : 070/1307/Rekomlit/KESBAK/2013

1. Yang bertanda tangan di bawah ini :

Kepala Badan Kesatuan Bangsa dan Politik Provinsi Jawa Barat

Berdasarkan surat dari : Kepala Badan Lingkungan Hidup dan Penelitian Provinsi Nusa Tenggara Barat Nomor : 050.7/1451/III/BLHP/2013 Tanggal, 6 Agustus 2013.

Menerangkan bahwa :

a.	N a m a	:	Hj. SURYANI EKA WIJAYA, ST., MBA.
b.	HP/E-Mail	:	
c.	Tempat/tgl lahir	:	Bima, 01 September 1975
B	Agama	:	Islam
e.	Pekerjaan	:	PNS
f.	Alamat	:	Jl. Energi Gg. Tamboraja No. 41 A Tangsi Rt. 029 Ampenan Selatan Kec. Ampenan Kota Mataram
g.	Peserta	:	-
h.	Maksud	:	Penelitian
i.	Untuk Keperluan	:	Penelitian dengan judul "Kebijakan Penanganan Perubahan Iklim dan Transportasi Perkotaan di Indonesia"
j.	Lokasi	:	Kota Bandung
k.	Lembaga/Instansi Yang Dituju	:	OPD Tingkat Provinsi Jawa Barat, Biro Otda dan Kerjasama , Biro Hukum dan Ham, Biro Keuangan, Biro Administrasi Pembangunan Setda Provinsi Jawa Barat dan Bakesbangpol Kota Bandung.

2. Sehubungan dengan maksud tersebut, diharapkan agar pihak yang terkait dapat memberikan bantuan/ fasilitas yang diperlukan.
3. Demikian Surat Keterangan ini dibuat untuk dipergunakan sebagaimana mestinya, dan berlaku sampai dengan tanggal, **30 Desember 2013**.

Bandung, 20 September 2013

an. KEPALA BADAN KESATUAN BANGSA DAN POLITIK

PROVINSI JAWA BARAT

Kepala Bidang Ketahanan Ekonomi, Seni, Budaya,
Agama dan Kemasyarakatan

H. MOERJONO, SH.
 NIP. 19610126 199103 1 003

Surabaya City



PEMERINTAH KOTA SURABAYA
BADAN KESATUAN BANGSA, POLITIK DAN PERLINDUNGAN MASYARAKAT
 Jl. Jaks Agung Suprpto No. 2 & 4 Telp. 031 - 5343000 Fax. 5473284
SURABAYA 60272

REKOMENDASI PENELITIAN

Nomor : 070 / 148657 / 436.7.3 / 2013

MENUNJUK : SURAT : **BADAN PERENCANAAN PEMBANGUNAN DAERAH (BAPPEDA) PROVINSI NUSA TENGGARA BARAT**
 NOMOR : 050 / 1416 / 01 - BAPPEDA
 TANGGAL : 16 Agustus 2013
 PERIHAL : Permohonan Ijin Penelitian dan Pengumpulan Data

DASAR : 1. Peraturan Menteri Dalam Negeri Republik Indonesia Nomor 20 Tahun 2011 Tentang Pedoman Penelitian dan Pengembangan di Lingkungan Kementerian Dalam Negeri dan Pemerintahan Daerah
 2. Peraturan Menteri Dalam Negeri Republik Indonesia Nomor 64 Tahun 2011 Tentang Pedoman Penerbitan Rekomendasi Penelitian.
 3. Perda Kota Surabaya Nomor 8 Tahun 2008 Tentang Organisasi Perangkat Daerah Kota Surabaya.
 4. Peraturan Walikota Surabaya Nomor 54 Tahun 2010 Tentang Rincian Tugas dan Fungsi Lembaga Teknis Kota Surabaya.

Dengan ini menyatakan tidak keberatan memberi ijin untuk melaksanakan Penelitian / Pengabdian Masyarakat kepada :

N a m a : **Hj. SURYANI EKA WIJAYA, ST., MBA**
A l a m a t : Jl. Energi No. 41 A Gg. Tambora Ampenan Selatan Mataram
P e k e r j a a n : Pegawai Negeri Sipil
T e m a / J u d u l : KEBIJAKAN PERUBAHAN IKLIM DAN TRANSPORTASI DI INDONESIA
T e m p a t / L o k a s i : KOTA SURABAYA (DPRD, BAPPEKO, Badan Lingkungan Hidup, Dinas Pendapatan dan Pengelolaan Keuangan, Dinas Perhubungan, Dinas PU Bina Marga & Pematuan, Dinas Cipta Karya dan Tata Ruang, Bagian Bina Program, Bagian Hubungan Masyarakat)
T a n g g a l (W a k t u) : 3 (Tiga) Minggu, TMT Surat dikeluarkan
P e n g i k u t : -

Syarat – syarat ketentuan sebagai berikut :

1. Penelitian yang dilakukan harus sesuai dengan surat permohonan, dan yang bersangkutan harus mentaati ketentuan / peraturan yang berlaku dimana dilakukan Kegiatan / Penelitian.
2. Penelitian yang dilaksanakan tidak boleh menimbulkan keresahan dimasyarakat, disintegrasikan bangsa atau keutuhan Negara Kesatuan Republik Indonesia.
3. Yang bersangkutan sebelum dan sesudah melakukan Penelitian / Kegiatan harap melaporkan pelaksanaan dan hasilnya kepada Dinas / Instansi yang bersangkutan.
4. Surat Keterangan ini akan dicabut / tidak berlaku apabila yang bersangkutan tidak memenuhi syarat / ketentuan seperti tersebut diatas.

Surabaya, 30 Agustus 2013

a.n. **KEPALA BADAN**
 Sekretaris,

Abduhakim SH., M.Si.
 Pembina Tk. I
 NIP 19620304 198703 1 017

Tembusan :

- Yth. 1. Ketua DPRD Kota Surabaya
 2. Kepala BAPPEKO Kota Surabaya
 3. Kepala Badan Lingkungan Hidup Kota Surabaya
 4. Kepala Dinas Pendapatan & Pengelolaan Keuangan Kota Surabaya
 5. Kepala Dinas Perhubungan Kota Surabaya
 6. Kepala Dinas PU Bina Marga & Pematuan Kota Surabaya
 7. Kepala Dinas Cipta Karya & Tata Ruang Kota Surabaya

Bandung City



PEMERINTAH KOTA BANDUNG
BADAN KESATUAN BANGSA
DAN PEMBERDAYAAN MASYARAKAT
 Jalan Wastukencana No. 2 Tlp. 022 4230393, 4230097 - Bandung

Nomor : 070/3096/BKBPM
 Lampiran : 1 Lembar
 Perihal : Pemberitahuan Penelitian /
 Survey /Praktek Kerja

Bandung, 09 Oktober 2013
 Kepada Yth. Bapak/Ibu/Sdr :
 Terlampir

Kota Bandung
 di

B A N D U N G

1. Yang bertanda tangan di bawah ini :

Kepala Badan Kesatuan Bangsa dan Pemberdayaan Masyarakat Kota Bandung
 Berdasarkan surat dari : Kesbang Pol Prov.Jabar Nomor: 070/1307/Rekomlit/
 KESBAK/2013 Tanggal, 20 September 2013

Sehubungan hal tersebut di atas, kami harapkan :

Nama : Hj. SURYANI EKA WIJAYA, ST., MBA
 Tempat tanggal lahir : Bima, 01 September 1975
 Alamat : Jl.Energi Gg.Tambora No.41A Tangsi Rt.029 Kec.Ampenan Kota Mataram
 HP/E-Mail : 082144456723
 Peserta : -
 Pekerjaan, NRP/NPM : 11046630
 Untuk Melakukan : Penelitian

*Dengan Judul " Kebijakan Penanganan Perubahan Iklim dan Transportasi
 Perkotaan di Indonesia ".*

2. Yang bersangkutan telah menghadap kami tanggal 09 Oktober 2013 dan Surat Keterangan ini berlaku sampai dengan tanggal **08 April 2014**.
3. Dengan memperlihatkan identitas serta untuk kelancaran memperoleh bahan yang diperlukan, pada prinsipnya kami tidak keberatan yang bersangkutan melaksanakan Penelitian/Survey/Praktek Kerja, sepanjang tidak mengganggu tugas yang menyangkut rahasia jabatan masing-masing Instansi/SKPD.
4. Demikian atas kerjasamanya kami haturkan terimakasih.

a.n. KEPALA BADAN KESATUAN BANGSA DAN
 PEMBERDAYAAN MASYARAKAT KOTA BANDUNG
 Sekretaris

u.b.
 Kepala Bidang Bina Ideologi dan Wasbang



Catatan :

1. Yang akan melakukan survey diwajibkan membawa kartu identitas masing-masing.
2. Pengumpulan bahan data hanya dibenarkan dalam bidang yang tercantum dalam surat pengantar ini.
3. Hasil penelitian tidak boleh digunakan keperluan l. a.
4. Selain ketentuan diatas, harus pula memperhatikan petunjuk para pejabat dimana para pelaksana mengadakan survei.
5. Pejabat terakhir yang ditandatangani pelaksanaan tersebut harus menyimpan pengantar ini setelah yang bersangkutan selesai dengan keperluannya.

Appendix 3 research permit from the Ministry of Home Affairs



KEMENTERIAN DALAM NEGERI
REPUBLIK INDONESIA
DIREKTORAT JENDERAL KESATUAN BANGSA DAN POLITIK
 Jl. Medan Merdeka Utara No. 7 Telp. (021) 3450038, Fax (021) 3454270, Jakarta 10110

Jakarta, 6 Desember 2013

Nomor : 070/4598.DI
 Lampiran : 1 (satu) berkas
 Perihal : Rekomendasi Penelitian

Kepada

Yth. Gubernur Jawa Barat, Jawa Timur dan DKI
 Jakarta.

u.p. Kepala Badan Kesbangpol dan Linmas

Dalam rangka memperlancar pelaksanaan kegiatan penelitian bersama ini terlampir disampaikan Rekomendasi Penelitian Nomor 460.02/4524. D.I Tanggal 29 November 2013 atas nama Hj. Suryani Eka Wijaya, ST., MBA dengan judul proposal Pertentangan Kebijakan Multilevel Pada Kota-Kota Menengah dan Berpendapatan Rendah di Asia Kebijakan Penanganan Perubahan Iklim dan Transportasi di Indonesia (*Multi-level Policy Tensions In Medium-Sized Low Income Asian Cities: The Governance Of Change And Transportasi In Indonesia*) di Povinsi Jawa Barat, Jawa Timur dan DKI Jakarta, untuk dapat ditindaklanjuti.

Demikian untuk menjadi maklum dan terima kasih.

a.n. DIREKTUR JENDERAL
 KESATUAN BANGSA DAN POLITIK
 SEKRETARIS DITJEN,



INDRA BASKORO
 Pembina Utama Muda (IV/c)
 NIP. 49600925 198503 1 001

Tembusan :
 Yth. Bapak Dirjen Kesbangpol, sebagai laporan.

Appendix 4 supervisors letter and information sheet (in English and Bahasa Indonesia)

Supervisors letter



MASSEY UNIVERSITY
 COLLEGE OF HUMANITIES
 AND SOCIAL SCIENCES
 TE KURA PŪKENGĀ TANGATA

Palmerston North, 6 August 2013

RE: Suryani Eka Wijaya's PhD Thesis project in urban transportation and climate change policies in Indonesia

Dear Sir or Madam,

We are writing to you in our role as Ms. Wijaya's supervisors kindly asking for your support and cooperation in gaining data and information for her PhD thesis. Ms. Wijaya is a PhD candidate in the Resource and Environmental Planning Programme, School of People, Environment, and Planning, Massey University. She is studying about the climate change and transport policy-making in Indonesian cities, Bandung and Surabaya. This research will develop a framework for studying urban planning practice and policy-making process for sustainable urban transportation in other medium-sized low-income Asian cities.

This project has been approved by Massey University Human Ethics Committee, prior the commencement of fieldwork research.

Ms. Wijaya is currently on study leave as she is working full-time for the government of Indonesia in the Regional Development Planning Agency (BAPPEDA) of West Nusa Tenggara Province. It would be great if you can provide data and information related to her topic as part of her contribution to the development of policy and planning practice in Indonesia.

Thank you very much for your kind attention and cooperation.

Best regards,

Dr Imran Muhammad

Senior Lecturer in Resource and Environmental Planning
 School of People, Environment, and Planning, Massey University, Palmerston North
 New Zealand,
 Email: i.muhammad@massey.ac.nz,
 Phone: +64 356 9099 Ext 81756

Dr Jeffrey K McNeill

Senior Lecturer in Resource and Environmental Planning
 School of People, Environment, and Planning, Massey University, Palmerston North
 New Zealand,
 Email: j.k.mcneill@massey.ac.nz,
 Phone: +64 356 9099 Ext 2507

Te Kunenga
 ki Pārehuroa

School of People, Environment and Planning
 Private Bag 11222, Palmerston North 4442, New Zealand T 06 356 9099 extn 81755 F 06 350 5737 <http://pep.massey.ac.nz>



MASSEY UNIVERSITY
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 TE KURA PŪKENGĀ TANGATA

List of Government and Non-Government Institutions and stakeholders

A. National Government

Ministry of planning and development
 Ministry of public works
 Ministry of transportation
 Ministry of environment
 Ministry of finance
 House of representative

B. Provincial Government of West Java Province and East Java Province

Department of planning and development
 Department of public works
 Department of transportation
 Department of environment
 Department of finance
 House of representative

C. Urban/city Government of Bandung (West Java) and Surabaya (East Java)

Department of planning and development
 Department of public works
 Department of transportation
 Department of environment
 Department of finance
 House of representative

D. International Development Organisations

World Bank (WB)
 Asian Development Bank (ADB)
 US Aid for International Development (USAID)
 German Technical Cooperation (GTZ/GIZ)
 Sweden International Development Agency (SIDA)
 Japan International Cooperation Agency (JICA)
 Australian Aid for International Development (AusAID)
 Institute for Transportation and Development Policy (ITDP)

E. Non-government organisations/civil society/experts/consultants

Indonesian Transportation Society
 Local NGOs
 Local Media, television, and radio
 Experts (local and international)
 Consultants
 Business owners (private sector)

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Information sheet in English



MASSEY UNIVERSITY
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 TE KURA PŪKENGĀ TANGATA

PhD Research

Multi-level policy tensions in medium-sized Low Income Asian (LIA) cities:
 The governance of climate change and transport in Indonesia

INFORMATION SHEET

Researcher Introduction

My name is Suryani Eka Wijaya. I am a PhD student in the School of People, Environment, and Planning at Massey University, New Zealand. I am in Indonesia conducting fieldwork for my thesis exploring climate change and transport policy-making in Bandung and Surabaya.

Project Description and Request to meet

I wish to explore the experiences and perceptions of people managing and coordinating urban transport planning and policy in Jakarta, Bandung and Surabaya. I would like to meet with you to discuss your involvement in and perceptions about climate change and transport policy-making.

Participant Identification and Recruitment

You and other participants have been identified from the published planning and policy documents related to climate change and transport policies, and include people in international, national, and subnational government levels and non-government organisations. I appreciate you making your time and knowledge available to me, but I am not able to provide any formal recognition or reimbursement for your time. The discomforts or risks to participants are low as the interview questions only ask for their experiences and perceptions in policy process.

Interview Procedures

The interview starts with the introduction of the research aim and my background. The semi-structured interviews that follow will be recorded and will take around 40 minutes. Please seek clarification if you have any concerns about your involvement in this study.

Data Management

The data will be used for study-related purposes only. Your consent is sought in case the same data is used for other purposes or publications. I will transcribe the data. Confidentiality of the data will be maintained by using pseudonyms and a coding system, protecting all participants' identities. Interviews data will be stored within the university property after completion of the fieldwork research. The disposal of data such as the transcripts and consent forms will take place 5 years after research submission.

Participant's Rights

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- decline to answer any particular question;
- withdraw from the study at any time;
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used unless you give permission to the researcher;
- be given access to a summary of the project findings when it is concluded
- ask for the recorder to be turned off at any time during the interview.

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MASSEY UNIVERSITY
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 TE KURA PŪKENGĀ TANGATA

Project Contacts

This project is supervised by:

Dr Imran Muhammad

Senior Lecturer in Resource and Environmental
 Planning

School of People, Environment, and Planning,
 Massey University, Palmerston North
 New Zealand,

Email: i.muhammad@massey.ac.nz,

Phone: +64 356 9099 Ext 81756

In Indonesia, my contact detail: Badan Perencanaan Pembangunan Daerah (Bappeda) Provinsi NTB,
 email: s.e.wijaya@massey.ac.nz, phone: +62 370 636717.

Dr Jeffrey K McNeill

Senior Lecturer in Resource and Environmental
 Planning

School of People, Environment, and Planning,
 Massey University, Palmerston North
 New Zealand,

Email: j.k.mcneill@massey.ac.nz,

Phone: +64 356 9099 Ext 2507

In case you have any questions or inquiries about the project, please do not hesitate to contact me and my supervisors by email or phone.

Low Risk Notification

This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher named above is responsible for the ethical conduct of this research. If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher, please contact Professor John O'Neill, Director, Research Ethics, telephone 06 350 5249, email humanethics@massey.ac.nz.

I hope that this information has answered all your inquiries. Thank you for your kind attention and consideration to participate in this project.

Best regards,

Suryani Eka Wijaya

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Information sheet in Bahasa Indonesia



MASSEY UNIVERSITY
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 AND SOCIAL SCIENCES
 TE KURA PŪKENGĀ TANGATA

Penelitian Untuk Program Doktor

Kebijakan penanganan perubahan iklim and transportasi perkotaan di kota-kota menengah dan berpendapatan rendah di Asia

LEMBAR INFORMASI

Saya Suryani Eka Wijaya mahasiswa pada program doktor di bidang perencanaan kota dan wilayah, Massey University, New Zealand. Saat ini saya sedang melaksanakan pengambilan data dan informasi di Indonesia terkait tesis PhD saya melalui telaahan terkait perubahan iklim and transportasi perkotaan di Bandung dan Surabaya.

Garis besar survey dan undangan

Saya tertarik pada sikap dan persepsi anda dan berharap dapat menggali pengalaman dan pendapat para pihak yang berkepentingan dalam proses pengelolaan dan koordinasi perencanaan transportasi perkotaan dan kebijakan di Jakarta, Bandung, dan Surabaya. Saya mengundang para pihak terkait untuk berdiskusi secara langsung dengan Anda terkait peran dan pelibatan para pihak. Khususnya dalam penyusunan kebijakan terkait perubahan iklim dan proses pengambilan keputusan untuk transportasi perkotaan.

Identifikasi peserta dan proses seleksi

Pelibatan Anda dan peserta lainnya telah diidentifikasi melalui dokumen perencanaan dan kebijakan umum di bidang perubahan iklim dan transportasi perkotaan. Pelibatan ini juga berkaitan dengan peran lembaga bantuan luar negeri dan organisasi non pemerintahan pada tingkat internasional, nasional, provinsi, dan lokal atau kota level. Saya sangat berterima kasih atas kesempatan, waktu, dan pengetahuan yang telah Anda berikan. Namun demikian saya tidak memiliki kapasitas untuk menyediakan dana untuk membalas jasa Anda. Resiko rendah dan hal-hal yang menyebabkan tidak nyaman terkait pelibatan Anda dalam penelitian ini telah dipertimbangkan dengan baik. Hal ini terkait dengan jenis pertanyaan dalam interview yang bersifat umum dan menggali pengalaman dan persepsi dalam proses penyusunan kebijakan perubahan iklim dan transportasi perkotaan di Indonesia.

Prosedur interview

Proses interview akan diawali dengan penjelasan terkait dengan tujuan penelitian dan latar belakang peneliti. Proses ini akan disimpan melalui perekam suara dan berlangsung selama 40 menit. Anda dipersilahkan untuk mengajukan pertanyaan jika terdapat hal-hal yang kurang jelas terkait dengan keterlibatan anda dalam proses penelitian ini.

Manajemen Data

The data will be used for study-related purposes only. Your consent is sought in case the same data is used for other purposes or publications. I will transcribe the data. Confidentiality of the data will be maintained by using pseudonyms and a coding system, protecting all participants' identities. Interviews data will be stored within the university property after completion of the fieldwork research. The disposal of data such as the transcripts and consent forms will take place 5 years after research submission.

Hak Anda

Proses partisipasi Anda dalam interview ini bersifat sukarela. Jika Anda memutuskan untuk mendukung proses penelitian ini, Anda berhak atas:

- Menolak untuk menjawab pertanyaan-pertanyaan tertentu

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AND SOCIAL SCIENCES
 TE KURA PŪKENGĀ TANGATA

- Memutuskan mundur dari penelitian ini sewaktu-waktu
- Mengajukan pertanyaan tentang penelitian ini pada waktu lainnya
- Memperoleh informasi untuk mendalami bahwa nama dan identitas Anda akan digunakan berdasarkan persetujuan dari Anda sendiri
- Memperoleh akses pada hasil penelitian di masa mendatang setelah process pengambilan kesimpulan;
- Memohon untuk mematikan alat perekam suara sewaktu-waktu selama prosss interview berlangsung.

Kontak informasi

Jika ada pertanyaan yang terkait dengan proses pengambilan data ini, silahkan menghubungi pembimbing saya dan saya melalui email atau number telephone berikut ini:

Dr Imran Muhammad

Senior Lecturer in Resource and Environmental Planning

School of People, Environment, and Planning,
 Massey University, Palmerston North
 New Zealand,

Email: i.muhammad@massey.ac.nz,

Phone: +64 356 9099 Ext 81756

Alamat saya di Indonesia : Badan Perencanaan Pembangunan Daerah (Bappeda) Provinsi NTB, email: s.e.wijaya@massey.ac.nz, telephone : +62 370 636717.

Dr Jeffrey K McNeill

Senior Lecturer in Resource and Environmental Planning

School of People, Environment, and Planning,
 Massey University, Palmerston North
 New Zealand,

Email: j.k.mcneill@massey.ac.nz,

Phone: +64 356 9099 Ext 2507

Kaji Etik/Ethical assurance

"Proyek penelitian ini telah dievaluasi oleh peer review dan diputuskan sebagai resiko rendah. Sehingga belum pernah ditelaah oleh salah satu anggota University's Human Ethics Committees. Para peneliti yang namanya disebutkan di atas bertanggung jawab untuk etika dalam pelaksanaan penelitian ini. Jika Anda memiliki persoalan terkait pelaksanaan penelitian ini yang ingin dibicarakan dengan seseorang selain para peneliti, silahkan menghubungi Professor John O'Neill, Director, Research Ethics, telephone 06 350 5249, email humanethics@massey.ac.nz."

"This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher named above is responsible for the ethical conduct of this research. If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher, please contact Professor John O'Neill, Director, Research Ethics, telephone 06 350 5249, email humanethics@massey.ac.nz."

Saya berharap Lembar Informasi ini bermanfaat untuk Anda untuk berpartisipasi dalam penelitian ini. Terima kasih banyak atas segala perhatian dan kebaikan Anda.

Salam hangat,

Suryani Eka Wijaya

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School of People, Environment and Planning

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Appendix 5 participant consent form



MASSEY UNIVERSITY
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TE KURA PUKENGA TANGATA

PhD Research
**Multi-level policy tensions in medium-sized Low Income Asian cities:
The governance of climate change and transport in Indonesia**

PARTICIPANT CONSENT FORM - INDIVIDUAL

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree/do not agree to the interview being sound recorded. (If applicable include this statement)

I agree/do not agree to the interview being image recorded. (If applicable include this statement)

I wish/do not wish to have my recordings returned to me. (If applicable include this statement)

I wish/do not wish to have data placed in an official archive. (If applicable include this statement)

I agree to participate in this study under the conditions set out in the Information Sheet.

Signature: _____ Date: _____

Full Name - printed _____

To: Eriyanga
M. Pambuan

School of People, Environment and Planning
Private Bag 11202, Palmerston North 4412, New Zealand. T: 06 330 9889 ext: 11105 F: 06 330 5121 <http://pep.massey.ac.nz>

Appendix 6 research interview guide

Interview topic for transport decision-making process

- a. What is your role and responsibilities in urban transport decision-making process?
- b. How the policy for urban transport was made?
- c. How the policy for climate change was made?
- d. How was the adoption process take place in integrating between urban transport and climate change policies?
- e. Who was involved in the policy-making and implementation?
- f. Why these actors involve in the policy-making and implementation?

Interview topic for financial power

- a. What are the criteria for urban transport funding allocation?
- b. Where does the funding for BRT project come from?
- c. How the decision for funding allocation was made?
- d. Who was involved in the funding allocation meetings?
- e. Why these actors involve in the meetings?
- f. How does the funding disbursement for BRT project being use?

Interview topic for socio-political power

- a. What are the national urban transport and climate change priorities?
- b. How do the political leaders' response to the national policies?
- c. What are the local political commitments for BRT project?
- d. How do the civil society response to the national policies?

Interview topic for discursive arguments

- a. Why local government accept or reject BRT project?
- b. How do you value BRT project?
- c. How was the urban transport master plan developed?
- d. Who do you think play the main role in promoting or rejecting BRT in your city?
- e. What are the potential benefits of BRT project?
- f. What are the drawbacks of BRT project?

Interview topic for public participation

- a. What are the formal and informal rules and norms for public participation in transport and climate change decision-making process in your city?
- b. How public were involved and considered in transport and climate change decision-making process in your city?
- c. What are the forms of public involvement take place?
- d. How were the public participation's results taken into consideration in the final transport decisions?

Interview topic for communication patterns

- a. What are the formal and informal methods of communication during policy formulation and decision-making for BRT project?
- b. What are the challenges in communication process between stakeholders at multiple government levels?
- c. How do stakeholders deal with communication issues?
- d. What are the challenges in communicating the policy decision for BRT project?
- e. How were the responses from various different stakeholders?

Appendix 7 participants of formal and informal semi-structured interviews in Surabaya

Organization
Mayor of Surabaya
Regional Development Planning Agency of Surabaya City (BAPPEKO Surabaya City)
Transport Department of Surabaya City
Public Works Department of Surabaya City
Financial Department of Surabaya City
Programme Development Department of Surabaya City
Housing and Spatial Planning Department of Surabaya City
Environmental Agency of Surabaya City
Public Works Department of Surabaya City
Cooperation Department of Surabaya City
Politicians (Members of DPRD of Surabaya City)
Regional Development Planning Agency of East Java Province (BAPPEDA East Java Province)
Transport Department of East Java Province
Public Works Department of East Java Province
Cooperation Department of East Java Province
Politicians (Members of DPRD of East Java Province)
Research and Development Agency of East Java Province
Energy and Mineral Resource Department of East Java Province
Environmental Agency of East Java Province
Financial Department of East Java Province
Law Department of East Java Province
Land-transport owners organization (ORGANDA) of Surabaya City
Minibuses association (<i>Paguyuban Angkot Surabaya</i>) of Surabaya City
Transport expert from Institute of Technology Surabaya (ITS)
Economic expert from Airlangga University
Socio-political expert from Airlangga University
Communication expert from Airlangga University
Media person from Jawa Pos Newspaper

Appendix 8 participants of formal and informal semi-structured interviews in Bandung

Organization
Regional Development Planning Agency of Bandung City (BAPPEKO Bandung City)
Transport Department of Bandung City
BRT Technical Implementation Unit (UPT-TMB)
Environmental Agency of Bandung City
Public Works Department of Bandung City
Financial Department of Bandung City
Economic Department of Bandung City
Politicians (Members of DPRD of Bandung City)
Housing and Spatial Planning Department of Bandung City
Regional Development Planning Agency of West Java Province (BAPPEDA West Java Province)
Transport Department of West Java Province
Cooperation Department of West Java Province
Politicians (Members of DPRD of West Java Province)
Environmental Agency of West Java Province
Energy and Mineral Resource Department of West Java Province
Programme Development Department of West Java Province
Tax Department of West Java Province
West Java Province Metropolitan Development Management (WJPMDM)
Land-transport owners organization (ORGANDA) of Bandung City
Land-transport owners organization (ORGANDA) of West Java Province
Transport experts from Bandung Institute of Technology (ITB)
Transport engineer from Bandung Institute of Technology (ITB)
Urban planning experts from Bandung Institute of Technology
Environmental expert from Bandung Institute of Technology (ITB)
Bandung Creative City Forum (BCCF)
Riset Indie (Community groups in transport and urban planning)
Media person from Pikiran Rakyat

Appendix 9 participants of formal and informal semi-structured interviews in Jakarta

Organization
Ministry of National Development Planning (BAPPENAS)
Ministry of Transport
National Transport Research Centre
Ministry of Public Works
Ministry of Environment
Indonesia National Council on Climate Change (DNPI)
Ministry of Finance
Politicians (Members of DPR)
Indonesian Transport Society (MTI)
Transport experts from NGOs
Socio-political experts from University of Indonesia
Transport engineers from University of Indonesia
Urban and spatial planning experts from University of Indonesia
Officials from IndII-AusAID
Officials from the World Bank
Officials from ITDP-Jakarta
Officials from GIZ
Officials from AusAID
Media person from Kompas