

**THE STUDY OF PUBLIC AND PRIVATE PARTNERSHIP
IN URBAN DEVELOPMENT AS A SMART CITY:
A CASE STUDY OF LIGHT RAIL TRANSIT
CONSTRUCTING PROJECT IN
KHON KAEN**



Piyamart Tupmongkol

**A Dissertation Submitted in Partial
Fulfillment of the Requirements for the Degree of
Doctor of Public Administration
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ABSTRACT

Title of Dissertation	THE STUDY OF PUBLIC AND PRIVATE PARTNERSHIP IN URBAN DEVELOPMENT AS A SMART CITY: A CASE STUDY OF LIGHT RAIL TRANSIT CONSTRUCTING PROJECT IN KHON KAEN
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A Study of Public and Private Partnership in Urban Development as a Smart City: A Case Study of the Light Rail Transit Constructing Project in Khon Kaen is aimed at: 1) studying and developing cooperation within urban development policies in a public private partnership model in Khon Kaen; 2) studying the public private partnership implemented in urban development in Khon Kaen; 3) studying the roles and operation of public private partnership in urban development in Khon Kaen; 4) studying the strengths, limitations, problems and threats to urban development in the public private partnership model; and 5) proposing policy-based suggestions to the government. This study involves a qualitative approach using interviews with relevant people in the public sector (regional government offices), private sector and five local administrative organizations based on observations and information obtained from documents which comprise the major tool for data collection.

The findings indicate that this form of partnership has arisen because Khon Kaen City has realized various issues as a result of its rapid growth. Local administrative organizations and the people sector have, therefore, devised a concept of urban development by way of a Smart City by starting with the development of a mass transit system as its first priority. However, due to certain budgetary constraints related to construction, the private sector under the name of Khon Kaen City Development (KKTT) Co., Ltd. offered its support in pushing the Khon Kaen Urban Development Project. Initially, a budget was funded for driving the project. Thus, the Khon Kaen Urban Development Project was initiated from the bottom-up, which resulted in the cooperation of five local administrative organizations under the name of Khon Kaen Transit System Co., Ltd. (KKTS) and the private sector. However, pushing forward with

the Khon Kaen Urban Development Project has made them face several problems and threats, a part of which may be related to insufficient decentralization.



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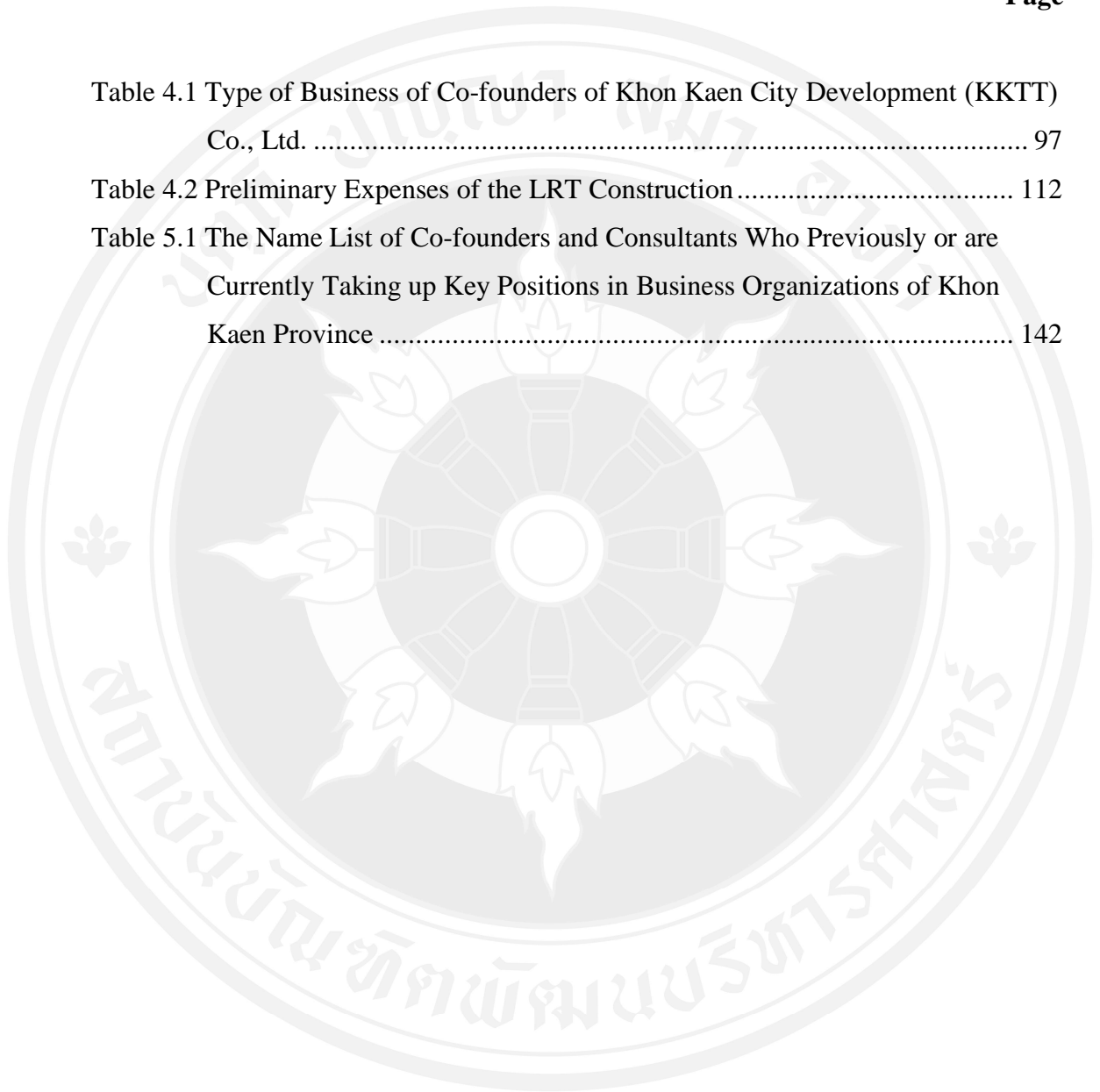
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CHAPTER 1

INTRODUCTION

1.1 Background and Significance

The City of Khon Kaen is one of the most modernized areas in the northeast of Thailand. Although its outer areas are rural, the downtown is no less modernized than other cities in Thailand. Khon Kaen is located in the core area of Thailand's northeastern region and has long been the center of education. Also, medical development of the city has been recognized. As for the economic aspect, the level of economic growth is high and commercial areas are scattered all over the city. Real estate development has been steady. All these factors distinguish Khon Kaen from other northeastern cities.

As the urbanization of Khon Kaen is outstanding, the city has been trying to deal with development, and deal with changes brought on as a result of that very development. Therefore, a project of the city development with regards to public transportation has been originated for the first time in the province. It is not easy to put a large-scale project into practice and push it forward in a city which is not a target for development of the state. This is because these cities have a number of limitations. Nevertheless, the City of Khon Kaen has looked for a number of ways to make the prospect of city development possible according to its plan.

The term 'urban' is used to describe the important area which makes up the center of the economy, society, politics and culture. Accordingly, urban area is the location where the people who live in it participate in many activities. The urban area, therefore, is a community which comprises a variety of people in one particular area where population density can be witnessed. Construction, facilities, basic infrastructure, transport, services, and a plurality of cultures attract people from other areas as well as business units (Blair, 2001). Other aspects of development have

constantly been attracted, which makes the city more complex in terms of its problems, means to solutions and development.

Given the fact that the city attracts a number of people who arrive with hope for prosperity, career, education, other services, better aspect of life and opportunities than other non-urban areas, they have to face with the congestion of and urban area and life's struggles (Munzwa & Wellington, 2010; Nipapan Jentsantikul, 2013; Swyngedouw, Moulaert, & Rodriguez, 2002). The rate of competition is high and that leads to various kinds of city problems in areas such as housing, transport, traffic, pollution and the environment. The quality of life of the people in the city is thus hindered. (Nipapan Jentsantikul, 2013). Congestion, growth and urban sprawl are all key factors that lead to the need for a plan for development and more systemic solutions.

Accordingly, the urban area is the center of various kinds of activities that constantly attract people. Many problems consequently follow. Therefore, the urban area needs smart development so that it can cope with what is arriving – peoples, business units and various kinds of development. In the US, local administrations and people in the area are responsible for urban development management. They have their roles in setting up the plans and putting all regulations into practice. In the provincial areas, the growth of the city is focused and cooperation is the link between local and national units. The central government has limited roles because there is no policy at the state level that is concerned with local areas (Bengston, Fletcher, & Nelson, 2004). It can be said that the key roles of urban development are what the local administration in the area and the people are responsible for.

Although urban development is considered one of the State's duties, it is also connected with the new role of local administrations in a contemporary world (Davey et al., as cited in Baclija, 2013). Localities have the duties of planning, managing and solving a city's problems. However, elements such budget, personnel, technological know-how are necessary for solving the problems which result from urban and development features. Even most local administrations and the State lack the knowledge about these factors which are very important and can lead to difficulty achieving the solutions needed for an outcome. It also takes time because various

aspects may not be ready and hence cannot keep up with the constant changes in a city.

Therefore, urban development is not an issue that either the central government or local administration can put into practice without the cooperation of other sectors, particularly the private sector. The local administration has limitations in many aspects, especially the insufficient budget to support a large scale project. Therefore, the strategies to establish partnerships between the public and private sectors for public services need to be implemented to solve local problems. As witnessed in many provinces, urban development is initiated by the local people of that very province in the form of cooperation with the public sector through the local administration. It is described as a public private partnership (PPP). It is a form of procedure in which the public sector allows the private sector to take part in a development project of the country so that the project will be effective (Editors, 2015). “The main reason why PPP has been popular in the country is that investment in this form helps lessen the fiscal budget and public debt that the government has to face. A large-scale project needs a significant budget. It seldom happens that the public sector is the only actor in the investment, especially when the country is still indebted and the budget on social welfare is likely to rise” (Kanin Peerawattanachat, 2017). It can be said that the public and private partnership in investment is a model of integration with regards to urban development. The interdependence is initiated by the power of the people and the public sector, without having to wait for a budget from the central government. This indeed facilitates integrated development of the society, economy and environment (Bangkokbiz, 2017).

The partnership between the public and private sector, or PPP, is “a long-term partnership between public and private sector with the aim to providing public services and large-scale basic infrastructure (Cartlidge, 2006). Therefore, PPP is a concept developed with the objective of welcoming the public and private sectors to share both risk and benefit. The scope starts with hiring the private sector to handle all kinds of services and allowing the private sector to invest in finance, design, construction, operations, and maintenance and be responsible for other tasks (Li, Akintoye, Edwards, & Hardcastle, 2005). The main reason that the public sector allows the private sector to participate in various kinds of operations is that the public

sector has a limited budget and the public service is not efficient. The private sector is encouraged to use its own resources for investment in terms of large-scale basic urban infrastructure. The public sector also has limitations in terms of efficient innovation, especially in the development of large-scale basic infrastructure in a developing country (Koppenjan & Enserink, 2009). Therefore, the concept of a public and private partnership, or PPP, is a solution to the limited budget that will be spent on public service. It allows the private sector to offer more effective and efficient scheme of management. A quality public service, therefore, can be achieved (HM Treasury, as cited in Li et al., 2005).

Thailand is a country where private sectors collaborate with the public sector in developing large-scale basic infrastructure, especially in Bangkok. For example, public transportation must be mentioned as a project that is aimed at solving traffic problems. This partnership project is operated as indicated in the Private Investment in State Undertakings Act B.E. 2556 (2013)". It was promulgated in the Government Gazette on 3 April 2013 (Ratchakitchanubaksa, 2013), and the "Notification of the Commission on Public-Private Partnership Commission: Strategy of the Private Investment in State Undertakings B.E. 2560-2564 (2017-2021)". It was officially announced in the National Gazette on 29 December 2017. The strategic plan indicates two types, and the characteristics of the investment are suitable for private sectors to participate in the investment. They include an investment in social affairs where the private sector should participate in the investment, and the social affairs in which the state encourages the private sector to participate in the investment (Ratchakitchanubaksa, 2017).

Category 1: The private sector should participate in the investment of four projects:

- 1) Railways, mass transit or transport by rail in the city
- 2) Roads, highways, express ways or transport by road in which fees are collected
- 3) Public ports for goods transport by water
- 4) High-speed railway system

Category 2: The government encourages the private sector to participate in the investment of nineteen projects:

- 1) Telecommunication networks
- 2) High-speed internet
- 3) Roads with fee collection
- 4) Good distribution stations
- 5) Common ticketing for public transport
- 6) Airport business management and space management
- 7) Waterworks or water treatment
- 8) Water management, irrigation
- 9) Public schools or education
- 10) Basic infrastructure for public health
- 11) Medical services and equipment
- 12) Basic infrastructure of science, technology and innovation
- 13) Digital economy
- 14) Exhibition centers or conference centers
- 15) Residences or facilities for low-income or middle-income people, the elderly, underprivileged people or people of disabilities
- 16) Railways for good transport
- 17) Airport or transport by air
- 18) Public ports for passengers
- 19) Energy

The development projects of social affairs in both categories in the “Notification of the Commission on Public-Private Partnership Commission: Strategy of the Private Investment in State Undertakings B.E. 2560-2564 (2017-2021)” are large-scale of investment and need significant amounts of budget; especially category 1 which is mostly about the systems of public transport.

Nowadays, the private sectors in many provinces are aware of the limitations of the public sector’s plan with regard to urban development project, be it about the budget, technological know-how or personnel. Therefore, there are partnership in the form of companies which are considered a collaboration between public sector and local administration in the urban areas. Large-scale urban development projects have been set up in Khon Kaen, Phuket, Chiang Mai, Phitsanulok, Saraburi and other provinces. However, Khon Kaen, Chiang Mai, and Phuket are the only cities which

are more advanced in urban development and where the private sectors participate in their projects. Accordingly, they have registered to set up as company and have launched projects of urban development for quite a while now. It should be noted that all three provinces have a constant high rate of urban growth. The GDP of these three has also been constantly rising. Certainly, these provinces have a high rate of economic expansion that attracts migration. Other problems such as traffic, pollution, environment and residential congestion therefore follow. Nevertheless, the city that is considered the model of urban development with a partnership of public and private sectors is “the City of Khon Kaen”.

The City of Khon Kaen is a located in a province in the center of northeastern Thailand with a number of outstanding features. It is at the junction of roads that lead to the north, the upper and the lower part of northeast. Overall, its total population (2019) is 1,802,872 people. It is considered the third largest population base in the northeast, after Nakhon Ratchasima and Ubon Ratchathani. The population density (2016) is 165.51 per square kilometer (National Bureau of Statistics, 2020), which ranks fifth in the region, below Maha Sarakham (182.08/square kilometer), Nong Khai (171.93/square kilometer), Surin (171.78/square kilometer), and Sisaket (166.33/square kilometer) respectively. However, the GDP of Khon Kaen ranks first in the region, at 211,192 million baht (2018) (Office of the National Economic and Social Development Council, 2020). It can be seen that Khon Kaen has the fastest rate of economic growth in the region if compared with other provinces. Its urban characteristics are obvious because a large public university is located there. It is also the commercial center with large department stores. It is the medical hub and has a number of natural tourist spots. Moreover, an industrial estate and many business units are located in the urban areas of Khon Kaen.

Urban development in developing countries results from their policy of national development with a focus on boosting the economy by industrialization, services and commerce, all of which lead to construction and urban expansion in the city (Piyaphong Boosabong, 2014). If the clock is turned back to Khon Kaen of the past, it is found that “urban development of Khon Kaen was the outcome of national policy, especially during the regime of Field Marshall Sarit Thanarat. The provincial government center was constructed in 1954 and Khong Kaen University was founded

in 1968” (Sakkarin Saepoo, 2014). That has led to continuous expansion and urbanization of Khon Kaen. It has thus become a province with a big leap in economic development. Some problems have followed, though, and this is not different from other big cities such as Bangkok. For example, traffic, pollution, waste management, social problems that include transnational laborers and migration from rural areas can all be witnessed (Theerasak Theekayuphan, 2014). These problems need solutions as well as urban development in order to cope with change in the future.

Local administration in the urban area of Khon Kaen, which includes Khong Kaen Municipality and others, have attempt to solve the problems of the city and gear up for proper development project. However, these local administrations face similar limitations and problems with regard to urban development. In other words, the budgets are insufficient (Theerasak Theekayuphan, 2014), as the government does not provide any financial support. Hence, these municipalities, led by Khon Kaen Municipality, need to rely upon the private sectors so that the latter can join in the project and put it into practice under the direction of government policy. The private sectors in Khon Kaen is also willing to participate in this project (Wanida Sarawat, 2016).

A concept of urban development in Khon Kaen that paves the way forward for a Smart City has been initiated by many sectors in the city. However, these urban development projects to solve the problems of Khon Kaen are moving forward toward a smart city in the future but need a high level of budget and specific expertise. With the limited budget provided by the public sector, the private ones have been persuaded to participate in the project. Therefore, twenty business persons have formed a group called “Khon Kaen Think Tank”. This group had its license registered on 9 January 2015 under the title of Khon Kaen City Development, Co., LTD (KKTT). It collaborated with Khon Kaen Transit System, Co., LTD, which had its license registered on 24 March 2016 for setting up the project. This company represent five municipalities in the City of Khon Kaen, which include the Khonkaen Municipality, Mueang Sila Town Municipality, Mueang Kao Subdistrict Municipality, Tha Phra Subdistrict Municipality and Samran Subdistrict Municipality. The collaboration is aimed at implementing these urban development projects, one of which is a public

transport service (Theerasak Theekayuphan, 2014). These five municipalities are directly involved with the development of the public transport.

In the context of Khon Kaen, this research focuses on the plan and implementation of urban development. It analyzes the City of Khon Kaen because it is a model of urban development partnership involving the public and private sectors. It aims at solving the problems of the city in systematic ways and with a clear direction. The development of the partnership between public and private sectors under the government policy is therefore studied here. This research moreover looks for the origin of how the project was initiated, with its problems and challenges, so that Khon Kaen can be a case study for other cities that plan similar projects.

1.2 Objective of the Research

This research aims at illustrating the partnership between public and private sectors in urban development as a model that the City of Khon Kaen has developed. The objectives are:

- 1) To study the emergence and development of partnerships in policy with regards to urban development, focusing on the collaboration between public and private sectors in Khon Kaen.
- 2) To study the characteristics of a partnership between public and private sectors on urban development in Khon Kaen.
- 3) To study the roles and the joint-operation of the public and private sectors in project development in the City of Khon Kaen.
- 4) To study the strengths and weaknesses, problems and obstacles of urban development in the form of partnerships between public and private sectors.
- 5) To offer policy recommendations.

1.3 Research Questions

This research has three questions that will shed light on the partnership between public and private sectors in an urban development project of Khon Kaen. It

is about collaboration, interest and risk management, strengths and weaknesses, and obstacles. The questions are:

- 1) Where was the partnership between public and private sectors in the City of Khon Kaen initiated, and why did the partnership take place in this province?
- 2) What are the characteristics of the partnership between public and private sectors in the City of Khon Kaen?
- 3) What are the problems and obstacles that the urban development project of public and private sectors in Khon Kaen have to face with?

1.4 Literature Review

This research employs a theoretical framework and concepts to explain the partnership between public and private sectors of the urban development of Khon Kaen through the construction of Light Rail Transit. An overview of the literature will be discussed below.

1) The concept of urban development is important because the urban area is crucial to the people, economy and environment. This concept paves the way forward so that the urban development will be in accordance with the growth of the city. Therefore, this concept is employed to explain the meaning, significance and directions of urban development, both in developed and developing countries. It is also employed in the analysis of the direction of urban development in Khon Kaen.

2) A top-down and bottom-up approach of policy implementation is employed. This theoretical framework sheds light on the direction of policy implementation and key actors of the policy formulation. Also, an analysis of the partnership's emergence between the public and private sectors can be achieved. It helps answer the question of which party has a role in putting the policy into practice and operating the project until it is completed.

3) Urban regime theory is the key concept that explains the limitations of the public sectors. It cannot respond to all aspects of people's expectation, so it is therefore necessary to get access to the resources as provided by the private sectors. Important resources do not belong to the government only, but are also scattered

among many private ones. Partnership with the private sector can be set up so that the resources are used for the utmost benefit of the people.

4) The concept of a public-private partnership (PPP) is employed in this thesis. Theoretically speaking, the public and private sectors are interpreted as binary opposites and they might not be able to collaborate. This is because their objectives and expected interests may differ. However, this concept insists that the public and private sectors can collaborate so that society get the utmost benefit. This concept is used to explain the partnership, related sectors, risks and benefits. It will throw light upon the partnership between the public and private sectors, risk management and interests as expected by many sectors.

5) The concept of social capital helps explain and shed light on the factors that make people confident of and trust in the partnership of important project. An urban development project cannot be pushed forward by only a single actor. Rather, many sectors need to collaborate and be confident of the partnership.

6) The agency theory is the concept employed to explain a continuation of driving force in urban development of the City of Khon Kaen. A variety of group of people have participated in pushing the project forward, but there may be one major group who operates the project and put it into practice.

7) The concept of decentralization is employed in this thesis to analyze the problems and obstacles of the partnerships and large-scale urban development project without having to rely on the budget from the central government.

8) The concept of good governance is employed to examine the methods and procedures of Light Rail Transit (LRT) construction in the City of Khon Kaen. Every project, be it public, private or the partnership of the two, needs to be accountable for external sectors. In that way, the project will be transparent and trustworthy.

1.5 Research Methodology

This research is qualitative. It examines the partnership between public and private sectors in urban development. The City of Khon Kaen is employed as a case study because the private sectors have collaborated in having their license registered.

Since then, they have participating in the urban development project with the public sector and the project has been launched for quite a while now.

For the data collection of this research, in order that the information is sufficient, three methods of in-depth interview, non-participant analysis and document analysis will be employed.

1) In-depth interview were used with local administrations executives who have been engaged in the partnership of urban development with the private sectors (The Mayor of the Municipality, deputy mayors of the municipalities on related affairs and municipal clerk), as well as Governor and those who initiated the partnership of the private and public sectors. A snowball method is employed to get access to key informants.

2) Non-participant observation is employed when the researcher observed the partnership project between the public and private sectors.

3) Document analysis is the study of the research, interviews, related articles as well as information of the origin of the partnership between the public and private sectors. Regulations and documents on this partnership between public and private sectors are also included.

1.6 Scope of the Research

This research is on the partnership between public and private sectors in urban development, focusing on the development, roles, forms and success of a joint venture of investment between the two sectors. The city which is quite modernized and does not only have a steady rate but also a big leap of development is employed in the thesis as a case study, as it has to cope with a number of problems.

Scope of the context: This research is about the partnership between public and private sector according to an urban development project by the government. It focuses on their collaboration in different provinces. The roles of the public and private sectors result from that very partnership. This thesis studies its forms and its problems and obstacles. Therefore, the policy recommendation can benefit other cities that are running similar projects.

Scope in terms of population and the area: This research studies the urban development of Khon Kaen, as it is considered the one with the highest – a big leap of -- economic growth in the northeastern region. Because of the fast-paced speed of its economic growth, the city also experiences similar velocity. Khon Kaen has had experienced problems that follow the urban expansion, such as traffic.

1.7 Contribution

This research sheds light on the concept of urban development according to a unique plan of the City of Khon Kaen as follow:

- 1) Be aware of the development and the partnership status in the form of urban development between public and private sectors.
- 2) Be aware of the roles and collaboration of different sectors as public and private sectors join in putting the urban development project into practices.
- 3) Be aware of the characteristics of the urban development partnership between public and private sectors.
- 4) Be aware of the strengths and weaknesses of urban development in the form of a partnership between public and private sectors.
- 5) Be aware of the indexes for success of urban development in partnership between public and private sectors.
- 6) Be aware of the problems and obstacles for urban development in a partnership between public and private sectors.
- 7) Policy recommendations.

1.8 Definition of Terms

1) The partnership between public and private sectors means the cooperation of public organizations and private ones under a project which is related to the urban development of the City of Khon Kaen.

2) Urban development means that the project organized to pave the way for leading Khon Kaen to being a smart way city. It is Light Rail Transit (LRT).

3) Local administration refers to the local administration that is related to the urban development project of Khon Kaen It includes Khonkaen Municipality, Mueang Sila Town Municipality, Mueang Kao Subdistrict Municipality, Tha Phra Subdistrict Municipality and Samran Subdistrict Municipality.

4) Public sector means the government sector which is related to the urban development project in Khon Kaen.

5) Private sector means the private organization which is related to the partnership of investment in the urban development of Khon Kaen.

1.9 The Structure of the Thesis

This thesis is structured in six chapters as follow:

Chapter 1 is the introduction that explains the overall picture of the research. It comprises the state of problems of the thesis; the objectives of the thesis; research questions; related theories and concepts that will be employed in the analytical sections; scope of the research and its contribution.

Chapter 2 discusses the concept, theories and literature review. The concepts and theories employed in the thesis will be explained. They include the concept of urban development, top-down and bottom-up approach; urban regime theory; public-private partnership (PPP); social capital; agency theory; concept of decentralization and concept of good governance.

Chapter 3 is the research methodology. It discusses the data collection and how data in this research is analyzed.

Chapter 4 discusses the context of urban development in the City of Khon Kaen. It explains the overall context of Khon Kaen, the background of the development project, sectors related to the project, and details of the Light Rail Transit (LRT).

Chapter 5 is the analysis of all data. The research findings are also presented.

Chapter 6 is the conclusion of the research. Recommendations for policy makers are also provided in this chapter.

CHAPTER 2

LITERATURE REVIEW

This research study reveals that public-private partnerships for large-scale public service projects are challenging, especially in countries where decentralization is not inclusive. As a result, such partnerships rarely occur, particularly, local partnerships. To analyze this phenomenon thoroughly, eight theories/concepts are used as analysis tools. First, the public-private partnership concept was used to explain the relationship and public private partnership (PPP) types in the case of Khon Kaen, including the Agency Theory, which can point out the causes of Khon Kaen's development projects which have been carried out continuously for many years. The PPP direction in Khon Kaen may have to be analyzed by using top-down and bottom-up approaches to describe the advocacy for urban development policies caused by the requirements of local people. Then, the Decentralization concept will be adopted to analyze problems and obstacles pertaining to PPP and large-scale urban development projects that do not rely on the central government's budget. The Urban Regime theory is, therefore, used to explain the necessity that the public sector has to encourage the private sector to participate in urban development because of public sector limitations. The private sector can fill those limitations. However, a partnership involving various sectors is inevitably needed. The Social Capital concept will help to identify factors that make urban development successful or failed, as urban development cannot be implemented alone but requires cooperation and mutual trust from different sectors.

Although the private sector supports the budget for Khon Kaen urban development projects, such projects also involve the local public sector. Good governance is, therefore, unavoidable for helping to analyze righteousness in this Khon Kaen City Development Project. Finally, an urban development approach was applied to explain urban development in Khon Kaen and lessons from other countries

where urban development projects, especially at the local level, have been conducted. This will serve as a guideline in terms of future recommendations.

The above concepts and theories may be used to explain only some parts of this phenomenon. When all of them are adopted, they can help to create an understanding about the unique PPP in Khon Kaen, and may be beneficial to other cities requiring similar urban development. This chapter involves these concepts and theories, and finally, a conceptual framework will be presented.

2.1 The Concept of Public-Private Partnership (PPP)

One of the government's key functions is to provide public services to people. There are a wide variety of public services, from small-scale ones using a low budget to large-scale ones with a high budget. Due to limited resources, e.g. budget, technology, knowledge, competency and manpower, the public sector cannot always provide efficient public services. So the concept of public-private partnerships was initiated to efficiently and effectively develop the quality of public services.

A Public-Private Partnership, or PPP, is a cooperation between the public and private sectors to carry out some activities. It can be said that public-private partnerships attract both the public and private sectors to work together under a long-term contract (Cartlidge, 2006). Public-private partnerships are regarded as an effective approach to infrastructure and public services (Ke, Wang, Chan, & Lam, 2010) for the public. Such partnerships appear in many forms depending on the objectives and features of the activities. It may be stated a PPP is a partnership between the government (public sector), the private sector and citizenry who will adjust or seek new approaches to make policy-based decisions, build political reactions and plan management and cooperation (Grossman & Holzer, 2015).

A Public-Private Partnership (PPP) may be regarded as one concept of the Networks concept. Private investment in infrastructure has taken place in European countries since the 18th century but was widely adopted in the late 1990s (Tang, Shen, & Cheng, 2010). In 1858, the PPP concept was used to construct the Suez Canal (Cartlidge, 2006). In 1997, England applied the PPP model to various activities (Winch, 1998, as cited in Tang et al., 2010) with the objective of collaborating on

infrastructure projects requiring a large amount of investment. The major functions of the private sector include maintenance, development or construction of necessary infrastructure (Torres & Pina, 2001), such as hospitals, schools, highways, etc. The basic principles are:

1) Infrastructure serviced via a public-private partnership will be cheaper and of better quality (Jin & Doloi, 2008).

2) Public-private partnerships integrate resources from the public and private sectors (both for-profit and non-profit organizations) in order to achieve public goals (Skelcher, 2005).

Currently, the private sector is persuaded to provide public services or large-scale infrastructure to bring about urban development or to solve urban issues. It is a popular method to avoid public sector restrictions in terms of budget, knowledge, innovation, etc. Many countries have applied this approach to urban development. According to the study of Koppenjan and Enserink (2009) on PPP in infrastructure for sustainability, an article entitled “Public-Private Partnerships in Urban Infrastructures: Reconciling Private Sector Participation and Sustainability” was presented to explain that, due to insufficient budget and inefficient public services in the public sector, the public sector has to push the private sector to share in the public sector’s investment, risks and benefits. The public sector can help enhance the efficiency and quality of various projects and expand the scope of public services. However, the private sector’s attraction to the investment relies on clear conditions from the State so that the private sector can make a sound decision. Political uncertainty must also be reduced, because numerous projects take a long time. In case of political instability, this may affect projects invested in by the private sector.

The definitions and models of public-private partnerships, public activities organized between the public and private sectors in the PPP model, values and applications for the public sector’s management, risk distribution and benefit sharing, as well as differences between the public and private sectors will be explained.

2.1.1 Definitions and Components of Public-Private Partnerships

Public-private partnerships have been popular recently. Various countries have applied this concept in accordance with the context or goals of each country. Thus, the

definitions of PPPs vary from broad to specific, depending on the model used in each context.

Sharma and Bindal (2014) described the basic features of public-private partnerships (PPPs) as contracts or agreements between the public and private sectors. Gormley and Balla (2017), explained further, that such contracts or agreements may be made in the form of written contracts or informal agreements. PPPs may be broadly implied as “sustainable public-private partnerships that will jointly produce products and/or services, as well as share risks, costs and interests” (Klijn & Teisman, 2003). Such meaning is consistent with the definition from the National Council for Public-Private Partnerships, as an “agreement between the public and private sectors on sharing of resources and risks concerning public services or infrastructure” (Li & Akintoye, as cited in Tang et al., 2010).. It is remarkable that, apart from an agreement by the public and private sectors to provide public services, some factors, e.g. investment, resources, risks and interests, must also be shared between both parties.

According to these definitions, there are five components of public-private partnerships suggested by, namely participation, referring to the involvement of at least two agencies, one of which must be in the public sector; relationships, referring to sustainable relations and partnerships; resources, referring to values created and resources distributed by Schuppert (2013) each agency, e.g. assets, authorities or fame; sharing, referring to sharing in responsibility and risks; and continuity, referring to a contractual framework that makes the partnership continuous, that is, the issuance of regulations and clarity for partners. In addition, Cartlidge (2006) observed that transparency is another significant issue.

Both the definitions and components of public-private partnerships lead to various forms of PPP activities, which will be discussed in the following section.

2.1.2 Models of Public-Private Partnerships

The private sector’s investment may play a key role in supporting the public sector on social topics through a new method. There are many different methods or models of public-private partnerships, depending on project characteristics and agreements. In this research, three models of PPPs are explained, namely Build,

Operate and Transfer (BOT), Private Finance Initiatives (PFI) and Business Improvement Districts (BIDs).

Build Operate and Transfer (BOT) is a model of public-private partnerships in which the private sector is the builder and the manager, as agreed. Finally, the private sector will deliver the project to the public sector without receiving any return (Tang et al., 2010). Cartlidge (2006) described it in that BOT is an idea that integrates the design, construction and maintenance of assets constructed, which is comprised of three elements, namely 1) Build: referring to the private sector's agreement to build and operate the infrastructure, whereby the private sector is responsible for construction costs, 2) Operate: after construction, the private sector will manage and maintain that structure, as agreed, and will receive returns from the investment in the form of charges or tolls, and 3) Transfer: after the private sector's management of infrastructure investment in accordance for a specified period, the private sector will deliver ownership and management to the government or relevant state agencies.

Private Finance Initiative (PFI) comprises three types: 1) joint venture 2) financially free-standing project and 3) classic PFI (Cartlidge, 2006).

1) A joint venture is a project that is jointly created by the public and private sectors but the private sector controls all projects. The public sector partnership is there to protect the overall interests of society. Such projects must be cost-effective in terms of economics and resources under the following conditions:

(1) The private sector joining the project must pass a screening process.

(2) Projects must be controlled by the private sector.

(3) The government's contribution must be clear and limited.

Returns will be collected from service users or project clients.

(4) Risk and return allocation must be clear and agreed on in advance.

The State's investment may exist in different forms, such as loans, asset transfers or project assistance. The government may also participate in the project in the form of regulation planning, grants or subsidies.

2) Financially free-standing projects are a model of partnerships, whereby the private sector is the project manager and service users have to pay

service charges to the private sector. While the public sector takes part in initiating and planning projects, the private sector must be assured that it will receive benefits from the collection of service fees. However, the public sector will eventually become the owner of such projects by the agreed upon time.

3) Classic PFI is a public-private partnership model that is widely used and the most well-known. It is often used for complex and high-value projects and those with long-term contracts (more than 30 years).

Business Improvement Districts (BIDs) are a form of public-private partnership that are widely used. Justice (as cited in Grossman & Holzer, 2015), explained that BIDs focus on economic development, decentralization, leadership and culture values, while economic success is the broad aim of BIDs. Such success is measured at both the individual business level and the community level. As for the PPP in the form of BIDs, entrepreneurship will be a force for improvement, while investment is both material and nonmaterial. Investment is regarded as material combined with social wealth, which requires joint managerial ability and individual competency. Thus, the government does not play a role in assistance only, but is also a part of the economic or social partnership (Grossman & Holzer, 2015). BIDs integrate collaboration and local property capital to take control over a range of local municipal functions for their own private urban “patch” (Graham, 2000).

Skelcher (2005) also proposed five PPP models, as follows:

1) Public Leverage: This model is a way for the government to create conditions believed to be beneficial to economic activity and business growth. The government promotes the private sector’s decision making to achieve the objective of public policies. The government often uses this method when the business sector or a non-profit organization is required to serve as a tool to find out what the public sector requires.

2) Contracting-Out and Competitive Tendering is a method whereby the government hires the business sector or non-profit organizations to provide public services. The government will specify the types and standards of service, and bidding will be used to select the private sector to provide public services. This will thus result in upgraded public services.

3) Franchising refers to a method that the government uses, issuing a license for the private sector or non-profit organizations to provide public services. The private sector will receive returns in the form of user fees. The public sector may insist that the private sector has to develop or build certain infrastructure, which will eventually be transferred to the government (Pietroforte & Mille, as cited in Skelcher, 2005). This is how the government distributes a monopoly to the private sector (Ghere, 2001, as cited in Skelcher, 2005). However, the private sector has to compete in order to be selected by the public sector.

4) Joint Ventures and DBFO Partnerships are methods agreed to by at least two agencies who work together. Each party will be independent (Schaeffer & Loveridge, 2002, as cited in Skelcher, 2005). Most partnerships involve large-scale infrastructure. Concerning DBFO partnerships, the government will determine the required output and make a contract with the private sector, who will design, invest, manage and provide public services. The government will pay for the output in the form of fees or other interests.

5) Strategic Partnering is a public private partnership that does not make a distinction between organizational characteristics (Ashkenas et al., as cited in Skelcher, 2005). They are organizations that are compatible for mutual benefit (Grimshaw et al., as cited in Skelcher, 2005). Both parties or organizations will share all risks and benefits (Schaeffer & Loveridge, 2002, as cited in Skelcher, 2005). Both organizations will be connected by trust.

2.1.3 Public Activities Jointly Organized between the Public and Private Sectors in the form of Public-Private Partnerships

The above mentioned public private partnerships will be carried out by both sectors to conduct the following public activities (Torres & Pina, 2001):

- 1) Economic activities involving public services which are mostly managed by PPP, such as public parking, markets or communications.
- 2) Social services, including businesses relating to sports, elderly, the disabled and young children.

3) Public works and town planning that relies on user service charges as the investment, e.g. water supply systems, water quality improvement and road cleaning.

4) Other services involving services beyond the three mentioned activities.

When the public sector attracts the private sector to provide a wide variety of public services, even though the missions are transferred from the public to the private sector, the public sector will still be responsible for public services, e.g.

1) The public sector shall decide the level of services needed and required resources.

2) The public sector shall specify and control safety and service quality.

3) The public sector shall monitor public services to be in accordance with specified standards.

There are many forms of benefits received by both parties, especially by the private sector, e.g. money, materials, profits such as working channels and efficiency enhancement; or intangible objects, e.g. images and knowledge development (Klijn & Teisman, 2003).

2.1.4 Values and Applications for Public Sector Management

Public-private partnerships often attract the government to lessen losses or debts (Budina, Bixi, & Irwin, 2007). Savas and Savas (2000, as cited in Skelcher, 2005) study reveals that one of the PPP models in the United States can lower the production cost by 20-40% compared to public services managed by the government. This is a result of employee reduction, employment conditions, complicated administration, new management and other factors. In England and Australia, Domberger and Jensen (1997, as cited in Skelcher, 2005) indicated that investment figures decreased by 20% when a PPP was used for public services provided by the public sector. Such PPP methods for public services can help save resources and lets the government emphasize its own tasks without wasting its resources on operations that the government is not specialized in (Cumming, as cited in Tang et al., 2010). The government will thus be able to use the private sector's skills, experience,

technology and innovation. This can then lead to more satisfaction of public services (Tang et al., 2010).

Public activities between the public and private sectors not only reduces the public sector's costs, they also allocate risks to the private sector, including financial risks (Torres & Pina, 2001). The private sector is regarded to better manage risks (Hayford, as cited in Jin & Doloi, 2008) although Xiao-Hua and Hemanta (2008) are of the opinion that efficient risk allocation is not easy.

Although the public sector seems to benefit from the adoption of PPPs for public services, there are some issues the government has to be aware of. Schuppert (2013) suggested posing some questions: Is the risk sharing between the public and private sectors really fair? How will the contract be designed to ensure that partners will receive equal benefits? If knowledge is monopolized by the private sector, what will be the public sector's solution? Jin and Doloi (2008) added these four additional topics focusing on risk management: 1) How are risks shared between the public and private sectors? 2) How does the public sector respond to risks? 3) Why is one risk forwarded to the private sector? And the most important question: Is there any resource distribution strategy? These issues may cause problems in terms of the public and private sectors. The latter is viewed as those who benefit from the joint venture. This will be explained in the next section.

2.1.5 Risk Allocation

With respect to public-private partnerships, topics to be considered include risks and benefits. It is impossible that one party shall bear risks or benefits alone. Both sectors must fairly share risks and benefits.

The public sector has encouraged the private sector to participate in providing infrastructure or public services to the public because of the many limitations of the public sector. The private sector may not have such limitations or may possess more resources than the public sector. This can help PPP projects to be efficient and effective, however, such projects cannot avoid all risk, which is a likelihood in the event of an occurrence that will affect the project (SAA, as cited in Jin & Doloi, 2008). Such situations or risks can occur at any time, so it is important to make an

agreement or understanding before-hand about risk sharing between the public and private sectors (Ke et al., 2010).

There are various issues to be aware of pertaining to public private partnerships, such as benefits, negotiations, competition and risk allocation. (Ke et al., 2010) conducted a research study to search for risks that may arise from projects in the form of public-private partnerships in China and found that there were 37 risk factors affecting project failure, such as government reliability, government intervention, corruption, law changes, tax measure adjustment, inflation and technological risks. Ke et al. (2010). also analyzed the above risks allocated to appropriate stakeholders. He classified the risks into five groups: 1) Risks that the government has to be solely responsible for, 2) Risks that the public sector should be responsible for, 3) Risks that must be equally shared between the public and private sectors, 4) Risks that the private sector shall be responsible for, and 5) Risks that the private sector has to be solely responsible for. The findings indicate that national risks are those the public sector must be responsible for, while risks associated with the public sector or government officials and public sector activities should belong to the State. Risks that the public and private sectors have to share are risks that cannot be managed alone but together. In addition, there are project level risks under the responsibility of the private sector. However, no risks were found to be under the sole responsibility of the private sector.

A study on risk allocation was also conducted by Li et al. (2005), who grouped risks into the following three levels:

- 1) Macro level risk refers to project risks caused by external factors that concern political, legal, economic or social conditions at the national level.

- 2) Meso level risk refers to risks occurring within the project and relating to implementation problems, including project damages, location, design, construction and technology.

- 3) Micro level risk refers to risks caused by different features of the public and private sectors. They involve risks within the project but which differ from meso level risks because they relate to some parts of infrastructure due only to the difference among project stakeholders. In other words, the public sector must be accountable to society while the private sector focuses on profits.

The study conducted by Li et al. (2005) pertains to risk allocation in public-private partnership projects in England based on 500 questionnaires collected from hospital, transport, water supply, energy, residence, police, educational institution and other projects. Bing et al. proposed that the study results divide risk allocation into four groups: risks that should belong to the public sector; risks that should belong to the private sector; risks that should be born by the public and private sectors; and risks that rely on project environmental conditions, as follows:

1) Risks that should belong to the public sector include five types: nationalization/expropriation, poor political decision-making, political opposition, site availability and government stability. Out of the five risks, one type of meso level risk is site availability and the remaining four risks are macro level risks.

2) Risks that should belong to the private sector consist of 32 types classified into two groups:

(1) Initial risk belonging to the private sector comprises 11 types, four of which are at macro risk level: tax regulation change, inflation, the tradition of private provision of public service and influential economic events; four of these are at meso risk level: late design changes, residual risks, financial attraction of project and level of demand for a project; and three are at micro risk level: staff crisis, third party tort liability and different working methods.

(2) Risks that belong to the private sector alone include 21 types. They include macro risk level, namely industrial regulation change, interest rate volatility, weather, environment, ground conditions and financial markets; at the meso risk level: project finance, design, construction and operation; and at the micro risk level: organization and coordination.

3) Risks that should be born by the public and private sectors consist of those at the macro risk level, namely force majeure and legislation change; risks at the micro level, namely commitment from a partner, responsibilities and risk distribution and authority distribution.

4) Risks that rely on project environmental conditions are difficult to decide which group they belong to. Such risks include the level of public support, project approval and permits, contract variation, and lack of experience.

In addition to risk management occurring at the public and private sectors, which is one factor affecting PPP project success, there are other factors that impact the success of PPP. The study of Li et al. (2005) entitled “Critical Success Factors for PPP/PFI Projects in the UK Construction Industry” gathered factors affecting the success of PPP projects relating to the construction industry. Due to the above study, there were 16 factors leading to PPP success. Li et al. used all factors in the analysis based on the statistical method in order to prioritize which factors affect the success of PPP projects.

1) Strong private consortium refers to private sector groups participating in PPP projects who have to check the strengths and weaknesses of other project partners as well as their own strengths.

2) Appropriate risk allocation and risk sharing refers to the distribution of risks to partners who can best manage the risks.

3) The private sector can easily access a financial market because easy access to sources of funds will attract the private sector to join the investment.

4) Commitment and responsibility: all partners should devote their resources (budget, personnel, etc) to the PPP project.

5) Thorough and realistic assessment of the costs and benefits.

6) Project technical feasibility will provide an opportunity for the private sector to participate in the project, that is, it must be consistent with conditions and regulations.

7) Well-organized and committed public agencies.

8) Good governance is a key to attracting the private sector investment in PPP projects.

9) Favorable legal framework: Bennett (2000, as cited in Li et al., 2005) believes that regulations and political environment are fundamental to sustainable participation of the private sector.

10) Transparency and competition: To achieve transparency, good communication between the public and private sectors and consultation are needed. A definite decision must be made by the private sector.

11) Political support.

12) Sound economic policy and a stable macro-economic environment, as economic stability can greatly reduce risk to the private sector's investment.

13) Multi-benefit objective: Partners must understand and accept the goals of other groups.

14) Government involvement through providing guarantees: the government may offer a guarantee on subsidies.

15) Shared authority and responsibility to keep a long-term partnership.

16) Social support based on public acceptance.

Sanni (2016) studied the key factors that contribute to successful PPP projects based on PPP projects in Nigeria using 184 questionnaires. Sanni devised the factors affecting success into two groups: the public sector and the private sector. There were three factors involving the public sector - 1) leadership focus: the public sector must have leadership in PPP programs, 2) risk allocation and economic policy: the public sector must ensure that risks are allocated to those who can manage them best, and 3) project feedback: the review and study of successful projects will become ready-made information for future project implementation. As for the private sector, there were four factors, namely 1) favorable socio-economic factors: whether PPP will be successful or not depends on a favorable investment environment, 2) good governance and political support: this factor highlights the importance of political leaders who formulate policies that drive the development of infrastructure and public services in PPP projects, 3) short construction period, and 4) delivering public services that meet the demand, leading to public acceptance.

However, although the public and private sectors can cooperate on developing various forms of public projects, both of them have different or even opposite characteristics. Thus, they should be aware of this difference and achieve mutual understanding. This can help the partnership run smoothly and more likely to be successful in the future.

2.1.6 Differences between the Public and Private Sectors

The public and private sectors are naturally characterized in many aspects. The public sector "is responsible for controlling society and people through the

formulation of regulations and allocating resources under limited areas” (Kurian, as cited in Siripan Nogsuan Sawasdee, 2014) with the objective of public benefits. On the other hand, the private sector refers to “a group of people gathered with the objective of seeking economic benefits”. (Allison, 1983, as cited in Siripan Nogsuan Sawasdee, 2014).

The public and private sectors, therefore, have dissimilar natural management characteristics despite similar restrictions and challenges (Pongsiri, 2014). The management differences of both sectors are summarized with the following seven issues:

1) Organizational goals of the public sector are complicated, ambiguous and sometimes contradictory. On the contrary, organizational goals of the private sector are less complicated, straightforward and economic-centered (Famham & Horton, as cited in Pongsiri, 2014).

2) Accountability of the public sector is usually found in politicians, citizens, clients or public organizations, while accountability in the private sector exists in stakeholders, employees, suppliers, consumers and markets (Famham & Horton, as cited in Pongsiri, 2014).

3) Managerial functions of the public and private sectors are different. The public sector’s managerial functions are based on specific expertise, chain of command and formality, while the private sector’s managerial functions are based on a combination of the economist principle, e.g. profits, price controls, market shares, etc; rationalist principle, e.g. planning, structuring, teamwork, etc; and the generic principle, e.g. cooperative culture, quality and excellence cycles (Famham & Horton, as cited in Pongsiri, 2014).

4) Perceptions of incentive structures and motivations in the public sector are not monetary but are in other forms such as job security, participation in important works or power and honor. In contrast, incentives of the private sector emphasize materials, e.g. money (Rainey et al., as cited in Pongsiri, 2014).

5) Needs satisfaction in the public sector is relatively diverse, e.g. demand in higher positions (Rainey et al., as cited in Pongsiri, 2014) career security (Poole et al.; Rainey et al., as cited in Pongsiri, 2014). Private organizations will make an effort to reduce conflicts between individual and organizational expectations and

create positive feelings towards the organization and jobs (Rainey et al., as cited in Pongsiri, 2014).

6) Human Resource Management (HRM) in the public sector consists of four key characteristics: 1) a paternalistic style of management, 2) a standardized employment practice, 3) a collectivized industrial relation, and 4) a model employer's goals (Boyne et al.; Rainey et al, as cited in Pongsiri, 2014). Private organizations use training in management and labor control (Rainey et al., as cited in Pongsiri, 2014).

7) Decision-making processes in public organizations are slightly flexible (Rainey et al., as cited in Pongsiri, 2014). Political influence affects decision-making. Public opinion also leads to difficult decision-making. Decision-making in private organizations is distributed to managers at different levels and decisions are made on an economic basis (Weiss, as cited in Pongsiri, 2014).

Allison (1983, as cited in Siripan Nogsuan Sawasdee, 2014), summarized three aspects of the differences between the public and private sectors:

1) Strategy: The goals of public administration are controlled by the legislative branch through clear regulations, while private organizations have clear goals of profit- making.

2) Managing internal components: The public sector has to manage internal components under law, while the private sector has freedom to administer internal components according to organizational needs.

3) Managing external constituencies: The public sector has to be responsible to diverse organizations, e.g. parliament, court, media and independent organizations. On the contrary, the private sector is responsible to the board of directors only.

With respect to the above different characteristics of public and private sectors, it is noted that many aspects of administration are opposite. For example, organizational goals are usually complicated or ambiguous. Clear organizational goals will lead to 1) identification of specific elements and operations for current organizations, 2) generation of the vision of what organizations wish to be in the future, and 3) an approach to change in the current situation to clear desired situations in the future (Perera, Peiró, & Peiró, 2012). Private organizational goals are more

straightforward. Thus, they can set a united direction, resulting in more efficient implementation of plans in accordance with strategies more than public organizations.

In addition, incentives in the public sector are not obviously concrete and may not be acquired immediately. Unlike private organizations, material incentives are stressed, e.g. money. This may result in the attention to working to achieve organizational goals. Employees in the private sector tend to intend to achieve organizational goals more than those in the public sector. Administration in the public sector is governed under a chain of command in accordance with official regulations. As a result, there is no flexibility and delay because instructions and the *approval hierarchy* must be awaited. This makes solutions not up to date. The formulation of strategic plans to solve problems or adapt to the external environment is also delayed and not in time.

In brief, public-private partnership is generally viewed as the management between the public and private sectors to provide public services to people (Jin & Doloi, 2008; Xiao-Hua & Hemanta, 2008). The partnership between these two sectors exists in many forms. The public sector can deliver better quality of public services to the public with less investment as more external resources from the private sector are relied on.

2.2 Urban Regime Theory

As for the consumption of resources for the business or public policies at the city or higher levels, especially at the city level, resources in the public sector, only, may not be taken into account because there are numerous other resources distributed outside the public sector. Because of this, it is necessary to reorganize social and economic systems in order to create a shared use of resources between the government and non-government sectors (Stone, 1993) so that such resources can be used to administer cities in accordance with public sector urban development policies. It may take a partnership between the public and private sectors to share resources from both parties. The Urban Regime Theory has been adopted to explain this phenomenon.

City administration based on the Urban Regime Theory, or the Urban Governing Regime Theory, perceives that many major decisions are jointly made by the local government and the private sector. Sometimes, a decision is independent of the central government (Thomas, 1998). Lindblom (as cited in Davies, 2002) viewed that various governments of capitalist countries wish for economic growth in the market system only. The government's role is limited because economic decisions rely on business leaders, although political power belongs to the State. However, the business sector is the controller of resources in the market, resulting in economic growth (Sites, 1997). Since the private sector has a large number of productive resources in its hands, it influences the urban policy agenda (Davies, 2002). Thus, according to this theory, the private sector does not play less role in urban activities than the public sector. This may be regarded as a key participant in the government's operations (Mossberger & Stoker, 2001).

It cannot be denied that the importance of any sector cannot be ignored during urban development through the public and private partnership concept. Urban Regime Theory explains the relationship between the public and private sectors (Mossberger & Stoker, 2001) to create official and unofficial cooperation in collecting resources inside and outside the public sector. It can enable cities to meet policy-based goals (Brown, 1999) which are economically and socially beneficial. In other words, it is city governance, including collaboration in urban development, because the government cannot solve all problems alone (Stone, 2005). Therefore, urban governance is a method to use political power for social production (Storn, 2005, as cited in Zhang, 2002).

The Urban Regime Theory in this research consists of five key topics, namely regime definition; components; types; core criteria; and limitations of the theory, as detailed below.

2.2.1 Definition of Regime

Stone (2005, as cited in Thomas, 1998) explained that a regime comprises informal arrangements between benefits from the public body and the private sector leading to governing decisions. According to Stone, PPP does not mean that the public sector can use power (from the election) to force the private sector to work

together or let the private sector have higher authority. Its focus is on management of interests through policy-based negotiation by integrating benefits of various groups and emphasizing the business interests necessary to encourage the business sector in urban development (Stone, 2005, as cited in Ward, 1996).

It should be mentioned that the regime is a system that mediates between public control of the political process and private control of the economy (Stone, 2005, as cited in Davies, 2002). In other words, city politics is categorized into two parts: 1) the State that provides public services and is controlled by the public via elections, and 2) market systems, which are economic investment and urban development controlled by businessmen (Imbroscio, 1998). According to this definition, the Urban Regime refers to an actor outside the public sector because it is a collaboration for bringing in insufficient resources owned by public actors to implement policies (Mossberger & Stoker, 2001). Local governments often lack governance authority and resources due to the separation between the State and marketplace, which is the context of liberal democratic societies (Stone, 2005, as cited in Zhang, 2002).

Urban Regime Theory is the origin of a political economic perspective that rejects both political pluralism and structuralism. Political pluralism regards that the government's authority is enough for preparing and implementing policies. According to structuralism, economic drive determines policies. Stone's regime is in the middle of these two concepts (Stone, as cited in Mossberger & Stoker, 2001) The pattern of power structures depends on who governs, and decisions will not be perceived by a pluralism that is based on an elected decision-maker or the elite concept that resources are controlled by elites. This theory will be adapted to the situations and participants in the management process (DiGaetano & Klemanski, as cited in Ward, 1996). It may be stated that this theory has made an effort to overcome rigidity of both the pluralism and elite concepts (Ward, 1996).

Stone (2005) considered that the Urban Regime can help explain why certain groups of people have a preponderance to enter politics. The key presupposition is human nature and the character of society. According to Stone, humans are not perfectly rational but often follow their habits and tend to think of close benefits. However, they do not pay attention to benefits only, but also morality and ethics. As

for society, Stone viewed that none has the power to control all of society (Hirschman, as cited in Stone, 2005). However, the urban regime can answer two questions: 1) Under which conditions can people at the bottom level, who seldom have a channel to send a message to the authority, become active partners and be provided more opportunity? and 2) Under what conditions will the local government cooperate with other non-governmental sectors in formulating policies, particularly local economic development, whereby the government is often matched with the private sector, resulting in the model of a public private partnership? Sometimes, such a partnership is not easily visible (Stone, 2005).

2.2.2 Regime Components

According to the above definitions, (Thomas, 1998) remarked that there are four major components of a regime:

1) Capacity to do something shows the success of bridging two competencies, based on the context of United States cities: acceptable popular control and economic activities. In other words, the success of economic activities relies on at least the support of key players of the urban economy and the achievement of both popular control and adequate economic activities. It also requires compromise between popular preferences and the needs of economic elites.

2) Set of actors: Most city administrations are governed by alliances of political leaders, most of which are elected local politicians and land-based economic elites, who invest in the infrastructure of that city, e.g. banks, large department stores and shopping centers, including investors in houses and land. Thus, these economic elites are interested in making decisions regarding future economic activities and are able to use their economic resources to make those decisions.

3) Strong relationship among actors: Regime leaders must change the old perspectives of people. Regime members are drawn into a network of relationships. However, to build a strong relationship and get things done, the “free rider” problem must be solved by providing incentives to people to be engaged. Incentives can also be supported by key political actors.

4) Durability: The above three components: capacity to do something, set of actors and strong relationships, must exist and be sustained for years, preferably more than 10 years, in order to create the regime.

2.2.3 Types of Regime

The classification of the regime reflects how the policy change takes place. Those who can decide the political choice and change current policies must be those who can properly use nongovernmental resources. Stone (1993) categorized the regime into the following four types:

1) Maintenance regimes refer to the regimes that do not attempt to make significant change, neither social and economic change nor resource mobilization from the private sector, and does not claim for concrete behavioral change. This type of regime is based on the principle of routine services and certified by voting according to the agenda. Most people are satisfied with certain useful measures, such as low tax rates, so they seldom request anything. This regime is usually found in small administration areas, where governors and people are close to each other.

2) Development regimes refer to regimes that demonstrate efforts to change social and economic patterns, as well as private investment in public actions. The private sector must ensure that such investment is possible to bring about better change, because that regime relates to change. There are usually conflicts in development projects. However, this regime is not created to bring about mass public demand. Changes are caused by coordination among leaders of institutional elites using persuasion rather than force. However, development does not consist of conflict dimensions only, but also leads to incentives and opportunities, e.g. jobs, fees, contracts, schools, public parks, theatres and others.

3) Middle class progressive regimes refer to those visualized by exactions, monitoring, actions of elites and calibration for inducements and sanctions to achieve the perfect proportion of activities and restrictions. Thus, government works are comprised of complex rules. In addition, participation in the election is an essential condition of progressive regimes. Progressive mandates must be offered by popular support because these instructions may involve key tradeoffs. Thus, public

participation will expose people to be informed of the complexity of policies and common commitments to progressive goals.

4) Regimes devoted to lower class opportunity expansion pertain to education and job training, transport system improvement and business opportunity expansion. Lower class opportunity expansion can be carried out through human investment policies, as well as employment and business ownership opportunity expansion. This will affect practices within the private sector. To attain such goals, cooperation between leaders from institutions is necessary. These regimes also require sustainable regulations, which must be supported by eligible voters.

Mossberger and Stoker (2001) concluded with the following seven significant concepts of regimes from Stone's works between 1989 and 1993.

1) Regimes are informal and stable groups, which have access to institutional resources that enable the groups to maintain their role of making decisions in the administration. Achievement through cooperation does not occur via formal situations only, but also via informal networks.

2) Regimes that link between the popular control of government and economic resources of the private sector. Apart from the inclusion of the local government and business sector, participants in the regime may be diverse, such as organizations or groups of people who are representatives of middle-class people, etc.

3) Cooperation must be realized in order for it to happen. It should not be merely cooperation for regimes to be found.

4) Regimes are a stable arrangement that can span authorized people for public administrations.

5) Regimes can specify distinctive policy agendas, e.g. development regimes or middle-class progressive regimes that influence governing coalitions, participant relationships and used resources.

6) Consensus comes from interaction, leading to agreements caused by selected incentives and opportunities.

7) Regimes may not lead to complete agreement in terms of beliefs and values, but cooperation will bring about policy-based consensus.

2.2.4 Core Criteria of the Urban Regime Theory

Mossberger and Stoker (2001) summarized the core criteria of the Urban Regime Theory based on Stone's work. The Urban Regime exists on the basis of formal and informal networks. The core criteria are:

- 1) Partners come from both the public and non-public sectors, whereby participants from the private sector are required but not limited to the private sector only.
- 2) The partnership is based on social production, that is, resources from various sectors must be used to achieve the goals.
- 3) The identification of policy-based agenda must relate to the participants' compositions.
- 4) Rather a longstanding partnership than a temporary partnership.

2.2.5 Limitations of the Urban Regime Theory

Although Urban Regime Theory can dominate the study of urban politics, this theory has some limitations, as follows:

Firstly, one of the problems of this theory includes reliability and validity as research studies relating to this theory used the research methodology of the case study. To achieve conceptualization, it is necessary to compare or integrate the findings from plenty of case studies of cities (Mossberger & Stoker, 2001).

Secondly, Urban Regime Theory still has some restrictions on the importance of significant social movements in urban politics because community changes may have an adverse impact on political resources (Sites, 1997).

Thirdly, Lauria (1997, as cited in Imbroscio, 1998) pointed out the theory's limitations that emphasize too much political management and maintenance of internal governing coalitions or local politics. Therefore, this theory should be integrated with the Regulation theory so that they connect local politics within the city and external structural forces, such as authority inside or outside the public sector.

Fourthly, a key weakness proposed by Imbroscio (1998) is the definite separation of the State and market under a city context. Such separation implies that the business sector is the controller of urban economic development and economic

development or wealth creation is beyond the political power process (Berk & Swanstrom, as cited in Imbroscio, 1998).

Fifthly, Imbroscio (1998) observes that, as Urban Regime Theory is the same concept as the urban political-economy, it cannot link economic questions sustainably and systematically. Despite the Urban Political-economy theory, it is hardly adapted to seriously consider economic processes (Imbroscio, 1998).

Nowadays, urban management is changing. Scholars have to find theories to explain such change (Ward, 1996) and to explain the reactions of various actors at the city level (Mossberger & Stoker, 2001), e.g. politicians, government officials, capitalists or activists. The Urban Regime Theory is a theory that dominates local political study (Imbroscio, 1998, as cited in Davies, 2002).

It may be stated that the Urban Regime Theory was developed to explain the changing context of urban management. It does not prioritize only the public sector or elected politicians, but also the private and people sectors and urban stakeholders because this theory considers that resources to be used for urban management and development are not concentrated solely in the public sector. On the other hand, although a large number of these resources are distributed beyond the public sector, most of the resources are in the hands of the private sector (Davies, 2002, p. 3). Because of this, the State has to attract these resources from the private sector to become a tool for urban management. Stone (as cited in Mossberger & Stoker, 2001) regarded how the public sector controls resources, so it becomes a significant participant in urban management.

Urban Regime Theory focuses on bottom-up management (Ward, 1996). But public sector management also has horizontal relations between the public and private sectors (Bjorna & Aarsaether, as cited in Blanco, 2013). This is in line with Stone's view (Stone, 1993) that urban management must attract partnerships and mobilize resources from the private sector.

In conclusion, the Urban Regime Theory has divided the urban power structure into two poles: one that is elected from the public sector and responsible for the public in accordance with the democratic system which stresses actors in local administration, and the private sector who controls the economy and possesses many resources. As the public sector actors are in charge of efficiently providing public

services but with limited resources, the concept of a public private partnership was created to mobilize resources from the private sector to be a part of urban management. Thus, this theory emphasizes 1) cooperation that leads to both a formal and informal governing coalition between governmental and non-governmental organizations, 2) selective incentives to motivate different sectors to take part in urban management policies or projects, and 3) resources that are necessary for urban management and development, which are limited in the public sector but many of them are distributed outside the public sector or in the private sector. However, this theory is considered as a concept or a model rather than a theory because of limitations in diverse explanation or forecasting in terms of formation, maintenance and changes of the regime (Dowding et al., 1995, as cited in Mossberger & Stoker, 2001)

The Urban Regime Theory demonstrates to us the relationship between the public and private sectors in exchanging or sharing resources. This liaison may require a mediator or a representative to negotiate or find a channel to approach decision makers. As a result, this collaboration between the public and private sectors can meet the objectives of both parties.

2.3 The Agency Theory

Driving large-scale projects, especially those requiring a public private partnership may need an agency or a key actor to start the operation and continue. Such an agency may play a role in seeking solutions to problems, or finding a channel to reach decision-makers who can lead to negotiations that enable the project to proceed and eventually succeed.

Agency is usually defined as any action that relies on someone else to act on someone's behalf because they or other stakeholders cannot do such acts on their own (Siripan Nogsuan Sawasdee, 2014). In other words, one person acts on behalf of someone (Shapiro, 2005) or assigns his work to other people to act on his/her behalf (Eisenhardt, 1989; Ekanayake, 2004). The person who acts on behalf is called an agent who is delegated by an individual or principal groups (referred to as the principle) who cannot do such acts themselves.

A major concern pertaining to agents concerns benefits. Agencies should be motivated by public interest (Waterman & Meier, 1998). In fact, though, organizations often basically adhere to self-interest (Eisenhardt, 1989). Thus, principals must have the capital to let agencies do anything to meet their interests (Waterman & Meier, 1998). If principals and agents have opposite interests or agencies act for group interests, the organization's objectives cannot be efficiently achieved.

In the role of agencies in pushing for public policies, they have to involve the public sector in a process that tends to control agencies, or prefers to follow the top-down operational guidelines specified by the State. However, public policies may be driven in areas using a bottom-up approach.

2.4 Implementation of Policies Using the Top-down and Bottom-up Approach

Implementing a policy is one of the more significant steps in the process of public policy because it enables the initiated policy to bring about concrete results, and part of the success or failure of public policy lies in the implementation.

Policies are implemented based on two approaches that are widely used: a top-down approach and a bottom-up approach. Each approach is unique for explaining different implementations. The top-down approach emphasizes those involving policies at the top level, namely the government or people authorized to implement policy, while the bottom-up approach focuses on practitioners and those concerning bottom policies, e.g. civil servants, people comprising benefiting groups or driving groups. Each approach has its own strengths and limitations, as detailed in the following:

2.4.1 Top-down Approach

In general, public policies are created by government decisions (Huwlett, Ramesh, & Anthony, 2009; Sabatier, 1986). As a result, policy goals follow government expectations (Smith, as cited in Van Meter & Van Horn, 1975) in order to solve problems or abide by policies proposed prior to taking office. Based on this

approach, to consider the success of policy implementation, the policy and control of policy implementation by policy makers must be more stressed than with bottom-level practitioners (Voradej Chandarasorn, 2009). The presupposition (Calista, as cited in Sombat Thamrongthanyawong, 2006) is the following:

- 1) Institutions or organizations determine the effectiveness of structures of policy implementation.
- 2) Appropriate legislation and adequate promotion of practitioners are required.
- 3) Suitable legal regulations are required to implement policies in accordance with the objectives.
- 4) Despite high skills and commitments, practitioners may aim for their own benefit.
- 5) Incentives must be provided to make practitioners cooperate in implementing policies.
- 6) A review and changes should be emphasized in line with changing situations.

Concerning the top-down approach, government is the policymaker who creates policies and supervises their implementation to achieve the set goals (Gun, as cited in Elmore, 1979; Ham & Hill, 1984, p. 99). It seems as if public policies are the government's property (Ham & Hill, 1984). Practitioners must follow the direction determined by the government. The government and policymakers can also intervene in the implementation at any time. They use the budget as a tool to intervene and control implementation. For example, if practitioners do not follow the government's direction, the government may cut the budget or change from one agency (Ham & Hill, 1984) to another agency that can be more controlled by the government. This shows that the government is on the top level of policy implementation and has a great deal of power in implementing policy.

To implement policies by following this approach, the following essentials are needed (Hood, as cited in Sombat Thamrongthanyawong, 2006):

- 1) The administration system must be united.
- 2) Traditions/regulations must have the same patterns and their objectives must be clear.

- 3) Administration must be obeyed or completely controlled.
- 4) Communication and coordination between agencies must be complete.
- 5) There is no time pressure to successfully implement policies.

Sabatier (1986) described the following steps of top-down policy implementation:

- 1) Make a decision by officials.
- 2) Designate policy practitioners and target groups.
- 3) Determine policy objectives or goals, including their achievement.
- 4) Identify key factors affecting the policy outcomes.
- 5) Specify the models of policy evaluation.

It can be concluded that the top-down approach places importance on the government and higher position officials. According to this approach, the government who involves the implementation of policy, plays a very large role. Sabatier (1986, p. 34) mentioned that over-emphasizing becomes a restriction because they can focus too much on the government and top-level actors. In fact, the success of policy implementation does not rely on the arrangement or supervision, but on cooperation from practitioners. The role of bottom-level practitioners is therefore ignored, although they are key players because they have experience in implementing policies and often make decisions if such policies face any problems. Thus, negligence of practitioners is another limitation of this approach. In addition, other non-governmental actors may be regarded as obstacles to implementing policies (Hjern & Hull; Elmore, as cited in Sabatier, 1986, p. 30). However, top-down policies are formulated and guided by the center of power, which means the government helps the policy to be practiced lawfully and implemented quickly. Overall, most public policies in Thailand are top-down policies where the major players in formulating said policies are the government.

Van Meter and Van Horn (1975) summarized the following obstacles to implementing policies using the top-down approach.

- 1) Policy and objective standard: policies must be complete and objectives must be clear. In reality, policies may not be complete from the beginning and policy objectives can be difficult to be made clear.

2) Policy resources: sufficient resources must be made available to implement policies, in terms of personnel, budget, time, technology, etc. In practice, there may be limitations which could obstruct the implementation.

3) Organizational communication and regulation enforcement must be unique and distinctive. As policy implementation usually involves a large number of agencies, organizational communication may be difficult, lack unity and be an obstacle to implementation.

4) The agencies that implement policies must be ready and understand those policies, because if they do not have readiness or misunderstand them, the implementation may be inefficient.

5) Economic, political and social conditions and limitations pose a major threat to the implementation, because if one or more of these three factors do not contribute to the practice, which is sometimes beyond their control, this may lead to inefficient implementation.

6) The design and determination of policy practitioners: if the design of policies is not consistent with a top-down approach, or those involved at the top cannot control operational units, this may obstruct the implementation.

As a result of the above restrictions of the top-down approach, certain scholars have switched to pay more attention to a bottom-up approach. Elmore (1979, pp. 603-604) stated that neither success nor failure in implementing policies can be explained by the intention or the formulation of directions of policy makers, because there are other groups influencing the success or failure of policies, especially civil servants as the practitioners at the bottom level, etc.

2.4.2 Bottom-up Approach

The bottom-up approach pays attention to bottom-level practitioners, e.g. civil servants who adopt policies to implement and achieve specified goals, and may include target groups of policies that must follow policies that are specified by the State. Thus, according to this approach, bottom-level practitioners and target groups of policies play as important a role as policymakers or top-level practitioners. It may be stated that whether policies can meet the goals or not depends on how the practitioners make the practice successful. It is also an approach that provides an

opportunity to bottom-level personnel to have a role in making decisions and judging policy implementation. Elmore (1979) is of the view that neither success nor failure of policy implementation can be described by the intention or the formulation of directions, because there are still other groups of people who influence the success or failure of policies, in particular civil servants as the adopters of policy implementation at the bottom level. Based on this approach, the government is merely a broad policymaker.

It may be stated that this approach is opposite to the top-down approach, i.e. the bottom-up approach stresses street-level bureaucrats as policy practitioners and “those who influence the success in implementing policies rather than the control from the top” (Voradej Chandarasorn, 2009, p. 76). Lipsky (1980, p. 14) pointed out that street-level bureaucrats are professionals, as they can make decisions for their own work. This implies that street-level bureaucrats are regarded as those having knowledge of policy implementation because policies are functions that need to be regularly performed.

To understand the actual implementation of policy, target groups and policy practitioners should also be taken into consideration (Matland, 1995, p. 148). Policies are implemented at two levels: the macro-implementation level or the government, and the micro-implementation level or agencies that respond to the macro-implementation level (Berman, as cited in Matland, 1995, p. 148). It is obvious that the government only formulates broad policies which will be developed and performed by bottom-level practitioners. Thus, we should not ignore the roles of bottom-level practitioners. In case policies are formulated by the government, even if they are meticulously defined, if bottom-level practitioners do not pay attention to or accept those policies, such policies are likely to fail. Therefore, following this approach, the success or failure of policy implementation will be affected depending on bottom-level practitioners in addition to top policymakers or the top practitioners.

As for public policies, other issues concerned include policy-based tools, which are key factors for implementing the policies to either success or failure.

The driving or implementation of policies based on the bottom-up approach can occur partly due to government decentralization, which provides an opportunity to the bottom structure or local areas to initiate policies that respond to their own needs.

In case of sufficient State decentralization, it can lead to efficient local operation. On the other hand, if the government is not actually decentralized, it is difficult to formulate local policies. Therefore, authority is necessary to make the bottom-up approach really take place.

2.5 Decentralization

Decentralization is an interesting issue among various sectors. Such decentralization is an essential factor for local development because it is a fundamental democratic governance consisting of a top-level structure for national governance, or the government responsible for governing the whole country, and a bottom level structure for local government, who should have the authority to formulate its own missions. This is desirable under democratic governance. Decentralization delegates the State authority to other lower agencies in the territorial hierarchy, which is separated from the central government (Smith, 1985, p. 1). In developing countries, decentralization is usually pressured by local politicians and civil society, who makes an effort to capture power from the central government. Meanwhile, national politicians use decentralization as a channel to get support from local allies (Schneider, 2003, p. 34).

Decentralization can be easily described as the State authorizing some non-central or non-regional organization to independently provide a public service (King Prajadhipok's Institute, 2002). either on public infrastructure, education, arts and culture, peoples' lives, asset safeguards or environmental safeguards (Thanet Chareonmuang, 1994). Thus, decentralization is the transfer of State power to other organizations within the local area to have the authority to freely administer and manage public services for people in that area according to the law as specified. Such decentralization will be effective when the central government who authorized the power, and the local government who was authorized, follow the following principles (Jumpol Nimpanich, 1998, p. 4)

- 1) The State must authorize local agencies to govern the administration and instruct them to carry out local-related businesses on their own.

2) The State, central agencies or decentralized authority shall support the authorized agencies or local administrative organizations to be ready for self-administration.

3) The State shall balance existing and additional responsibilities.

4) Decentralization shall be conducted to be efficient, effective and beneficial to people and the overall society.

5) Decentralization shall have clear goals that can be evaluated and systematically implemented.

Charas Suwanmala (2011) cited two reasons for decentralization to local administrative organizations: 1) each province or area faces different problems and requirements, and 2) politics and national government cannot access local problems. Due to these two reasons, the central government may not be able to take care of various areas thoroughly because of some limitations. As a result, localities have to be decentralized to cope with local problems more efficiently (Direk Patmasiriwat, 2011). Decentralization can also result in development of the quality of local government in terms of accountability and transparency through public participation, monitoring, decision-making processes and local services (Ghuman & Singh, 2013).

Decentralization in developing countries is deeper than that at the provincial level. However, it involves local administrative organizations focusing on three main topics: authority that can be composed by the locality, e.g. expenditures and public services to the people, 2) finances that can be collected by the locality, or loans that can be borrowed from the State, or private sourced funds and fees that can be collected from local public services, and 3) democracy, involving local administrators who are elected or appointed by the government (Bardhan & Mookherjee, 2006). Theoretically, decentralization must allow local administrators to manage projects, make discrete policy-based decisions, and cut red tape due to excessive centralization (Rondinelli, as cited in Rondinelli, Nellis, & Cheema, 1983).

There are three major problems of decentralization: 1) decentralization does not follow a formulated plan, e.g. laws that support decentralization, a budget that funds local administrative organizations or clarity of decentralization and State policy, and 2) problems due to local administrative organizations' insufficient budget and lack of competent personnel, and 3) distrust of local administrative organizations,

especially regarding their image of corruption, influence peddling and conflicts in their areas (Trakoon Meechai, 2016). These problems obstruct decentralization growth in Thailand and may hinder local administrative organizations who are ready to provide public services to local people to efficiently carry out operations.

Although local administrative organizations are decentralized by the State and cannot avoid following the guidelines set by the State, it does not mean that they cannot initiate an approach that differs from traditional approaches, e.g. initiating to provide large-scale public services in collaboration with the private sector. However, to initiate anything different from the existing ones may need cooperation from many sectors to drive and make the central government realize actual local needs. Social capital may be one of the factors that makes it possible.

2.6 Social Capital

Social capital is a concept that can be used to describe social phenomena in terms of cooperation at various levels, from the community and local to national levels, which includes common capital caused by cooperation or assistance between individuals and social groups (Putnum, as cited in Siripan Nogsuan Sawasdee, 2014). Social capital is a social organization. e.g. networks, norms or social trust, which lead to cooperation in jointly creating common benefits (Putnam, 1995, p. 67). Temple (2009) suggested that, apart from trust and networks, information exchange is one significant issue that indicates social capital.

Social capital is the foundation of collaboration, bringing about public benefit and social development. It relies on individual relationships, which are key to social capital (Viengrat Nethipo, 2011). Thus, social capital helps success to be possible as planned. Without it, that success may not occur (Coleman, 1988).

To explain social capital, it is unavoidable to mention networks, which are accepted as important and key factors to strengthen social capital. It is obvious that the scholar's definition of social capital often relates to "networks". For example, Lin (2011) defined social capital as the extension of the diversity of embedded resources in a social network. Bourdieu (1980, as cited in Portes, 1998) defined social capital as the integration of valuable resources linked to durable networks. Institutional

relationships may be more or less perceived. noticed that social capital is one feature of social organizations that implies social relations. He also pointed out that networks are a key component that leads to cooperation for common benefit. Networks refer to individual relationships in society, and were regarded by Field (Field, 2008, p. 1) as the heart of social capital. Relationships in the form of networks are the center of diverse social resources (Lin, 2011) and help collaboration in terms of communication (Putnam, 1995, p. 67) that enables people in society to jointly conduct activities for common or social benefits. In addition, many scholars are of the opinion that social capital is inevitably related to the network relationship (Lin, 2011; Field, 2008; Putnam, 1995), because networks are a combination of resources that become one social capital (Field, 2008) when people or social groups provide society with scarce resources in order to achieve some common goal.

With respect to the concept of social relationships that lead to social capital, social capital models relating to social capital are created. Coleman (1988) identified the following three types of social capital (Coleman, 1988).

- 1) Structures comprising obligations, expectations and trustworthiness related to each other. When one individual does something for another individual, the individual who receives something wishes to reciprocate to the giver. At the same time, the individual giver has expected to receive something in return in the future. The giving and reciprocating of two individuals is based on trustworthiness toward the other. This trustworthiness is important to the relationship of the three structures. Without trustworthiness, or low trustworthiness, this relationship will not take place because when the giver is not reciprocated by the receiver, trustworthiness will not be provided to the receiver. If people in society can build that relationship, it can amplify the number of resources in society by handing out resources that individuals possess to others who need that resource. It means trusting that when they need resources, other people will certainly give those resources to them, as well.

- 2) Information channels: Information is essential and information access to it is costly and something that must be paid attention to. However, social relations are a channel to disseminate information, e.g. news from friends or close people with similar interests, etc. Thus, such social relations result in social capital to disseminate information, contributing to actions.

3) Norms and effective sanctions: effective norms can create powerful social capital, which makes people in society devote themselves toward public benefit. What reinforces sacrifice and common benefits may also reinforce social support, status, honor and other rewards.

Although social capital leads to change from traditional practices, cooperation should be verified by the people concerned, and external people, in accordance with the concept of good governance.

2.7 Good Governance

At present, good governance is a popular concept among public and private agencies. All agencies place importance on good governance in administration. This may be observed in the form of practices or guidelines for bringing about honesty in the administration of those agencies. Good governance is also not prioritized, especially for the work in an organization. Work that requires inter-organizational cooperation cannot omit good governance, too. However, before adopting a good governance concept, its definition must be understood, first, so that it can be properly applied.

The definitions of Good Governance are diverse, from the broad meaning of the well-being of people or that of the public, private and social sectors. The United Nations' broad definition of good governance does not specify any sector but only mentions equity and good quality of life of people. It is defined thus, "good governance is a fundamental principle of creating the well-being of people in society and in all countries to be equally developed and have a better quality of life" (Chaijaroenwatana & Lee, 2003). The Office of the Civil Service Commission's definition of good governance is also broad, but relates to governing rules and organizations relevant to good governance. It is defined this way, "good governance refers to good management of resources and society in all aspects and levels, including the management of organizational systems and the mechanisms of cabinets, public agencies, government organizations and the non-public government, regional and local administrations, non-governmental organizations, private organizations, clubs and associations for different activities, juristic persons, the private sector and

civil society sector” (2001). It is notable that the Office of the Civil Service Commission’s interpretation of good governance is different. Its good governance refers to good administration of State affairs. This is consistent with the broad meaning covering all sectors pertaining to country governance. Another definition that is close to that of the Office of the Civil Service Commission is, “good governance refers to good administration. At the national level, it refers to efficient administration of State affairs, including all sectors, e.g. public, private and people” (Bhakdibutr & Sutthikamot, 2008).

Another narrower definition of good governance stresses administration only, “good governance is a good administration governed mainly by the State and government, which are fair and legal, use systems, accountability, public participation, transparency and consistency that can be audited” (Chai-Anan Samudavanija, 1998). Its definition may be narrower, as “good administration and management systems” (Yuk Sri-ariya, 2003).

With respect to all the above definitions, it can be concluded that good governance refers to good administration, including righteousness relating to all sectors, e.g. public, private and people with the objective of the well-being of people. However, such definitions cannot be realized without the principle that helps to formulate a correct public administration approach.

The principle of good governance is always formed, developed, improved on and added to insure that such practice ensures righteousness. In the early period when good governance is widespread, there are seven fundamental principles: 1) righteousness and political accountability, 2) independence in performing responsibilities, 3) fair and reliable legal systems, 4) commitment and bureaucratic auditing, 5) freedom of expression and disclosure of information to society, 6) efficiency and effectiveness of public administration, and 7) seeking cooperation with civil society organizations (OECD, as cited in Supot Saikaew, 2002).

The Office of Public Sector Development Commission proposed the following components of the good governance principle to the cabinet at a meeting dated April 24, 2012. The cabinet approved the proposed principles consisting of four main elements and 10 sub-elements:

1) Honesty with Determination of Morality.

Morality/Ethics refers to the moral and ethical performance of duties in accordance with social expectations, including adherence to core values of ethics standards for political position holders and State officials.

2) Active People Engaged in All Sectors

(1) Participation/Consensus Oriented involves listening to public opinions and allowing them to participate in perceptions, learning, understanding and sharing their views in solving problems, etc.

(2) Decentralization includes appropriate delegation of authority and distribution of responsibilities for decision-making and operations to operators at different levels.

3) Ready for Being Audited and Adhering to Democracy

(1) Accountability that can be audited or questions that can be answered and explained in case of doubt.

(2) Disclosure/Transparency involves honest performance and disclosure of necessary and reliable information to the public.

(3) Rule of Law includes the strict and fair exercise of power of laws and regulations without discrimination but taking into account the rights and freedom of people and stakeholders.

(4) Equity or providing services equally by taking into consideration equal opportunity for access to public services among the disadvantaged people in society.

4) Proactive and Focus on Achievement

(1) Efficiency involves the economical use of resources for official operations to yield cost-effective productivity and maximum benefits to the public.

(2) Effectiveness includes a strategic vision to meet the demands and expectations of people and stakeholders, as well as performance of duties in accordance with the mission to meet organizational objectives with clear operational goals.

(3) Responsiveness refers to properly providing good quality of services, creating trust and satisfying expectations/requirements for a wide variety of service users and different stakeholders.

Thailand is a country that has adopted the good governance concept for both public and private organizations, so it has become a very interesting trend. Good governance has been adapted to public organizations to ensure efficient and transparent operations, which can be audited by independent organizations for public accountability and public participation, as well as decentralization promotion (Siripan Nogsuan Sawasdee, 2014). Siripan Nogsuan Sawasdee (2014) also explained various understandings of good governance in each field of expertise.

1) International organizations view good governance as a tool for developing public accountability, the rule of law, human rights, sustainable development and free markets.

2) Public administration academics consider good governance as a 21st century approach focusing on horizontal operations, taking into account stakeholders and interacting more with business and social sectors in terms of collaboration and auditing.

3) The administration dimension stresses accountability of executives to shareholders.

Despite different interpretations of good governance by each sector, common issues concerning good governance include an expectation of transparent and auditable management through public participation, as well as public issues, fairness and emphasis on other sectors as stakeholders. In addition, good governance is not limited to public sector administrations only, the private sector can also adhere to the good governance principle in management. Thus, organizations that adhere to good governance for management may be recognized and build trust from external personnel and stakeholders rather than those without good governance.

2.8 Urban Development Approach

As the urban population is continuously increasing, most people now live in urban areas (Fietkiewicz & Stock, 2015). current cities are characterized by

complicated activity networks and concentrated administrations. Cities are also the center of various organizations leading to new forms of services and the center of politics and culture. Cities have become a hub of activity and the center of administration. A large number of people carry out activities in limited area, resulting in congestion and complex problems (Dubey, 1990). Because of this, urban executives need to accelerate urban growth planning and deliver basic services, construct infrastructure and provide sufficient housing to meet public demand (The World Bank, 2018). Urbanization therefore takes place. Indicators include density, employment and economic importance (Sivaramakrishnan, 2011).

Urbanization is caused by the movement of people from rural to urban areas with diverse public services and sources of employment. Cities are required to be appropriately developed and change by taking into account four conditions: 1) economic aspects or land value, 2) social aspects, e.g. culture and people's interests, concepts of houses/land or assets, 3) spatial aspects, e.g. public spaces and infrastructure planning in accessible areas, and 4) institutional aspects, e.g. land ownership, financial ability, etc. (Nagamine, 1986).

In terms of explaining the concept of urban development, key issues to be discussed include the definition and significance of urban development, as well as approaches or models of urban development, which will be described further in the next section.

2.8.1 Definition of Urban Development

To explain the definition of urban development, there are two words: "development" and "urban". Development is broadly defined as "qualitative improvement of economic, social and environmental structures" (Preecha Piampongsan, 2014). Referring to the Oxford advanced learner's dictionary (1994), development is defined as steady or advanced growth or the organized management of things. Overall development may refer to improvements to bring about progress or continuous systems in terms of economic, social and environmental aspects.

Urban is defined by Orathai Kokpol (2016) as "a permanent, dense and large location of settlement, where humans gather to live together in groups". She also added that urban, when compared to rural, is a place with bigger populations, with

more structures or houses that are adjacent to each other in a wide area, and with more facilities for those residing in those areas than in rural areas.

After the words of development and urban are combined as “urban development”, it may be broadly defined as improving places where people live densely, to continuously grow based on economic, social and environmental management systems so that people living in the cities have a good quality of life.

It may be stated that urban development to suit urban lifestyles to facilitate people and upgrade their quality of life is a major concern that localities must pay attention to because it is necessary to plan all systems in terms of infrastructure, transport and environment to serve future urban growth. This will make it grow with direction.

2.8.2 Importance of Urban Development

One key question is why urban development is necessary, such as modern city development and convenience contributing to the livelihood of people living in that city. The importance of urban development is partly to prevent cities from growing with no direction. Roads, public parks, wastewater disposal or urban infrastructure may be unsystematically laid. This will be an obstacle to future development of urban structures. In addition, Richardson (1981) expressed his idea that urban planning should be prepared and urban development should not be carried out according to market forces, which may not be able to determine proper the development direction. Urban development planning is therefore a priority. DuRant et al. and Smith pointed out ten factors for urban development (Ajaj, 2014) in order to serve urban change and respond to the following problems arising in the city.

- 1) Rapid growth and a natural young demographic within cities.
- 2) Continued migration from rural to urban areas, in spite of high living costs in cities, because there is employment, suitable services and infrastructure, better services and better educational opportunities.
- 3) Reclassification of urban areas and development.
- 4) Social and spatial fragmentation due to the application of schemes for land.
- 5) Proliferation of slums.

- 6) Congested roads and city streets.
- 7) Lack of appropriate services for the population.
- 8) The increase in population growth in the city.
- 9) The deterioration of infrastructure.
- 10) Widespread violence and crime.

Good urban development must take into consideration the urban development strategy suggested by (Hausner, 1993), as follows:

- 1) Cities with viability, prosperity, competitiveness and potential enhancement to be beneficial to residents at the regional and national levels.
- 2) Ameliorating the disadvantages of the underclass, who may lead to problems, including promoting development in deprived communities.
- 3) Preserving cities to be a hub of culture, innovation, opportunity and social enterprise.

Hausner (1993) also cited critical features that are needed for urban development.

- 1) Urban development must focus on areas with problems and development potential.
- 2) Urban development must have long-term plans.
- 3) Urban development requires cooperation from the public sector to work on projects together.
- 4) Urban development must provide an opportunity to the private sector for the investment.
- 5) Urban development requires cooperation from the public, private and community sectors.
- 6) Urban development must foster leadership from the local government.
- 7) Urban development must seek sustainable development through investment climate changes.
- 8) Urban development requires efficient local management in the development process.
- 9) Urban development must link benefits arising from development to deprived people.

10) Urban development must emphasize the measurement of output and continuous monitoring for efficient development.

It is obvious that urban development cannot take place alone. It requires cooperation from various parties to carefully and systematically plan or set the direction because there are a wide variety of urban development approaches depending on suitability and the mutual agreement of urban people.

2.8.3 Urban Development Concept

Orathai Kokpol (2016) proposed the five following types of urban development concepts:

1) Garden city is based on the concept to provide people with a good life in the midst of nature and green areas. The city will be surrounded by agricultural zones comparable to a city green belt. Its advantages include beautiful nature, peaceful and unhurried inhabitants, as well as equal access to resources. The city also has green areas, fresh air and public parks where urban people can meet. Examples of cities according to the Garden city concept include 1) Letchworth Garden City in England, which was the first city to adopt this concept, 2) Welwyn Garden City in England, and 3) Singapore.

2) Symbio city was initiated by the awareness of problems that cities are facing, e.g. climate, air pollution from both automobiles and factories, lack of green areas, polluted water, health problems, etc. These problems take place because cities have to serve large numbers of people who migrate from rural to urban areas. Thus, the Symbio city was designed under a concept of consumption and utilization of resources that takes into account the environment as a priority to bring about environmentally friendly urban development. The principle includes integrated urban management that stresses city planning, transport, logistics, energy consumption, water management, as well as natural resource and environmental management. Thus, a Symbio city aims “to find the relationship of living things that live in various systems of the city and to make such relationships beneficial to each other. This can reduce the utilization of resources in the city, save energy and have a positive and sustainable effect on the environment”. Examples of cities in accordance with the Symbio city concept can be found in Sweden.

3) Smart city refers to “a city that can apply information technology and communication to improve the quality of livelihoods of urban people, mitigate environmental impacts, as well as efficiently and sustainably reduce the consumption of energy. It can be stated that a Smart city applies technology to administer the city to increase the efficiency of utilization of limited resources and optimize its use to be worthwhile, make the quality of urban life better, consume energy efficiently and reduce impacts on the environment. A Smart city consists of three elements: it is 1) efficient: with optimal use of limited resources, 2) sustainable: mitigation of environmental impacts, as well as a sustainable reduction of costs and energy use, and 3) livable: a city where residents have a good quality of life. In addition, Smart cities must comprise six major components: 1) smart energy or the smart and cost-effective utilization of energy, 2) smart mobility refers to construction of structures that serve and support non-fuel vehicles, application of information technology to manage transport so that road users can access traffic information in a timely manner, and design of mass transport systems that link to each other to facilitate their management, and 3) smart water refers to the utilization of technology for systematical water management, 4) smart public services refers to smart public services in terms of safety, convenience and information readiness, 5) smart building refers to the design of energy-saving buildings, and 6) smart data center refers to the hub of all urban data, e.g. electricity supply, water supply, mass transport, security systems, etc. Smart involves different aspects of urban development, such as natural resources, energy, transportation, mobility, buildings and living conditions (Neirotti et al., 2014, as cited in Fietkiewicz & Stock, 2015, p. 2345).

4) Creative city was initiated by Richard Florida who believes that all cities have the potential to solve their economic problems to become a unique city focusing on creativity in urban management, urban design, solving the city and daily life problems of urban people. Urban development under this concept is based on building “people” and an “environment” that contributes to various types of creation. Examples of cities developed according to the Creative city concept include Tokyo and Kanazawa in Japan and Medellin in Columbia.

5) Just city was designed with an emphasis on society. The three major components proposed by Susan Fainstein include equity, democracy and

diversity, which make the city safe to live in and have a steady economy. The concepts behind the above components are 1) “democratic equality”: city administrators must ask the opinions of urban people prior to any changes in urban structures or any legislation relating to peoples’ livelihoods. Such changes have to be beneficial to all people. Administrators use equality in the design of policies for the solutions to problems stressing that everyone deserves equal treatment. This will make all people have more opportunity to access services, and 2) “flow of diversity integrated as single one” refers to acceptance of differences in terms of ethnicities, lifestyles or specific features of groups, which will not result in cleavage, division and inequality.

2.8.4 Examples of City Development

In many countries, urban development has been paid attention to. Some cities have been fully developed to be modern centers of technology and innovation, as well as convenient and able to upgrade the lives of people living in that city, while other cities are developing infrastructure to serve changing lifestyles. Some other cities not only consider modernness and convenience but also impacts on the environment after being developed. Or they switch to urban development by taking into consideration environmental development at the same time. This has become a significant goal of urban development (Jian, Jiang, & Kazunori, 2003, p. 702).

In developed countries, cities are often developed with specific features, which may be outstanding technology, or have environmental concerns or be provided with modern facilities. These cities are often developed with complete infrastructure and efficient public utilities and mass transit systems. Currently, they emphasize urban development that helps to solve environmental problems or urban development along with environmental care. Asian countries that focus on urban development in this manner include Japan and the Republic of Singapore.

Japan is recognized as a developed country and known for its technological progress and modernity. Several cities in Japan have been developed in infrastructure and are perceived as modern and convenient. Zoning plans are also implemented to organize the use of city areas, which are under the responsibility of municipal governments (Sorensen, 2011). Japan, therefore, consists of cities with good planning and development. However, cities in Japan do not stop developing, especially, major

cities. This does not involve infrastructure development for convenience only, but is rather another step of development that takes more into account the environment, e.g. Tokyo used to be faced with transport, green space and increasing carbon problems due to congested traffic (Fietkiewicz & Stock, 2015). As a result of those problems, transport has been developed to reduce greenhouse gas emissions under the Kyoto Protocol in 2005 (Donoso, Martínez, & Zegras, 2006; Zegras, 2007). Kyoto joined the Smart City Challenge Program three years ago and has since been developed as a city with an efficient mass transit system, a walkable city and a city with low air pollution levels. Tokyo has 10-year strategic plans and three goals, which are: 1) Tokyo, a city of cooperation with the environment and a city of low carbon, 2) Tokyo, a city of industrial development that contributes to the environment and society, and 3) Tokyo, a city of learning (Fietkiewicz & Stock, 2015).

Another country that emphasizes the environment along with urban development is the Republic of Singapore, which is one of the world's most developed countries. Despite being a small island country, Singapore can manage the utilization of limited area to serve public needs in terms of physical convenience and the environment.

The concept of urban development as a green city has been prioritized since the beginning of Singapore's urban development, which started after gaining independence from the United Kingdom. Singapore used to be a colonial state, a port surrounded by houses with a dense population with health and social problems (Hassan, as cited in Tan, Wang, & Sia, 2013). It used to be the largest slum in Southeast Asia (Yuen, 1996, p. 959) but became a compact city with high-rise buildings through the development of infrastructure and high-level industry as well as mass transit systems and housing programs. About 85% of the population lives in high buildings. Singapore has also the busiest port in the world (Tan et al., 2013). Such urban development has damaged traditional vegetation, forest areas, natural vegetation and wildlife (Yuen, 1996). Singapore has since switched to focus on urban development in terms of a Green city. So far, Singapore has been developed and recognized as a "Garden City" (Tan et al., 2013) that has created large trees along the roads and plenty of public parks (Yuen, 1996).

Apart from Japan and Singapore, another country with outstanding development is the Republic of Korea, or South Korea. Although it is not remarkable concerning urban development as a green city that emphasizes the environment, South Korea has been physically developed and recognized as a modern city.

After the Republic of Korea, or South Korea, started being ruled under a democratic system at the national and local levels, leaders at all levels of governance were elected. Industrialization started, along with urbanization, e.g. construction of infrastructure and residence for new groups moved to live in the cities, as well as land use pattern management. Due to rapid economic and urban development, Seoul has expanded rapidly, leading to over-concentration. Restricted development zone policies were therefore formulated to strictly cope with the growth of metropolitan areas in line with the United Kingdom's British green belt (Bae & Sellers, 2007).

Due to industrial and urban development, South Korea is the world's 8th most energy consuming country (IEA, as cited in Jae-Seung & Jeong-won, 2016). This affects the environment similar to countries in which industry and urban infrastructure are highly developed. Because of more severe climate change, South Korea announced its Green Growth Strategy in 2008 to help increase the quality of its urban environment, to reduce carbon gas emissions and to decrease the import of fossil fuels from foreign countries. Such strategies aim to serve as sustainable development guidelines that harmonize environmental, economic and social development (Jae-Seung & Jeong-won, 2016). The objective of these strategies is to solve global warming and enhance South Korea's international status (Presidential Committee on Green Growth, as cited in Jae-Seung & Jeong-won, 2016).

Various types of industrial and urban development in terms of infrastructure have taken place in the three above countries, leading to many impacts on the environment and natural resources. Nowadays, the urban development approach tends to improve and restore the urban environment along with urban modernity and convenience through projects. Meanwhile, several developing countries are switching to invest in urban development and infrastructure to serve their urban and economic growth. In addition, the number of people migrating to reside in urban areas keeps increasing.

As for Thailand, the concept of urban development is very interesting, as many provinces have adopted this idea as an approach to develop their cities, e.g. Chiang Mai, Khon Kaen, Phuket and Ubon Ratchathani. However, the provinces that seem to drive this interest more actively than others are Chiang Mai and Khon Kaen, which have primate cities, whereby the issues faced by these cities are being realized. Both provinces are making an effort to adopt the concept of urban development to solve problems and improve the quality of life for their urban people.

Chiang Mai Province is one of most important provinces in the north because it is a popular place among both Thais and foreigners, especially in the cold season. As a result, Chiang Mai has higher economic growth than other provinces in the north because of its business units, e.g. large-scale hotels, department stores and shops to serve the large number of tourists. With respect to the above context in Chiang Mai Province, a large number of people have migrated to work and live in urban areas in Chiang Mai. As a result, Chiang Mai has to confront problems that are no different from other cities, such as traffic, congestion, the environment, quality of life, etc. However, Chiang Mai cannot avoid key problems like traffic and mass transit issues because Chiang Mai does not have a systematic mass transit system. Many private cars are used, resulting in traffic congestion (Bangkokbiz, 2017). The number of private cars in Chiang Mai is greater than the number of inhabitants. More importantly, the number of cars is higher than that of roads, leading to traffic congestion (Narong Tananuwat, n.d.). Thus, the development of Chiang Mai started with development of a mass transit system first. Up to 70 private companies jointly established Chiang Mai City Development Company Limited. All of them have the same concept of realizing the city's problems and wishing to change it for the better (Bangkokbiz, 2017). Currently, Chiang Mai is seriously driving its urban development.

Khon Kaen Province is one of Thailand's northeastern provinces. Its situation is not much different from Chiang Mai Province. Khon Kaen has a relatively dense population and exponential economic growth. It is also situated in the East-West Economic Corridor and a dry port may be constructed in Khon Kaen's nearby areas. Due to the above context, the public, private and people sectors in Khon Kaen Province have a concept of urban development because Khon Kaen is starting to face

various problems which cannot serve its urban growth in the future. At present, Khon Kaen City will try to develop into a Smart city, starting with infrastructure for a public transport system development to tackle the traffic in Khon Kaen City by constructing a light rail transit, or LRT. In the future, Khon Kaen will try to develop as a complete Smart city (its details are shown in Chapter 4).

According to the examples of urban development in developing countries, most development is concerned with infrastructure to meet the demands and upgrade the quality of life of urban residents. In fact, this does not differ from urban development in developed countries because infrastructure is focused on from the beginning. After more development, though, this affects the environment. Developed countries therefore have switched to developing their cities and maintaining the environment at the same time. Thus, if possible, developing countries should study urban development lessons from these developed countries, that is, urban development in parallel with environmental care. More importantly, urban development is not just facing one problem for an urgent solution, rather, it should be recognized as a critical issue that must be consistently addressed (Hausner, 1993) leading to systematic development.

Urban development is currently a significant topic because of dramatic social, technological, natural resource and environmental changes. Without proper planning and good management, cities may not properly respond or serve urban lifestyles. They may grow without any direction and be difficult to improve. Thus, appropriate urban planning to suit a city's characteristics and livelihoods will make cities livable and increase the quality of life for its urban people.

2.9 Conceptual Framework

Urban areas are essential in many aspects because cities are usually a hub of major activities, e.g. education, medicine, economy and facilities. Because of this, cities attract the population to live in them. As the population increases, business units also increase to meet public needs, resulting in higher employment. However, urban growth does not lead only to convenience, it also leads to a lot of problems that urban people must confront, especially regarding quality of life, housing, travel, pollution,

etc. Due to various problems, Khon Kaen City has realized that internal traffic is becoming a problem and may hinder future urban growth. Public transit systems must therefore be developed to upgrade the quality of life of the people and serve upcoming economic development.

In general, urban development, particularly large-scale infrastructure, e.g. electric trains, roads, public parks, are regarded as the State's duty because these projects require a huge budget, as well as modern technology and innovation. People are in the position to request and wait for the budget and the projects handed out according to the State's decision. Although people and local administrative organizations are aware of these problems, they do not have the potential for solving them, as a very high budget is required. At the same time, the government has a diversity of missions covering the entire country. In addition, as the government may have other more important development approaches, the government is not capable of satisfying public requirements thoroughly and simultaneously in all areas (Sharma & Bindal, 2014), especially with the budget needed for large-scale infrastructure construction at the same time.

However, the resources needed to tackle or develop cities are not only concentrated in the hands of the government, they are also distributed in society in the private sector, in forms such as budget, cooperation and knowledge. Thus, cooperation is needed to jointly use such resources (Stone, 1993), particularly, the use of such resources for the benefit of urban people. In addition, the private sector and people, as well as local administrative organizations in Khon Kaen Province, are aware of government restrictions, so they had an idea to develop cities without relying on the government's budget. As a result, urban development projects are being driven by the private sector together with local administrative organizations and the people sector without waiting for a State budget. However, the construction budget will be arranged by itself. so the government has to allow the private sector to carry out these projects and let local State agencies cooperate.

The private sector, in collaboration with local administrative organizations in Khon Kaen City, have initiated a concept of urban development because they realized the government's limitations and Khon Kaen's potential, in the government's perspective, is that Khon Kaen City is not among top target cities that the government

wants to spend a budget for large-scale public utility development. Thus, this research stresses the study of public-private partnerships in urban development. A private partnership will help cities construct their infrastructure and provide more cost-effective services (Ke et al., 2010) which are more economical than the total public responsibility. In addition, public services will be more efficient and effective. Currently, different models of the public-private partnership have been adopted by many countries (Klijn & Teisman, 2003) for constructing infrastructure and providing services, both in developing and developed countries (Sanni, 2016).

Such cooperation can hardly take place without social capital, which is regarded as a common cost incurred by cooperation or assistance between individuals and groups in society (Putnam 1995, as cited in Siripan Nogsuan Sawasdee, 2014). Khon Kaen City's development was initiated by a small group of people. Later, this concept expanded to other groups and finally became a cooperation network. Such cooperation will not happen without mutual trust. However, such partnerships are not seen merely in cooperation for urban development projects, such projects will also become social enterprises in the future that emphasize income generation and social goals (Ebrahim, Battilana, & Mair, 2014; Doherty, Haugh, & Lyon, 2014). It can be stated that the Khon Kaen City Development Project is not aimed at making only profits, it may generate benefits to the people in Khon Kaen, too.

Social capital may contribute to sustainable and continuous public-private partnerships or to a private partnership alone, leading to progress of the Khon Kaen City Development Project. This project may require actors in public and private agencies, who are the core representatives, to seek channels or methods to push the project forward and maybe find the solution when the project faces some problems or threats, which could stop or delay its operation.

In Thailand, the public-private partnership is an infrastructure development model leading to urban development, and it is being adopted in many cities. However, to attract private partnerships in urban development, especially for infrastructure that requires a lot of budget and modern technology that the public sector may not possess, this can help the public sector to more efficiently and effectively provide services to the people. However, such cooperation must take into account many factors, such as which partnership models applied, benefit sharing, risk management as to which party

will be responsible for what risks, benefits arising and to which party, as well as how the public and private sectors with different organizational goals can adapt their goals accordingly.

With respect to different concepts of urban development, the issues that cannot be overlooked include those influencing city administrations, e.g. the central government, local government or even people living in the city who are certainly involved in urban development. Any group playing a big or small role depends on which direction the government's management concept lies. In other words, urban development will follow the government's development direction with an emphasis on locality or people. Thus, both the top-down approach and the bottom-up approach are used to analyze which direction urban development would focus on. If the central government allows decentralization to manage its local projects and supports local administrative organizations, projects carried out by localities can continue their operation. On the contrary, if the government does not cooperate with them, the operation of projects initiated by local administrative organizations may be difficult.

In addition to government decentralization, local administrative organizations and the private sector have to stress good governance for project management. Such partnerships and project management must be explicitly transparent with both information and operational methods so that they can be audited by external personnel from the people and the central government. This can build trust in the partnership and management of the project.

All concepts and theories will be used to explain and analyze the phenomena of the public-private partnership in the operation of Khon Kaen City Development Project, where light rail construction will be pushed for. This will become a large-scale public service project in Khon Kaen City without using the government's budget. This is presented in diagram form to connect all the concepts and theories, as well as to present the following conceptual framework:

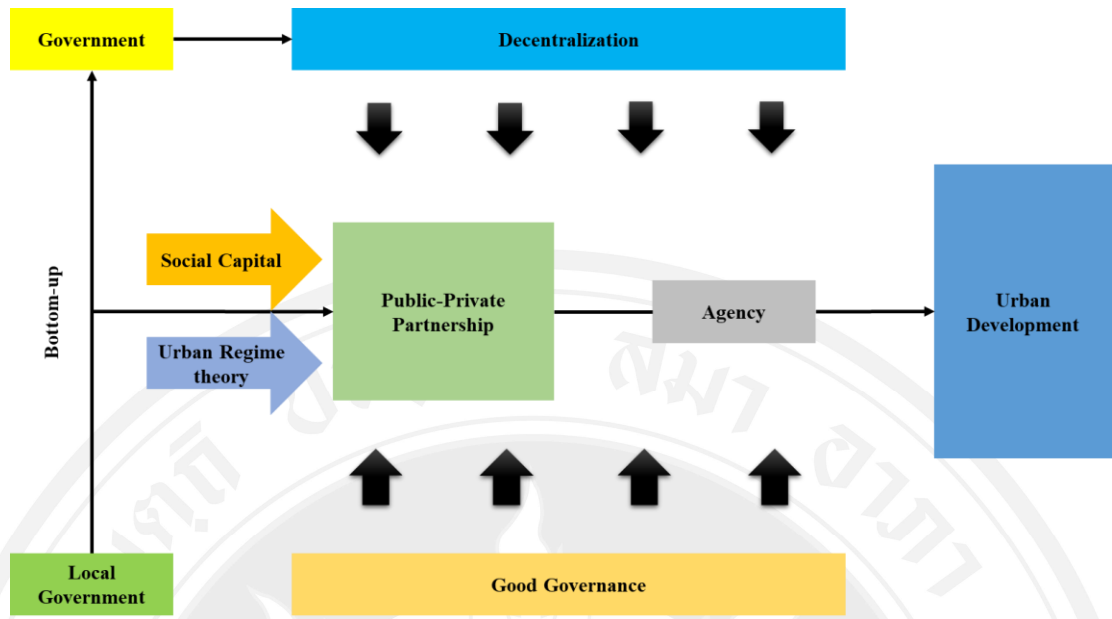


Figure 2.1 Conceptual Framework

CHAPTER 3

RESEARCH METHODOLOGY

The research titled “A Study of Public and Private Partnership in Urban Development as a Smart City: A Case Study of Light Rail Transit Construction Project in Khon Kaen” focuses on the roles of the public and private sectors in the partnership of urban development with the concept of a “Civil State” as proposed by the government. Normally, this project of urban development must be operated by the public sector – be it the government or the local administration. With a number of limitations, however, such as budget, personnel, technology and knowledge on innovation, the public sector cannot efficiently solve all the problems of the city. The private sectors, therefore, being aware of the problems the city is facing, has to participate in procedures to resolve by offering assistance to the construction of large-scale basic infrastructure and certain aspects of the city renovation. Although the private sector does not expect its total budget to come from the public sectors, the former needs the consent from the latter so that they can participate in organizing these projects and solving the problems of the city.

The urban development project was initiated by the private sectors who collaborated with local administrations in the City of Khon Kaen. It was considered a new phenomenon and taken as a role model of urban development in contemporary world. Currently, this large scale of investment needs significant amount of its budget to come from the government. However, a fixed date of when that budget will be granted has not been indicated. Nevertheless, the City of Khon Kaen has the ideas it needs for urban development without having to wait for the budget from the government. Khon Kaen is not the provinces targeted by the government to plan for a development scheme. The private sector and local administrations as well as the people in Khon Kaen, therefore, have joined together in looking for a strategy of urban development without having to rely on the government for its budget. Their planned Light Rail Transit (LRT) is hoped to elevate the condition of the public

transport services in the city. It is also part of the larger development plan to transform Khon Kaen into a Smart City.

This research aims to explain the partnership between the public and private sectors, focusing on the roles of these two organizations. For this project of urban development, it analyzes the characteristics of the partnership and investment by the public and private sectors, and the interest distribution. This chapter will discuss the methodology in detail.

3.1 Scope of the Research

This research analyzes the partnership between public and private sectors in the realm urbanization, focusing on development, the roles of the public and private sectors, the characteristics and the success of the investment between the two actors. The city of Khon Kaen, which has gained in urban characteristics with a big leap of economic development, has been selected as a case study. It has to face many problems similar to what other cities are experiencing.

Nowadays, the partnership between public and private sectors in urban development, according to the development policy of the government, catches the attention of many provinces with similar plans. The City of Khon Kaen is one of the very first cities that employ the concept of urban development, focusing on the basic infrastructure of public transport. This research aims at examining the development of such partnership in Khon Kaen, the roles of both public and private sectors that result from that partnership, its characteristics, its problems and its obstacles. It is hoped that policy recommendations for urban development will be provided to benefit other provinces that are following in the footsteps of Khon Kaen. This thesis will therefore examine the project of Light Rail Transit (LRT).

The main reason why the City of Khon Kaen was chosen is because it has taken a big leap in economic development and its economic growth ranks as first in the northeastern region. However, it also has to face with the problems that result from the continuous urbanization. It is therefore urgent that solutions to these city problems are found, especially those of traffic, as it is getting more serious and could obstruct the development of the city in the future. This is because Khon Kaen is a medical hub,

economic center and part of the East-West Economic Corridor. It is not only because good public transport will help solve the traffic problems, it will also facilitate the people and business units in the area.

3.2 Methodology

This research is qualitative and it includes the techniques of data collection, analysis, interpretation and presentation in a narrative form. An inductive technique is used in the examination (Teddlie & Tashakkori, 2009), as it is more likely that in-depth information to explain phenomena will be acquired with this technique (Patton, 2015), rather than the techniques of predicting, describing or looking for causal relations (Merriam & Tisdell, 2015). The qualitative research, hence, focuses on analysis and interpretation that explains phenomena.

Patton (2015) said there are three methods of data collection, according to qualitative research:

- 1) In interpersonal interviews, open-end questions are employed so that the researchers are informed of the ways of thinking, world-views, feelings and experience of the interviewees.
- 2) Fieldwork observation helps the researcher explain human behavior, such as their interactions and other different kinds of behavior.
- 3) Documentation provides recorded information.

This research has chosen the qualitative methodology and employed all the three methods aforementioned, because it aims at examining different aspects of details in the partnership between the public and private sectors in the chosen urban development project. The qualitative methodology employed in the research includes:

- 1) In-depth interviews are the key for data acquisition. This research employs the information of related persons both from the public and private sector.
- 2) Non-participant observation is employed when the researcher observes the activities related to the urban development project.
- 3) Document analysis is employed to examine the documents from related organizations and mass media in the form of news reports. This explains the details of data acquisition. However, the data acquisition helps acquire in-depth, well-

rounded and various aspects of information. This thesis examines the partnership of the public and private sectors in the urban development project of Khon Kaen, which is one of the first cities that has initiated this kind of plan.

3.2.1 Target Groups

There are five target groups in this research.

- 1) Local administrations in the urban areas related to the urban development project
- 2) Private sectors who participate in the urban development project
- 3) Governors in the province related to the project
- 4) Provincial sectors
- 5) Academia

3.2.2 Data Collection Methods

In data collection, it is hoped that the information is sufficient. Therefore, three methods are employed; in-depth interviews, non-participant observation and document analysis.

1) In-depth interviews are employed when the executives of the local administration and those related to the urban development project collaborating with the private sectors (mayor, related deputies, municipal clerks), governor and initiators of the partnership project, along with the private sectors in the province, are interviewed. The snowball method will be used to get access to the key informants.

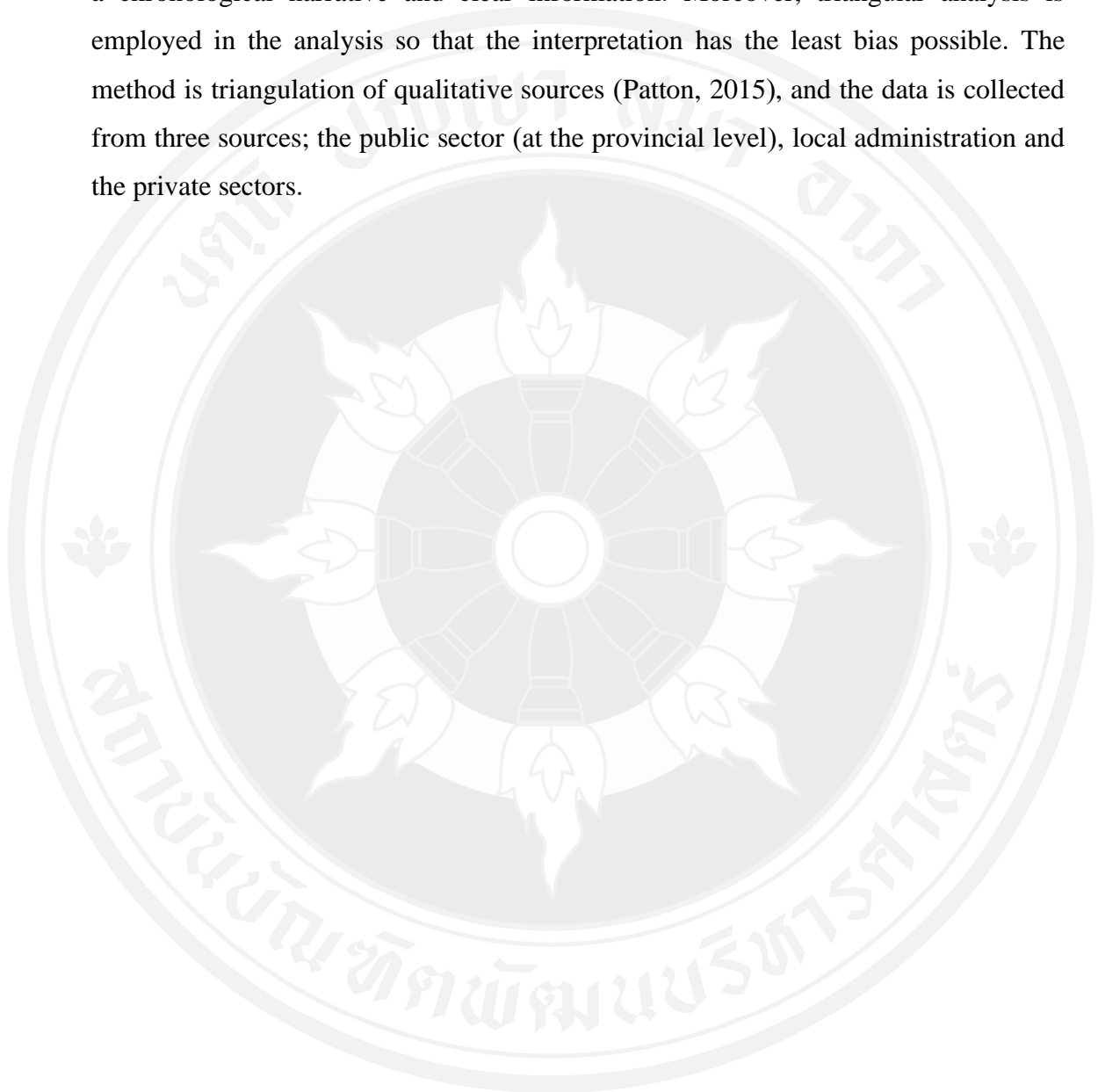
2) Non-participant observation is employed to observe the partnership between the public and private sectors in that city.

3) Document analysis is the examination of research, related articles, interview reports of different people in the partnership of public and private sectors, regulations and related documents from both the public and private sector.

In-depth interview, as part of data collection, is a tool that helps achieve information in this research. Participants were from related sectors; six participants from local administrations, four from private sectors, four from public sectors, one from mass media and one from the academic domain.

3.3 Data Analysis

This research is qualitative. The in-depth interviews, and document will be explained and the phenomena analyzed. The interviews will be transcribed to provide a chronological narrative and clear information. Moreover, triangular analysis is employed in the analysis so that the interpretation has the least bias possible. The method is triangulation of qualitative sources (Patton, 2015), and the data is collected from three sources; the public sector (at the provincial level), local administration and the private sectors.



CHAPTER 4

KHON KAEN CITY CONTEXT AND KHON KAEN CITY DEVELOPMENT

This study explores urban development based on the government policy which promotes the development in each urban area in terms of the infrastructure, public utility, and environment. Such development is also consistent with the National Strategic Plan and the National Economic and Social Development Plan. In this regard, Khon Kaen is a province which realizes the significance of the city development in order to improve current conditions of its urban area and ensure preparedness for future growth in a proper manner.

This chapter presents the overview of Khon Kaen Province and Khon Kaen city. This includes an explanation of urban development by related sectors, the background and characteristics of this study's urban development project, and cooperation between the public and private sectors in regards to urban development. This overview of Khon Kaen Province and Khon Kaen city will help build an understanding of Khon Kaen city's problems, causing several sectors in Khon Kaen city, especially the private sector, which includes local business operators and civil society, to be enthusiastic in planning the development of Khon Kaen city without being dependent on budget allocation from the government. This said, development of Khon Kaen city cannot totally deny the government's support, because Khon Kaen is governed by government in the same way as other provinces. Even though it has tried not to rely on a government budget for planning its urban development, it needs to be under the supervision or endorsement of the central government, regional authority, and local authority. Therefore, the government sector, including the central government, regional authority, and local authority, is unavoidably involved in its urban development. This study will reveal the roles of the public and private sectors in developing Khon Kaen city.

The first part of this chapter explains general information about Khon Kaen Province in order to demonstrate the context of the province, comprising the area size, size of the populations, administrative divisions of the regional authority and local authority, as well as economic data, all of which shows rapid growth of Khon Kaen Province. Thus, it requires a systematic development plan and cooperation from several sectors in an intensive and continuous manner.

4.1 General Information about Khon Kaen Province

Khon Kaen Province is located in the central part of the Northeast region, approximately 445 kilometers from Bangkok. It occupies an area of 10,885.99 square kilometers or approximately 6.8 million Rais of land, with a total population of (as of 2019) 1,802,872 (National Bureau of Statistics, 2020). As for the administrative areas, it includes 26 districts, 198 subdistricts, 2,331 villages, and 389 communities. With regard to local administrative authorities, they include 1 provincial administrative organization, 1 city municipality, 6 town municipalities, 78 subdistrict municipalities, and 139 subdistrict administrative organizations. In addition, Khon Kaen Province has a total of 33 regional public agencies, and 227 central public agencies and state enterprises (Khon Kaen Province, 2017). The current Khon Kaen Governor is Mr. Somsak Jangtrakul.



Figure 4.1 Khon Kaen Province

Source: Khon Kaen Governor's Office, 2017.

The territories of Khon Kaen Province are adjacent to several provinces in the Northeast. This is regarded as one of the more outstanding provinces in the central part of the Northeast, as it serves as a junction for the North, the upper Northeast, and the lower Northeast. Details are as described below.

The northern part is adjacent to Udon Thani, Loei, and Nong Bua Lamphu Provinces.

The southern part is adjacent to Nakhon Ratchasima, and Buriram Provinces.

The eastern part is adjacent to Kalasin and Maha Sarakham Provinces.

The western part is adjacent to Chaiyaphum and Phetchabun Provinces.

As for the overview of Khon Kaen Province, there were a total population in the third highest population in the Northeast, after Nakhon Ratchasima and Ubon Ratchathani Provinces, respectively. The population density (in 2016) was 165.51 persons per square kilometer (National Statistical Office, 2019), having the fifth

highest density, after Maha Sarakham Province (182.08 persons per square kilometer), Nong Khai Province (171.93 persons per square kilometer), Surin Province (171.78 persons per square kilometer), and Sisaket Province (166.33 persons per square kilometer), respectively. Nevertheless, GDP of Khon Kaen Province in 2015 ranked first among provinces in the Northeast, amounting to 211,192 million baht (Office of the National Economic and Social Development Council, 2020), and ranked 17th in the country, of which non-agricultural income amounted to 166.649 million baht, and agricultural income amounted to 20,622 million baht. Moreover, Per Capita GDP of Khon Kaen Province in 2015 ranked first among provinces in the Northeast, and ranked 30th in the country, amounting to 107,607 baht (Khon Kaen Province, 2017, p. 4).

Due to the rapid growth of Khon Kaen Province, it came up with an idea of Khon Kaen development based on 5 key strategies, as follows: 1) Promotion of economic development with the aim of increasing competitiveness and reaping opportunities from countries in Greater Mekong Subregion; 2) Development of people and social quality; 3) Management of natural resources and environment for sustainable development; 4) Reinforcement of stability and life & property security; and 5) Enhancement and development of capabilities in serving as a Smart city and as a Meeting, Incentive Travel, Convention, Exhibitions: MICE City. (Khon Kaen Province, 2017) Nonetheless, the idea of urban development did not recently emerge, it had been urged over a long period. However, past ideas might not be so obvious, compared to those at present.

In the past, the regional development idea of encouraging Khon Kaen Province to become a growth pole was part of the rural development idea proposed by the government, especially the industrial development plan in rural areas in the Northeast (Committee for Development of the Northeast; Louis Berger, Biwater, Inc., as cited in Glassman & Sneddon, 2003). Moreover, Khon Kaen was designated as the center of the Northeast since the governing period of Field Marshal Sarit Thanarat, so a large number of public authorities have been established (“Khon Kaen Smart City Project (1st Phase): Construction of LRT,” 2018). Thus, Khon Kaen Province has been overseen and included in the development plan of the government since 1960s. It has been considered an appropriate area for industrial development in order to help

prevent the migration of people from rural areas in the Northeast to Bangkok, and encourage them to remain in Khon Kaen Province (Glassman & Sneddon, 2003).

At present, Khon Kaen does not only have more industrial development than other nearby provinces, it is also a part of “Greater Mekong Subregion Economic Corridors” which is a project for building economic cooperation within Greater Mekong Subregion: GMS comprising 6 member countries, namely, Thailand, Myanmar, Laos, Cambodia, Vietnam, and China (Yunnan Province). The objective of this cooperation is to raise competitiveness and global economic opportunities through promoting economic growth in several aspects, including trade, investment, and service, aiming to stimulate employment, improve livelihood of populations, and promote mutual technological and educational cooperation, as well as sharing natural resources efficiently (Pat Niyomsilp, n.d.).

There are 3 areas involving in economic development within Greater Mekong Subregion Economic Corridors, as follows: 1) East-West Economic Corridor: EWEC; 2) North-South Economic Corridor: NSEC; and 3) Southern Economic Corridor: SEC (Office of the National Economic and Social Development Council, 2011). The area relevant to Khon Kaen is 1) East-West Economic Corridor: EWEC (R9), which provides connects between Myanmar – Thailand – Laos – Vietnam, with a total distance of about 1,450 kilometers, and connects some cities within each country as follows: Myanmar: Mawlamyine-Myawaddy, Thailand: Mae Sot-Phitsanulok-Khon Kaen-Kalasin-Mukdahan, Laos: Savannakhet, and Vietnam: Dong Ha-Da Nang. The objective is to establish a network of markets in GMS countries to act as a business development center, facilitate transportation, reduce cost, and shorten transportation periods (Pat Niyomsilp, n.d.).



Figure 4.2 GMS East-West Economic Corridor

Source: Termdham Sittilert, 2015.

Apart from being a part of the Greater Mekong Subregion Economic Corridors, Khon Kaen is also the selected location for construction of a “Dry Port”. Regarding this matter, KKTT (Khonkaen Think Tank) proposed an area in Muang Wan Subdistrict, Nam Phong District, to be the location of the Dry Port to serve as an Inland Container Depot: ICD, with plans to be implemented in the form of a public-private partnership project or PPP. The construction of the Dry Port in Khon Kaen was proposed because Khon Kaen is a province adjacent to Udon Thani and Nong Khai Province, making it convenient to travel to Laos, and further to Vietnam and China (Esanbiz Community News, 2018).

Although the Dry Port project is not located in Mueang Khon Kaen District, it is in the district adjacent to Mueang Khon Kaen District (in the northern part). Therefore, it is unavoidable to face economic growth and urban extension in line with the area’s development for economic purposes. This might intensify existing problems in Khon Kaen city. Moreover, to serve as an economic hub, it needs to have convenient and extensive mass transit systems for transportation.

From the aforementioned data, it was found that Khon Kaen has economic potential, rapid growth, with a high degree of urbanization in the same way as other high-growth provinces. In addition, it is also involved in the Greater Mekong

Subregion and other large projects, so it is unavoidable to experience future urban growth. However, Khon Kaen is encountering several problems similarly to other growing provinces, including traffic congestion, waste management, overcrowding, and other problems, all of which are rather intense in Khon Kaen city, as hereinafter described.

4.2 Khon Kaen City Context

Khon Kaen city is in the Northeast and was founded in 1788 during the reign of King Rama I who kindly and graciously granted the founding of Khon Kaen city at Ban Bueng Bon which was under the supervision of Mueang Nakhon Ratchasima. Nine years later, in 1797, King Rama I kindly and graciously granted the official founding of Mueang Khon Kaen which was under the direct supervision of Bangkok (Khon Kaen Province, 2017, p. 1) Thus, Khon Kaen is regarded as one of cities with a long history.

In terms of the administration, the administrative areas of Mueang Khon Kaen District include 18 subdistricts and 267 villages, with a total of 19 local administrative organizations (including Khon Kaen City Municipality). It is adjacent to nearby administrative areas as follows: (Department of Community Development, 2019).

The northern part is adjacent to Ubolratana District and Nam Phong District.

The eastern part is adjacent to Sum Sung District, Chiang Yuen District, and Kosum Phisai District (Maha Sarakham Province).

The southern part is adjacent to Kosum Phisai District (Maha Sarakham Province), Ban Haet District, and Phra Yuen District.

The western part is adjacent to Ban Fang District.

The administrative areas of Khon Kaen city consist of 15 subdistricts and 4 town municipalities, while the urban areas are governed by 4 local administrative organizations in the form of municipalities as follows: 1) Khon Kaen City Municipality covers the whole Nai Mueang Subdistrict; 2) Ban Thum Town Municipality covers the whole Ban Thum Subdistrict; 3) Sila Town Municipality covers the whole Sila Subdistrict; and 4) Tha Phra Subdistrict Municipality covers a portion of Tha Phra Subdistrict. Moreover, there are rural areas which are locally

governed by another 15 municipalities and subdistrict administrative organizations (Department of Community Development, 2019).

Considering the overview of Khon Kaen city, it is simply an ordinary city of a province of Northeast Thailand, with an unavailability of politicians who can import large and high value projects into Khon Kaen city, as well as having no attractive tourist destinations (Pattiya Poapongsakorn, 2017). Nevertheless, Khon Kaen is regarded as a large city in the heart of the Northeast which can be linked to other regions and neighboring countries, thus, this area is interesting. As a consequence, there are a large number of business units, university, and large department stores in Khon Kaen city, as well as a dense populations because it is the administrative center of the region, and the center of transportation, education, medicine, industry, and the economy for the province (Department of Community Development, 2019). Meanwhile, Khon Kaen was designated as a center for medicine and international conference (Pisut Anutaraangkul, personal communication, February 13, 2019). Therefore, Khon Kaen city must be prepared for future growth.

The growth of Khon Kaen has been substantial as the city has expanded greatly within the last few years (Sakkarin Saepoo, 2014; Teekayuphan, 2014). Sakkarin Saepu, a professor of the Faculty of Architecture, Urban Design and Creative Arts, Maha Sarakham University, explained that the growth of Khon Kaen and its urban development originated with a government policy, particularly, during the governing period of Field Marshal Sarit Thanarat. The government complex was built in 1954, and Khon Kaen University was established in 1968. In addition, Khon Kaen city currently has a variety of mass transit systems, ranging from buses, trains, and airplanes. Moreover, roads toward Khon Kaen city are designed to facilitate motorists with wide traffic lanes. Also, it has a university that's popular among students. Thus, people from both nearby and remote provinces have been attracted to Khon Kaen city. In addition, Khon Kaen is currently designated as a host city for conference, deemed a MICE City by the Thailand Convention & Exhibition Bureau, or TCEP, as well as serving as a distribution center (Kemchart Somjaiwong, personal communication, September 16, 2019). Therefore, Mr. Teerasak Teekayuphan (2014), Mayor of Khon Kaen City Municipality, proposed that Khon Kaen is being threatened by civilization, and encountering several problems in the same way as other large

cities, including rising traffic congestion, waste management problem, flooding, environmental pollution, as well as migrant workers and labor migration issue. These are significant problems encountered by Khon Kaen, and it is necessary to find out how to solve or alleviate them.

Considering the size of Khon Kaen city, it covers rather large area. However, there have not been land ownership laws, so unlimited lands can be occupied. Most landlords are wealthy people in Khon Kaen city, or local capitalists (Sakkarin Saepoo, 2014), who operate various kinds of businesses, whether it be property or non-property businesses. In other words, lands in Khon Kaen city is mostly owned by wealthy and privileged group of people who have the potential to accumulate and develop land because land prices in Khon Kaen have been continuously increased, making it so that underprivileged people hardly have an opportunity to occupy lands.

The context of Khon Kaen city indicated substantial growth and civilization, leading to rapid expansion of the city, resulting in ongoing issues of crowdedness, traffic congestion, and insufficient public utilities and infrastructure (C12, 2019). Thus, various sectors have been worried about upcoming problems in Khon Kaen, possibly making the city experience uncontrollable growth which could intensify the problems. Therefore, Khon Kaen city development project has been initiated.

The concept of Khon Kaen city development does not include the government or local public authorities taking a major role in urban development, the same as in past development, but instead involve several sectors, including the public, private, civil society, and people sectors, so that urban development becomes a public matter that every person can express their opinions on and push forward with the matter. Nevertheless, it is necessary to admit that a major role in driving Khon Kaen city development should belong to the private, public, and civil society sectors, especially the private sector which possesses more resources than the public and civil society sectors. Nonetheless, if all sectors are able to utilize their existing resources to jointly drive the urban development project to the best of their capability, it is likely that Khon Kaen city development will continue to be implemented.

4.3 The Transformation of Khon Kaen City into a Smart City with Light Rail Transit (LRT) Project

Khon Kaen city has achieved growth rather quickly despite having no natural tourist attractions, nor being an industrial center, but Khon Kaen city is a center of transportation, education, and public health for the Central Northeast, with many large business units. Also, it is a center for distributing goods to other nearby provinces.

The concept of Khon Kaen city development was proposed under the project “Khon Kaen Smart City” in association with 1) The Twelfth National Economic and Social Development Plan – Strategy 8: The development of science, technology, and innovation, and Strategy 9: The development of regions, cities, and economic corridors; 2) The strategy for the Northeast development, Item 6.1: The transformation of the city into a center of trade, investment, healthcare services, and education; 3) The provincial strategy – Strategy 5: The promotion and development of Smart City and MICE City capability; and 4) The government policy regarding Thailand 4.0 (Khon Kaen Province, 2017, p. 151) (Khon Kaen Provincial Development Plan, 2018-2021). In this regard, the development of mass transit systems is one of the projects for transforming Khon Kaen city into a Smart City in order to deal with traffic-related issues.

At present, Khon Kaen city is encountering several urban problems. One of the problems catching the interest of various sectors, namely, the private, local, and civil society sectors, is the traffic problem even though one governor of local organization viewed that actual problem of Khon Kaen city is not the traffic problem, but rather the waste management problem (Representative of a local administrative organization, personal communication, November 21, 2018). According to the statistics in 2017, the volume of waste in Khon Kaen Province reached 710,300 tons, having it the fourth highest volume of waste in the country, next after Chonburi, Nakhon Ratchasima, and Samut Prakan Province (Khon Kaen Statistical Office, 2019). However, the traffic problem gained more interest, possibly because it is a quite noticeable and frequent problem. Khon Kaen people and other visitors can readily perceive and experience this problem. Moreover, the traffic problem link to

the business units in Khon Kaen city, as inconvenient transport might affect business units in the city.

The traffic problem in Khon Kaen Province is considered a major problem, an increase in number of vehicles have intensified the traffic problem. Currently, there are 848,452 registered vehicles in Khon Kaen Province (the data as of May 31, 2019), making it the second highest number in the Northeast, after Nakhon Ratchasima Province (1,329,623 vehicles), and ranking the fifth highest number in the country, after Bangkok (10,305,969 vehicles), Chonburi Province (1,544,448 vehicles), Chiang Mai Province (1,455,848 vehicles), and Nakhon Ratchasima Province (1,329,623 vehicles), respectively (Department of Land Transport, 2019), representing 10.26% of the Northeast total, and 2.18% of the country. This increase in the number of vehicles has come from several factors in respect of economics, society, or even the government's first-time car buyer scheme, which might contribute to rising numbers of vehicles not only in Khon Kaen Province (The first representative of a local administrative organization, personal communication, November 20, 2018). As a result, the solution to traffic congestion with a mass transit systems arranged through the LRT construction has been initiated.

An attempt to solve the traffic problem in Khon Kaen city has been under way for a certain period of time. In a study on the establishment of new mass transit systems, such as Bus Rapid Transit: BRT¹. The results of that study revealed that such a mass transit system was likely to suffer losses because, as long as people prefer driving personal vehicles rather than using public transport, the newly introduced mass transit system would not gain popularity. Therefore, to make the BRT project come true, an attempt to reduce the use of personal vehicles needs to be made. This should be done by implementing a zoning system with high charges for parking spaces, especially during rush hour. This might motivate people who don't want to pay for parking to turn to public transport. In addition, parking charges can also generate income for localities (Sakkarin Saepoo, 2014).

¹ The study of Pongrid Klungboonkrong et al. titled "The Bus Rapid Transit (BRT) prototype system in a regional city for the sustainable traffic safety: The Khon Kaen case study".

Nevertheless, the establishment of such a mass transit system requires too high budget to be allocated by local government. However, it is rather difficult to receive any budget from the central government because Khon Kaen is not a city targeted for development, like other large cities, so it is unlikely to receive sufficient budget for the establishment of the large-scale mass transit system (The first representative of private sector, personal communication, November 24, 2018). Therefore, the said project was proposed to be carried out

...based on the framework of the private sector only, such as the joint venture, not being administered by the public sector, so it came up with the idea of establishing a company for city development serving as a parent company which utilizes financial funding to develop transport infrastructure... (Sakkarin Saepoo, 2014).

4.3.1 Background of Khon Kaen City Development

Khon Kaen city development is under the national development framework involving 20-Year National Strategy providing opportunities and social equality, having “a key target which places the emphasis on engaging several sectors, namely, the private sector, civil society, and local community in moving forward with development, while encouraging people to jointly think and take action for common interest, as well as implementing decentralization” (Office of the National Economic and Social Development Council, n.d., p. 10). is in order to utilize specific capability and geosocial networking in localities and leverage strengths to serve as a key manufacturer and service provider at the regional and provincial level. Furthermore, a larger urban populations would provide opportunities to spread prosperity to all areas and increase incomes throughout the populations by creating a pleasant city equipped with the capability to accommodate trade and investment, as well as switching excessive development in Bangkok and the Central region to regional areas”. This is the Strategy 9: The development of regions, cities, and economic corridors based on an urban development guideline, such as developing the environment in a key city of the province to become a pleasant city, to promote environmental management of the city in an integrated manner under the cooperation

of the central government, local government, civil society, and private sector, and developing the mass transit systems in urban areas” (The National Economic and Social Development Board, n.d., p. 16). The emphasis on development is based on Thailand 4.0 which aims to create a pleasant city equipped with modern public utilities and infrastructure, leading to transformation into a “Smart City”.

The transformation of Khon Kaen city into a Smart City has been put on the national agenda for urgent execution. In this regard, Prime Minister nominated Thailand’s National Smart City Committee to be chaired by Air Chief Marshal Prachin Juntong, Deputy Prime Minister, on October 15, 2017. Then, the Committee assigned the Secretary to Thailand’s National Smart City Committee, comprising the Ministry of Transport, Ministry of Energy, and Ministry of Digital Economy and Society, to formulate the master plan for development of Thailand’s Smart City to become the strategic plan for future development of the Smart City, while ensuring that the development would be implemented in accordance with problems and requirements, and applying digital technology appropriately within each area context. Smart City is defined as “a city which utilizes modern and smart technology and innovation to enhance efficiency in providing services and urban management, reduce cost, and save resources, with the emphasis on the participation of the business and people sectors in urban development, based on the concept of developing a pleasant and modern city for sustainable well-being of people in the city” ([Draft] Thailand’s smart city master plan, 2018, p. 3).

(Draft) Thailand’s Smart City Master Plan ([Draft] Thailand’s smart city master plan, 2018, pp. 3-4) provides a framework for Smart City development according to 6 universal principles, as follows:

- 1) Smart Economy – To focus on enhancing efficiency and flexibility in business operations, building business connection and collaboration, and applying innovation for development in order to achieve business transformation, while encouraging the target city to become one of the business centers on the basis of innovation, such as Smart Manufacturing, Smart Agriculture and Farming, Smart Tourism, and so on.

2) Smart Mobility – To focus on increasing accessibility to mass transit systems, ensuring safe and convenient transportation, enhancing efficiency in logistics system management, and sharing and using vehicles for saving energy.

3) Smart Energy & Environment – To focus on enhancing efficiency in energy use in the city or using alternative energy, referred to as clean energy, enhancing efficiency and effectiveness in waste management and environmental monitoring, as well as urging people to participate in preserving natural resources.

4) Smart Governance – To focus on developing service systems so as to enable people with access to public services (such as via a Smart portal), increasing people’s participation channels, as well as allowing people to access to information so as to ensure transparency and accountability.

5) Smart People – To focus on developing city administrators or local leaders who can apply digital technology for urban development, creating knowledgeable citizens who can apply technology, creating an environment that promotes creativity and non-conventional learning, as well as promoting social diversity.

6) Smart Living – To focus on providing service systems to facilitate good living, such as health services provided for people’s well-being, enhancing people’s security by keeping surveillance on crimes, as well as supporting facilities for proper living.

Development based on these 6 universal principles comes under a vision statement: “To develop a pleasant and modern city for sustainable well-being of the people in the city”, and the 5-year urban development target that is divided into 3 phases, as follows: Phase 1: 2018-2019 – Smart City in 7 provinces and 10 areas; Phase 2: 2019-2020 – Smart City in 8 provinces and 15 areas; and Phase 3: 2020-2022 – Smart City in 30 provinces/areas ([Draft] Thailand’s smart city master plan, 2018, p. 6). In this regard, Khon Kaen Province is 1 out of 7 provinces eligible for development during the first phase.

The concept of Khon Kaen city development has been initiated and put into practice for several years by NGOs, the people sector, private sector, and local administrative organizations which collective make an effort to plan how to develop Khon Kaen city in a proper way so as to accommodate growth in the city. The goal is

to transform Khon Kaen city into a Smart City, starting with Smart Mobility development, because mass transit systems of Khon Kaen Province are currently comprised only of vans, minibuses, and buses, which have not been able to fulfill the requirements, compared to an estimated number of public transport customers in Khon Kaen city of up to 194,000 persons (per trip per day), and it is likely to keep increasing continuously ("Khon Kaen model: Collaboration in developing the first LRT of the region," 2016) (Khon Kaen Model: Collaboration in developing the first LRT of the region, 2016). This kind of development provides a concrete outcome (The third representative of the private sector, personal communication, May 31, 2019).

Khon Kaen city development was originated in 2008 when a seminar titled "Look back the past, seeing the present, and the expectation on Khon Kaen over the next decade," was held through coordination by Esanbizweek newspaper (renamed as Esanbiz), aiming to formulate Khon Kaen development strategic plan that focused on the participation of all sectors. In the seminar, there was a "Panjamit Group"² consortium, comprising Khon Kaen City Municipality, Khon Kaen Provincial Administrative Organization, the Lawyers Council, Khon Kaen Chamber of Commerce, and the Federation of Khon Kaen Industries. Moreover, the collaboration has extended to the Northeastern NGO Coordinating Committee for Development, Khon Kaen University, Community Organization Council, Regional Environment Office 10, Bank of Thailand's Northeastern Region Office, Northeastern Economic and Social Development Center, Farmers Council, Village Fund Office, Farmers Rehabilitation and Development Fund, and so on, in order to create a consortium for planning how to develop Khon Kaen Province ("Khon Kaen for the Next Decade," 2019). This seminar was held based on the viewpoint of past development that it was a top-down approach which was implemented by the central government, but people were not involve in planning the development of their localities. "As a result, the development could not actually respond to local problems and people's requirements" (Representative of local media, personal communication, December 18, 2018).

² Panjamit Group has been formed to be prepared for the incoming international retail business operators or large retail companies.

Following a discussion with 1,000 participants, key issues from the brainstorming session were concluded as follows: 1) Khon Kaen well-being in the future; 2) Climate change; 3) Trade & investment, service, and tourism; 4) Future education; 5) Garbage and waste water; 6) Green city and mass transit systems; 7) Economics for happiness; 8) Future industry; 9) Khon Kaen: ICT City; 10) Fighting over water resources; and 11) Future energy ("Khon Kaen for the Next Decade," 2019). Afterward, there was a workshop which invited persons related to each issue to have mutual discussions and exchange opinions, while the issue of mass transit systems was one of the interesting issues to be further executed and start the development on (The representative of local media, personal communication, December 18, 2018).

The representative of the local media further informed the researcher that Khon Kaen development was driven by an assembly mechanism, with an emphasis on consultation and respect toward other opinions. The assembly was comprised of 3 components: academicians, the people sector, and public sector. There were academicians, NGOs, business operators, community leaders, the media, and villagers participating in continuous discussion about city development. Thereafter, local administrative organizations, including Khon Kaen Provincial Administrative Organization, and Khon Kaen Municipality, were invited to join the discussion, and the concept of Smart City was initiated in the end. The most interested issue was the solution to the traffic problem, and Smart Mobility was also 1 out of 6 aspects for transformation of the city into a Smart City.

Previously, there had been an idea of establishing a mass transit system in the form of Bus Rapid Transit (BRT). Back to 2006-2007, the Khon Kaen Provincial Administrative Organization and Khon Kaen Municipality used their own budget to have Khon Kaen University explore the master plan of mass transit systems in urban areas (The first representative of private sector, personal communication, November 24, 2018; The sixth representative of local government, personal communication, September 26, 2019) in order to solve the traffic problem in Khon Kaen. This issue was proposed over the past 10 years, but as the construction required a budget in the amount of billions of baht, and the central government had no sufficient budget, the issue had to be ceased. Afterward, business operators jointly discussed the issue with

the group of Khon Kaen for the Future, the concept of Khon Kaen city development started receiving attention, and the idea of establishing a mass transit system became an interested issue once again. This issue was seriously pushed forward after Khon Kaen Think Tank was established by local business operators in Khon Kaen city (The third representative of local media, personal communication, December 18, 2018).

The proposal for Bus Rapid Transit (BRT) construction under the cooperation of Khon Kaen Think Tank and Khon Kaen Municipality was proposed to Deputy Prime Minister and Minister of Transport, Air Chief Marshal Prachin Juntong, and further proposed to Prime Minister Prayut Chan-ocha, who signed to endorse the project under the name of the National Council for Peace and Order (NCPO), allowing for such mass transit system in any capable province. However, the project faced a legal problem, as the fundraising was not permitted, especially on the stock market, which allows fundraising in case of railway transport system, so the rubber-tired BRT could not do fundraising (The sixth representative of local administrative organizations, personal communication, September 26, 2019).

Thereafter, the public sector, represented by the Office of Transport and Traffic Policy and Planning (OTP), Ministry of Transport, and the private sector repeatedly conducted a study on the establishment of mass transit systems for solving the traffic problem in Khon Kaen city. The study concluded that it required using Light Rail Transit, or LRT, which is aligned in a north-south direction between Tha Phra Subdistrict Municipality and Samran Subdistrict Municipality (The representative of local media, personal communication, December 18, 2018). In addition, more than 82% of Khon Kaen citizens wanted to solve the traffic problem by using LRT ("Khon Kaen model: Collaboration in developing the first LRT of the region," 2016).

Therefore, the Light Rail Transit, or LRT project, was initiated under the cooperation of the private sector, civil society, and local administrative organization being regarded as the public sector. Details of the project will be explained in another part. The next part will present related sectors involving in pushing forward Khon Kaen city development, starting with the LRT project.

4.3.2 Khon Kaen City Development Concept

Collaboration on this project between the public and private sectors for Khon Kaen city development was initiated because budget allocation had only been made in the capital city of Bangkok. As a consequence, other provinces hardly ever have had the opportunity to receive budget for funding their development. Thus, Khon Kaen Province, represented by Khon Kaen City Development (KKTT) Co., Ltd., decided that if the province was kept waiting for a budget coming only from the government, Khon Kaen city development would not be able to catch up with future growth because the city had already achieved such a leap in growth. Without any development, sustainable growth might be deferred. Therefore, it was necessary to seek other sources of budget, leading to fundraising from local people in the province in order to develop needed infrastructure in Khon Kaen city, mainly for the sake of Khon Kaen (Khon Kaen City Development, 2018).

The original concept of the city development driven by local people came from their viewpoints that it is undeniable for the government to comply with regulations when dealing with several problems at any place. Those regulations might be one of factors causing the government to be unable to immediately or accurately the problems or fulfill the requirements of the people (The first representative of the private sector, personal communication, November 24, 2018). This is because the government has some limitations in respect to budget, complicated regulations causing delayed processes, or even the prioritization of the development targets.

Several sectors in Khon Kaen city considered that Khon Kaen Province might not be one of primary provinces which would receive budget from the government for development or the establishment of large projects, and the government determined that the private sector and local administrative organizations should be capable of raising funds for large projects, such as the LRT, on their own without relying on the government budget (The second representative of a local administrative organization, personal communication, 2018; The first representative of the private sector, personal communication; The third representative of a local administrative organization, personal, 2018), so the government under the National Council for Peace and Order (NCPO), allowed Khon Kaen Province to carry out the city development project on their own with the view that Khon Kaen Province was ready to implement the said

project (The first representative of the private sector, personal communication, November 24, 2018). If this project is successful, Khon Kaen city would gain more benefits than just solving their traffic problem, it would also support business movement and urban transportation (Patriya Poapongsakorn, 2017).

4.3.3 Driving Khon Kaen City Development

Khon Kaen city development has been driven forward because of cooperation between the public and private sector, starting with the private sector realizing that Khon Kaen city should be systematically developed. Thus, the civil society arranged a brainstorming session to provide a guideline on Khon Kaen city development. Then, the private sector was invited to join the discussion, as well as local administrative organizations, especially Khon Kaen Municipality, which had the same idea for the city's development. As a result, both parties (the public and private sector) started to cooperate in materializing the concept of Khon Kaen city development.

In the beginning of this collaboration in city development, it could be assumed that it was due to coordination between executives from the private sector, academicians from the (The first representative of a local administrative organization, personal communication, November 20, 2018), local administrative organizations from the public sector, and the people, which had jointly studied the feasibility of this project seriously, who all helped push forward the issue until it had drawn attention of people in Khon Kaen city and other provinces.

The city development has continuously been driven through these meetings between the public and private sectors to push forward the LRT Project implemented by the local government and private sector (Khon Kaen city). The Project is one part of transforming Khon Kaen city into a Smart City. Such meetings have been attended by representatives of related local administrative organizations from the public sector (5 municipalities), regional authority, and private sector.

After General Prayut Chan-ocha, Prime Minister and Head of the National Council for Peace and Order (NCPO), signed the order to approve the mass transit system project in Khon Kaen Province with the construction of a 26km light rail transit system in the first phase, which will be aligned in a north-south direction, a meeting was held on November 8, 2016. The meeting was comprised of the following

attendants: Mr. Chaitawat Niemsiri, Deputy Khon Kaen Governor, Mr. Teerasak Teekayuphan, Mayor of Khon Kaen Municipality, Mr. Tawatchai Ruenromsiri, Deputy Mayor of Khon Kaen Municipality, Mr. Tawatchai Wanapitakkul, Director-General of Civil Division of the Khon Kaen Municipality, and related agencies, including the 23rd Military Circle, the Regional Treasury Office, Khon Kaen, Provincial Land Transport Office of Khon Kaen, Khon Kaen Highway District 1, the Khon Kaen Rice Research Center, Khon Kaen Office of Rural Roads, and so on. After the meeting, there were 5 sub-committees nominated by Khon Kaen Governor to manage specific activities as follows: 1st Committee: Use of lands, land compensation, and TOD; 2nd Committee: Establishment of limited companies; 3rd Committee: Request for use of areas along the construction route; 4th Committee: Preparation of supporting units; and 5th Committee: Conducting surveys, studies, and design (“Khon Kaen Moves Forward LRT by Setting 5 additional Committees,” 2016).

After Khon Kaen Transit System Co., Ltd. (KKTS) was founded, and the Committee had carried out the project for a certain period of time, the Committee, which consisted of Mr. Teerasak Teekayuphan, Mayor of Khon Kaen Municipality, Mr. Ruangrawee Chantanam, Director of Legal Affairs, Regulations, and Complaints Subdivision, Khon Kaen Provincial Office for Local Administration, Mr. Tawatchai Wanapitakkul, Director-General of Civil Division of the Khon Kaen Municipality, Maj. Gen. Chatchai Praditphong, Chief Executive Officer of KKTS, Dr. Suradech Taweesaengsakulthai, Associate Dean of the College of Local Administration, Mr. Dhana Yantrakovit, Deputy Chief of the Department of Local Administration, and Dr. Somsak Jangtrakul, Khon Kaen Governor, met with General Anupong Paochinda, Minister of Interior, on February 22, 2018 to report on the progress of the project. Three significant issues, consisting of the following: 1) Matters of law, authority, and the project’s implementation process for ensuring clear and speedy implementation by related agencies; 2) Discussion about the proposal to Ministry of Interior to request him being the project owner, while asking to get the design output from the Office of Transport and Traffic Policy and Planning (OTP), Ministry of Transport, for implementing the project of the North-South LRT line (Samran-Tha Phra), and requesting for approval to nominate officers based on the authority of Ministry of

Interior regarding the railway's operation according to the Declaration of the Revolutionary Council No. 58 dated January 26, 1972; and 3) Request for use of land at the Khon Kaen Rice Research Center for the purpose of TOD (Transit Oriented Development) (Khon Kaen Province, 2018).

After the operating results were reported to Minister of Interior, a Committee meeting chaired by Dr. Somsak Jangtrakul, Khon Kaen Governor, was held on March 22, 2018 to ask for approval to have local administrative organizations (5 Municipalities), represented by Khon Kaen Transit System Co., Ltd. (KKTS), take charge of the project and ask for permission to use the results of the study on the project represented by the Khon Kaen Smart City Project (Phase 1): Construction of a mass transit systems for the North-South LRT line as a prototype in a regional city, Khon Kaen Province, as well as developing the city structure, and establishing infrastructure funds by means of private sector investment ("The first meeting of 2018 of construction LRT committee," 2018) Next, the project was declared as an agenda at provincial level in the committee meeting for supporting the implementation of the prototype North-South LRT line in a regional city, Khon Kaen Province no. 2/2018, dated July 5, 2018, chaired by Mr. Somsak Jangtrakul, Khon Kaen Governor. In addition, the meeting also resolved to request for the use of the master plan of the project, the EIA report from the Office of Transport and Traffic Policy and Planning (OTP), request for the use of lands from Rice Department, to implement the Railway System Laboratory and Full-Size Prototype Project, and request for the use of highway areas (traffic island) ("LRT will be proposed to the prime minister in december 2018," 2018).

Later, on October 18, 2018, the committee meeting for supporting the implementation of the prototype North-South LRT line in a regional city, Khon Kaen Province no. 3/2018, chaired by Mr. Somsak Jangtrakul, Khon Kaen Governor, was held with attendants from representatives of the related public agencies. In this meeting, Mr. Teerasak Teekayuphan, Mayor of Khon Kaen Municipality, reported that on October 17, 2018, the Commission for the Management of Land Traffic (CMLT) meeting, chaired by Mr. Somkid Jatusripitak, Chairman of CMLT, together with Minister of Interior (General Anupong Paochinda) and Minister of Transport (Mr. Arkom Termittayapaisith), resolved to endorse the design output of the mass

transit systems in Khon Kaen Province and the environmental impact according to the study of Khon Kaen University as required by the Office of Transport and Traffic Policy and Planning (OTP) This allowed Khon Kaen Province to develop and manage the project as specified in the Khon Kaen mass transit systems development plan ("Khonkaen municipality accepted resolution to conduct LRT," 2018) so as to be a role model for other provinces and a model of self-management province (Koratdaily.com, n.d.).

In summary, the request for approval of the LRT construction in Khon Kaen Province started when the Project Committee met with General Prayut Chan-ocha, Prime Minister and Head of the National Council for Peace and Order (NCPO) at that time, in order to ask for approval in principle of the 26km light rail transit system in the first phase, which will be aligned in a north-south direction. The project was approved by Head of the National Council for Peace and Order (NCPO) without consideration by the cabinet. Afterward, to make the project legitimate and suitable, it has to be endorsed by the Commission for the Management of Land Traffic (CMLT), which is responsible for transport systems, including railway transport system. However, before submitting the project to the Commission for the Management of Land Traffic (CMLT) for consideration, the project has to be delivered to the Office of Transport and Traffic Policy and Planning (OTP) in order for them to conduct a study on the LRT construction in Khon Kaen Province. Then, the results of the study were further submitted to the Commission for the Management of Land Traffic (CMLT) for consideration. CMLT considered and approved the LRT construction project in Khon Kaen Province. Therefore, the said project was deemed to be correctly endorsed by the government sector. This is summarized in Figure 4.3 as shown below.

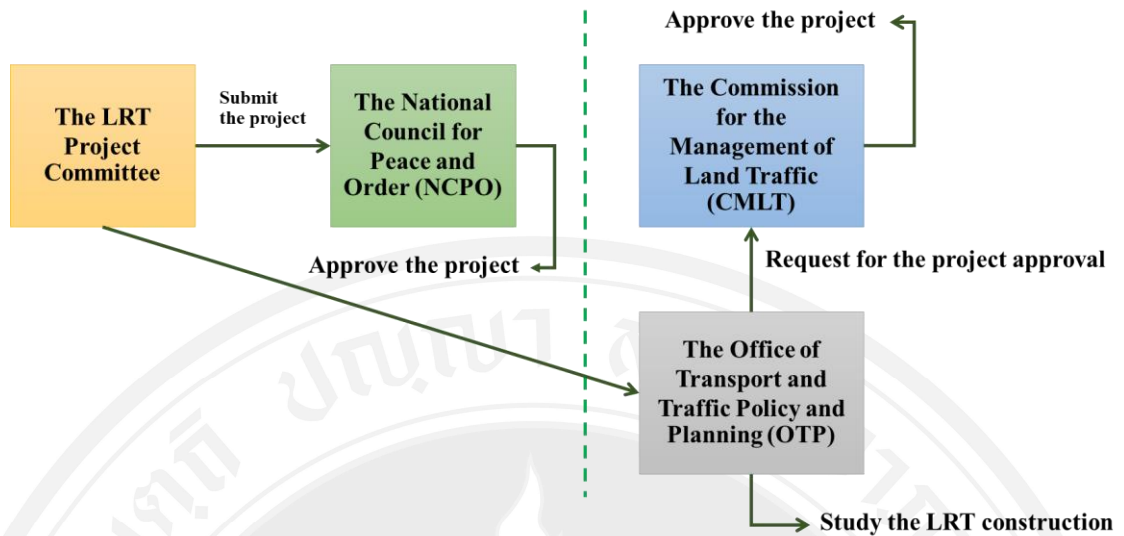


Figure 4.3 Diagram Displaying the Request for Approval of LRT Construction in Khon Kaen Province

The LRT construction project, driven by the localities in Khon Kaen city, was pursued continuously until gaining approval to implement the said project on their own. The project has been undertaken with the cooperation of the regional authority, as evidenced by the fact that the Khon Kaen Governor or Deputy Governor would act as a chairman of the committee meetings. Moreover, while the project is being carried out, there have been periodical meetings with government officials, whether it be the Prime Minister or Minister of Interior, in order to follow up their opinions and approvals from the central government.

In addition, there are regional authorities involved in the project, some of whom have been directly involved as follows: Regional Treasury Office, Khon Kaen; Khon Kaen Provincial Land Office, Khon Kaen Provincial Land Transport Office, Office of Highways 7 (Khon Kaen); Khon Kaen Highway District 1; Khon Kaen Rice Research Center, Regional Environment Office 10, and Office of Natural Resources and Environment. These authorities inevitably have to get involved in the project because it is essential for the LRT project to use public property, such as areas belonging to government agencies, and main public highways in the Northeast. Thus, the LRT project is associated with public tasks regarding the request for the use of highway No. 2, a request to exchange areas with other public agencies located at

maintenance center locations, or the environmental assessment, and so on. In this regard, the Project Committee has had to discuss and coordinate with these authorities so that the project could continue properly.

Apart from having public authorities get involved in the LRT construction project, there is another group of people who would possibly be affected by the new alternative railway transport system in Khon Kaen city, namely, the group of minibus operators which used to be a main mass transit system in Khon Kaen city. If Khon Kaen city has established the LRT, there might be an impact on the volume of minibus users. As a result, minibus operators would become those who are directly affected by the project (Kamonpong Sanguantrakul, 2018).

Regarding this issue, the LRT Construction Project Committee had discussed building an understanding with the minibus operators, who initially tended to be opposed to the mass transit system because they were afraid of an impact on their income. The group of minibus operators submitted 2 proposals to Khon Kaen City Municipality as follows: The first proposal was to have Khon Kaen City Municipality purchase all minibuses (700-800 minibuses) and enter into concession contracts to take over the business; the second proposal was to prohibit the construction of mass transit systems in Khon Kaen city. Initially, the discussion was made with minibus operators that if people could be persuaded to use public transport instead of private cars, it would be likely that they would increasingly use minibuses (The sixth representative of a local administrative organization, personal communication, September 26, 2019) because if the LRT starts actual operation, minibuses would be involved in picking up passengers from an LRT station and sending them to a destination out of reach of the LRT. In other words, minibuses would provide a feeder service for the LRT passengers (The second representative of the private sector, personal communication, May 21, 2019).

To carry out the LRT construction project, there are mainly 2 related sectors, as follows: The public sector which includes 5 Municipalities led by Khon Kaen City Municipality, Sila Town Municipality, Mueang Kao Subdistrict Municipality, Samran Subdistrict Municipality, and Tha Phra Subdistrict Municipality. All of 5 Municipalities have jointly established Khon Kaen Transit System Co., Ltd. (KKTS) to take charge of managing the LRT project instead of the 5 Municipalities for more

flexibility. Another equally important sector is the private sector, which has contributed to initiating, supporting, and driving the project until gaining widespread interest. Details of the public and private sector are hereinafter described.

4.4 The Involvement of the Public and Private Sector in Khon Kaen City Development

There are several sectors involving in implementing the Khon Kaen city development project. A main group which helps drive Khon Kaen city development project in a concrete manner is a new generation of business operators who inherited their businesses from their parents, with cooperation from both private and public sector (including regional and local authorities), as well as the educational sector, which is Khon Kaen University. Several sectors cooperatively pushed forward with the Khon Kaen city development project until the LRT Project was initiated. The LRT Project is a public transport development with not reliance on a government budget for implementing the project, but it does receive other support from the government sector (the government and 5 local administrative organizations govern areas within the LRT Project) which has helped make the Project come true. This part provides details about both private and public sector involved in this Khon Kaen city development project.

With regards to city development driven by the private sector and 5 local administrative organizations in the public sector, these sectors have implemented Khon Kaen city development by means of establishing a company. Business operators in the private sector cooperatively established a company named “Khon Kaen City Development (KKT) Co., Ltd.” The private sector invited 5 local administrative organizations located in areas within the city development project (the LRT Project) to participate in Khon Kaen city development project. In order to enable local administrative organizations to co-manage the project with flexibility, all of 5 local administrative organizations joined in establishing a company named “Khon Kaen Transit System Co., Ltd. (KKT).”

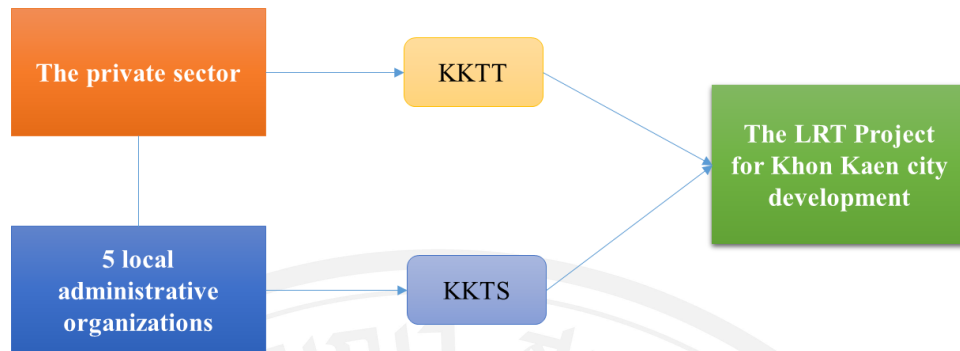


Figure 4.4 Key Drivers of the LRT Project

Both companies cooperatively initiated the project of 26km of the North-South LRT line, which is the first phase of this Khon Kaen city development project. Details of each company in relation to the establishment and executives who took part in corporate management are described below.

4.4.1 The Private Sector

In the private sector, new generation business operators who inherited businesses from their parents realized potential problems from future growth of Khon Kaen city. Thus, they would like to prepare the infrastructure to accommodate the growth of the city, starting from establishing mass transit systems in the form of the LRT.

As for the private sector, there are 15 business operators in Khon Kaen Province who are co-founders of Khon Kaen City Development (KKTT) Co., Ltd., and 7 consultants. The name list is as shown below ("Opening 15 Leaders of KKTT," 2015).

Co-founders of Khon Kaen City Development (KKTT) Co., Ltd. include the following:

- 1) Mr. Suradech Taweesaengsakulthai, Chief Executive Officer of Cho Thavee PLC. – A spare part seller and a dealer of HINO trucks.
- 2) Mr. Chokechai Khunwasi, Chief Executive Officer of Toyota Kaennakorn Co., Ltd.
- 3) Mr. Bordin Sereeyothin, Executive Director of Khon Kaen Fishing Net Co., Ltd.

4) Mr. Channarong Buristrakul, Managing Director of Isaan Piman Group Co., Ltd. – A large real estate business operator in Khon Kaen Province and in the Northeast.

5) Mr. Thana Sirithanachai, Managing Director of Siri Karn Group 90 Co., Ltd. – Being a housing estate business operator and providing finance services for automobiles, markets, and apartments in Bangkok.

6) Mr. Prasit Wongnijasila – Pharmacy business.

7) Mr. Chanvit Tangtanawat – Housing estate business and real estate business.

8) Mr. Kamolpong Sanguantrakul – A dealer of Toyota Khon Kaen.

9) Mr. Chaisiri Leesirikul – Rice mill business.

10) Mr. Pharon Thiraphanu – SP gas station business.

11) Mr. Kungwan Laovirojjanakul - Bualuang restaurant owner.

12) Mr. Mana Kansaksiri – Construction material business.

13) Mr. Siriwat Taveesangkulthai – Romtravi Khonkaen Corporation Limited, a dealer of HINO trucks in Khon Kaen.

14) Mr. Ekapong Angsriprasert, a financial specialist.

15) Mr. Chainarong Patthanapiradej - Fairy Plaza (Shopping Mall).

Consultants:

1) Mrs. Wadsana Taveesangkulthai

2) Associate Professor Rawee Hanpachern, PhD.

3) Mr. Phiyabutr Promlakano

4) Mr. Kemchart Somjaiwong

5) Mr. Samart Angwarawong

6) Mr. Surapol Taveesangkulthai

7) Mr. Sming Yimsiri

The co-founders of Khon Kaen City Development (KKT) Co., Ltd. consist of business operators in construction, production of goods for export, real estate, automobile dealer, rice mill, and other businesses as summarized in the table below.

Table 4.1 Type of Business of Co-founders of Khon Kaen City Development (KKTT)

Co., Ltd.

No.	Type of Business	Number (persons)
1	Real estate (land for rent, housing estate)	3
2	Automobile production	1
3	Production of goods for export	1
4	Automobile dealer	3
5	Rice mill	1
6	Gas station	1
7	Commerce (restaurant, shopping mall, pharmacy)	3
8	Construction material	1
9	Others (financial specialist)	1

Because those business operators operate large businesses in Khon Kaen, they were able to invite 20 large companies to engage in the partnership, each of whom contributed to fundraising with an amount of 10 million baht, totaling 200 million baht. In addition, another 8 economic organizations were invited, including Bank of Thailand – Khon Kaen Branch, Federation of Khon Kaen Industries, Khon Kaen Chamber of Commerce, Federation of Khon Kaen Tourism Industries, Khon Kaen Bank Club, Faculty of Management Sciences Khon Kaen University, Association for Promotion of Thai Small and Medium Entrepreneurs – Khon Kaen, and MBA Alumni Association – Khon Kaen University, to join in the partnership.

In addition, there are another 24 Chinese organizations in Khon Kaen Province, namely, Huakhiew Wittayalai School and Rathuthid School Alumni Association - Khon Kaen, Huakhiew Wittayalai School Council – Khon Kaen, Teo Aun Association Of Thailand – Khon Kaen, Chin Tia Hia Khon Kaen Association, Chinese Music of Khon Kaen, Khon Kaen Hakka Association, Pueng Thao Kong Ma Association – Khon Kaen, Kek Yang Association – Khon Kaen, Pho Leng Association – Khon Kaen, Hainanese People Club – Khon Kaen, Khon Kaen

Chamber of Commerce, Chit Kuson Khon Kaen Foundation, Library Association of Chinese culture – Khon Kaen, Kwong Siew People Association – Khon Kaen, Sawang Khon Kaen Samakki Uthit Rescue Foundation, Federation of Khon Kaen Industries, Ding Clansmen Association – Khon Kaen, Tungtrakul Association - Khon Kaen, Kow Clansmen Association – Khon Kaen, Khon Kaen Dragon & Liondance Athletic Association, Ung Clansmen Association – Khon Kaen, Jung Clansmen Association – Khon Kaen, and Lee Clansmen Association, engaging in a partnership for Khon Kaen city development. These Chinese organizations were comprised of wealthy men, millionaires, and landlords in Khon Kaen who had a similar role of executive consultants to co-founders of Khon Kaen City Development (KKTT) Co., Ltd. (The second representative of the private sector, personal communication, May 21, 2019). In addition, the progress of the project had been continuously reported to these 24 Chinese organizations. The structure of the cooperation is shown below.

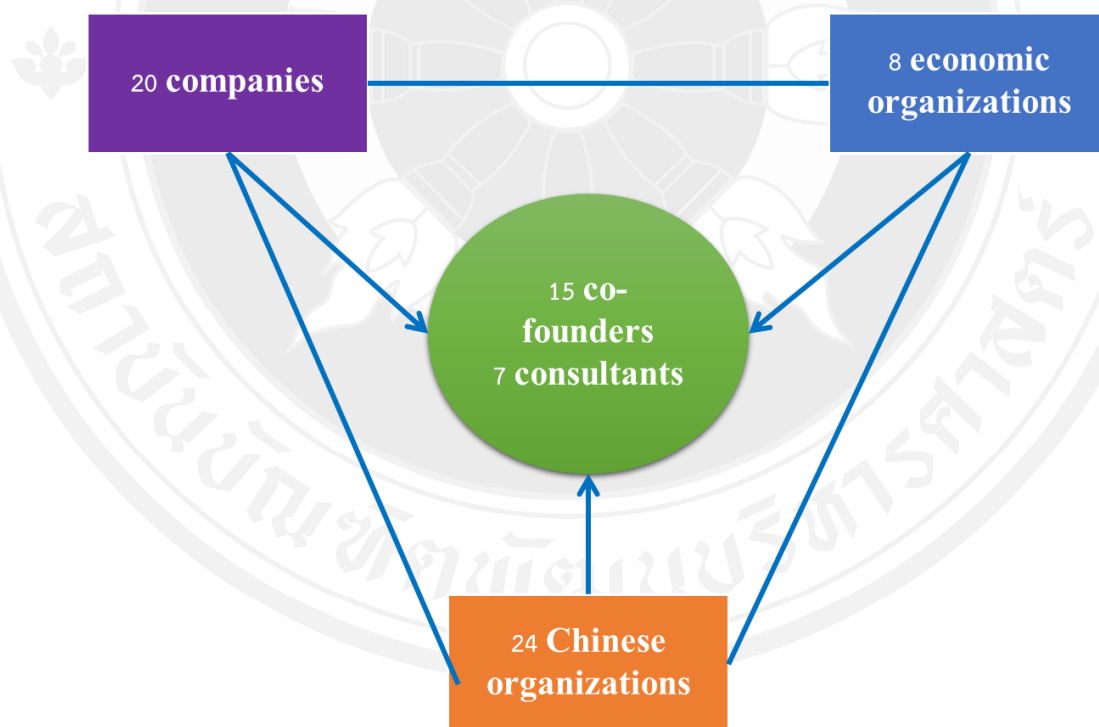


Figure 4.5 The Structure of the Private Sector Cooperation

Forming a Think Tank group to provide a guideline for Khon Kaen city development, these business operators established Khon Kaen City Development (KKTT) Co., Ltd. This could be regarded as a gathering of leading business entities in Khon Kaen Province, aiming to develop the infrastructure of Khon Kaen Province, with design and city development being correctly carried out, and ensuring proper growth of Khon Kaen city, which deserves to be a hub of ASEAN region and a future city based on the viewpoint: “Khon Kaen is a major city of the region with a high growth potential. If our province was left growing without any suitable plan, it might look like a decayed area in the future. Furthermore, how could we do to develop our province or plan to prepare for prospective growth?” (Khon Kaen City Development, 2018).

Khon Kaen City Development, or KKTT determines their role as that of an organization for “accumulating knowledge and expertise, coordinating, pushing forward, and providing financial support” (The fourth representative of the private sector, personal communication, September 3, 2019), with the aim of making an investment, starting from the LRT Project and development of areas along the LRT line, which is called Transit Oriented Development or commercial area development led by public transport. KKTT was registered as a limited company on January 9, 2015, with a registered capital of 200 million baht. The first project of KKTT would be the LRT Project (Khon Kaen City Development, 2018). The co-founders of Khon Kaen City Development (KKTT) Co., Ltd. did not expect profits from the joint venture (“Opening 15 Leaders of KKTT,” 2015), and had no intention of working for political purpose (The fifth representative of a local administrative organization, personal communication, February 13, 2019). Business operators who engaged in the joint venture would not vote in elections or public hearings in order to disqualify themselves from local and national political competitions in order to assure local and national politicians of their intention not to be political competitors (The first representative of the private sector, personal communication, November 24, 2018). As a result, KKTT gained cooperation and support for the city development project as planned. With regard to the establishment of Khon Kaen City Development (KKTT) Co., Ltd., there were 5 directors as follows: (“Opening 15 Leaders of KKTT,” 2015).

- 1) Mr. Suradech Taweesaengsakulthai, Chief Executive Officer of Cho Thavee PLC.
- 2) Mr. Chokechai Khunwasi, Chief Executive Officer of Toyota Kaennakorn Co., Ltd.
- 3) Mr. Channarong Buristrakul, Managing Director of Isaan Piman Group Co., Ltd.
- 4) Mr. Thana Sirithanachai, Managing Director of Siri Karn Group 90 Co., Ltd.
- 5) Mr. Bordin Sereeyothin, a business successor of Khon Kaen Fishing Net Co., Ltd. – Operating export businesses in several countries.

Khon Kaen City Development (KKTT) Co., Ltd. has played a role as Think Tank to plan and support systematic development of Khon Kaen city, as well as coordinate with officers responsible for implementing the city development projects from the public, private, and civil society sectors. Therefore, new generation business operators who gathered to establish Khon Kaen City Development (KKTT) Co., Ltd. had a significant role because they were regarded as a main mechanism for driving the city development project through its coordination at the local level. They connected between local administrative organizations and the people in Khon Kaen Province, including the public sector and other authorities which stimulated several activities relevant to Khon Kaen city development. For example, by holding meeting to brainstorm ideas with the public sector (local and regional authorities), the private sector, and the people in Khon Kaen city, or meeting between the public sector (local authorities) and the private sector to plan how to drive the city development project and gain recognition from the government.

4.4.2 The Public Sector (Local Administrative Organizations)

As for the public sector involving in the Khon Kaen city development project, the main role in this cooperation belongs to 5 local administrative organizations in Mueang Khon Kaen District, namely, 1 large municipality (city municipality), 1 medium municipality (town municipality), and 3 small municipalities (subdistrict municipality), comprising Khonkaen Municipality, Sila Town Municipality, Mueang Kao Subdistrict Municipality, Tha Phra Subdistrict Municipality, and Samran

Subdistrict Municipality. In this regard, Khon Kaen City Municipality is the local administrative organization which plays the major role because it is the largest local administrative organization, and has continuously participated in driving the city development.

4.4.2.1 Khonkaen Municipality covers an area of approximately 28,750 Rai or 46 square kilometers. It was upgraded from Khonkaen Town Municipality to Khonkaen Municipality, going into effect on September 25, 1995. Khonkaen Municipality is one of municipalities located in the urban area with the largest area, providing a significant role in driving Khon Kaen city development in a concrete manner. There were 240,895 populations in Khon Kaen City Municipality (as of December 2016) (Khonkaen Municipality, 2019). The current Mayor of Khon Kaen City Municipality is Mr. Teerasak Teekayuphan.

4.4.2.2 Sila Town Municipality is located on the right side (on the East) of Mittraphap Road. This Municipality is in the vicinity of Khon Kaen University, around 7 kilometers from Mueang Khon Kaen District, covering an area of 45,312.50 Rai or 72.5 square kilometers. It was upgraded from Sila Subdistrict Administrative Organization to Sila Town Municipality on August 24, 2012. There were 52,272 populations in Sila Town Municipality (as of 2018) ("General Information," 2019). The current Mayor of Sila Town Municipality is Mr. Yodying Chantanapim.

4.4.2.3 Mueang Kao Subdistrict Municipality is located on the left side (the West) of Mittraphap Road. This Municipality is adjacent to Khon Kaen Bus Terminal 3, covering an area of 24,718 Rai or 39.54 square kilometers. It was upgraded from Mueang Kao Subdistrict Administrative Organization to Mueang Kao Subdistrict Municipality on November 23, 2007. There were 29,676 populations in Mueang Kao Subdistrict Municipality ("General Information," 2019). The current Mayor of Mueang Kao Subdistrict Municipality is Mr. Vitit Tongsopit.

4.4.2.4 Tha Phra Subdistrict Municipality is located in the southern part of Khon Kaen city. This is the area at the beginning and the end of the LRT line as planned in the project. The Municipality is around 12 kilometers from Khon Kaen city, covering an area of approximately 5,000 Rai or 8 square kilometers. It was upgraded from Tha Phra Sanitation District to Tha Phra Subdistrict Municipality

according to Municipal Sanitation Change Act, B.E. 2542, taking effect on May 25, 1999. There were 9,099 populations in Tha Phra Subdistrict Municipality (as of 2016) (Tha Phra Subdistrict Municipality, 2019). The current Mayor of Tha Phra Subdistrict Municipality is Mr. Pisut Anutaraangkul.

4.4.2.5 Samran Subdistrict Municipality is located in the northern part of Khon Kaen city, around 13 kilometers from Khon Kaen city. This is the area of the beginning and the end of the LRT line as planned in the project, covering an area of 29,280 Rai or 46.9 square kilometers. It was upgraded from Samran Subdistrict Administrative Organization to Samran Subdistrict Municipality in 2008. There were 9,731 populations in Samran Subdistrict Municipality (as of 2016) ("History and General Information," 2019). The current Mayor of Samran Subdistrict Municipality is Mr. Thepparit Sripanya.

All of these 5 Municipalities were pleased to participate in Khon Kaen city development project mainly because the LRT line would run through their areas, and they would like to take part in solving the traffic problems of Khon Kaen city. In particular, these small local administrative organizations would like their local areas to achieve development and growth so that people and business units would be attracted to suburban areas, causing the localities to earn more income (The third representative of local government, personal communication, December 18, 2018). Also, this would provide an opportunity to develop the economy and suburban areas of Khon Kaen city. Moreover, in the overview, it would better facilitate Khon Kaen people, as well as increasing capabilities of Khon Kaen city to accommodate investors in the future (The fourth representative of a local administrative organization, personal communication, December 18, 2018).

Nevertheless, each municipality might play its role at a different level. The major role would belong to Khonkaen Municipality which initiated the idea of the pursuing city development in association with the private and people. Meanwhile, the other municipalities would play their roles in jointly planning and proposing the development guideline (The second representative of a local administrative organization, personal communication, November 21, 2018), as well as liaising with and building an understanding of local people in the (The fifth representative of a local administrative organization, personal communication, February 13, 2019). In

addition, to ensure flexible working environment among the 5 Municipalities, Khon Kaen Transit System Co., Ltd. or KKTS was established to take charge in management of the LRT Project instead of these 5 Municipalities.

Basically, local administrative organizations are public authorities established based on the decentralization principle, of which their main responsibility is to provide public services under the supervision of the central government. Normally, each local administrative organization would take charge of people or operations only in responsible areas. However, in some cases, a local administrative organization could have some operations to be carried out in cooperation with other local administrative organizations.

The municipality is a large local administrative organization with various tasks. Sometimes there are large-scale tasks required to be implemented in association with other local administrative organizations. According to the Municipal Act, B.E. 2496, a municipality is allowed to perform tasks in association with other local administrative organization in order to manage public utility services. The municipality is obliged to hold shares of not less than 50%. The Chapter 54 entitled “Syndicate” under the Section 58 legislated that 2 or more municipalities are able to jointly perform tasks for utmost benefits in the form of Syndicate, and the Royal Decree was enacted to determine the names, responsibilities, and procedures, as well as eligibility to receive financial support from the government and requests for loans. Thus, 5 Municipalities in Khon Kaen city agreed to participate in Khon Kaen city development project according to Khon Kaen Province and national strategies by being involved in the LRT construction project and being authorized to administer the business in the future. In order to ensure flexible management by 5 Municipalities, a company was established to take charge in management of the said project instead of these 5 Municipalities. This kind of cooperation between 2 or more municipalities has rarely been available in Thailand.

Khon Kaen Transit System Co., Ltd., or KKTS, was founded to take charge of managing the LRT Project for Khon Kaen city development instead of the 5 local administrative organizations, comprising Khonkaen Municipality, Sila Town Municipality, Mueang Kao Subdistrict Municipality, Tha Phra Subdistrict Municipality, and Samran Subdistrict Municipality. Khon Kaen Transit System Co.,

Ltd. was registered as a limited company on March 24, 2017, with a registered capital of 5,000,000 baht. Registered capital for the establishment of the company was funded by a donation of the Khon Kaen Chamber of Commerce for Khonkaen Municipality in the amount of 4,000,000 baht, and a donation from the Federation of Khon Kaen Industries for the other 4 Municipalities in an amount of 250,000 baht for each Municipality, totaling 5,000,000 baht (the sixth representative of a local administrative government, personal communication, September 26, 2019). KKTS gained approval from Minister of Interior to carry out the said project, formulate the policy, and ensure compliance of the KKTS business with the objective of its establishment. KKTS has executives, management structure, operations, corporate governance, vision, mission, and policy described below (Khon Kaen Transit System Co, 2018).

Executives of Khon Kaen Transit System Co., Ltd.

As for the selection of executives of Khon Kaen Transit System Co., Ltd., the executives would be selected by all 5 Municipalities, which are shareholders of the Company (The second representative of the private sector, personal communication, May 21, 2019). The executives of KKTS have a term of 2 years, and they can be re-elected to continue their position (The third representative of the private sector, personal communication, May 31, 2019). Current executives include the following:

1) Mr. Kemchart Somjaiwong, Chairman of the Board of Directors – Former President of Khon Kaen Chamber of Commerce in 2017-2018, former President of Khon Kaen Tourism Association, and Chief Executive Officer of Rachawadee Resort and Hotel.

2) Mr. Panya Kerdsak na Vangnoi, Vice Chairman of the Board of Directors – Consultant to the Federation of Khon Kaen Industries.

3) Maj. Gen. Chatchai Praditphong, Director and Chief Executive Officer – Former Senior Director of Division of Marketing & Public Relations of Bangkok Metro Public Company Limited or BMCL which is the MRT service provider.

4) Mr. Adirek Hongpoonpipat, Director and Executive Director – Former President of Khon Kaen Chamber of Commerce in 2016-2017, and Chairman of the Board of Directors, Sahachai Aluminum Limited Partnership.

5) Mr. Samart Angwarawong, Director and Executive Director – Former President of Khon Kaen Chamber of Commerce in 2014-2015.

Considering the name list of executives of Khon Kaen Transit System Co., Ltd., it was found that almost all of them are business operators in Khon Kaen Province, as well as previously taking up key positions, such as President of the Khon Kaen Chamber of Commerce and President of the Federation of Khon Kaen Industries, including executives of Bangkok Metro Public Company Limited or BMCL, which is the MRT service provider. All executives who are responsible for administering the Company are not associated with local administrative organizations, in order to gain acquaintance and respect from people of Khon Kaen Province and ensure management transparency (The fifth representative of a local administrative organization, personal communication, February 13, 2019).

The management structure, operations, and corporate governance of Khon Kaen Transit System Co., Ltd.

The management structure, operations, and corporate governance of Khon Kaen Transit System Co., Ltd. presents the chain of governance and the chain of command, starting with Ministry of Interior, Khon Kaen Governor, and 5 shareholding Municipalities responsible for overseeing operations of the Company. In terms of the administration, the Company has its management structure in the same way as other companies, while using the chain of command for administration purposes.

The management structure, operations, and corporate governance of Khon Kaen Transit System Co., Ltd.

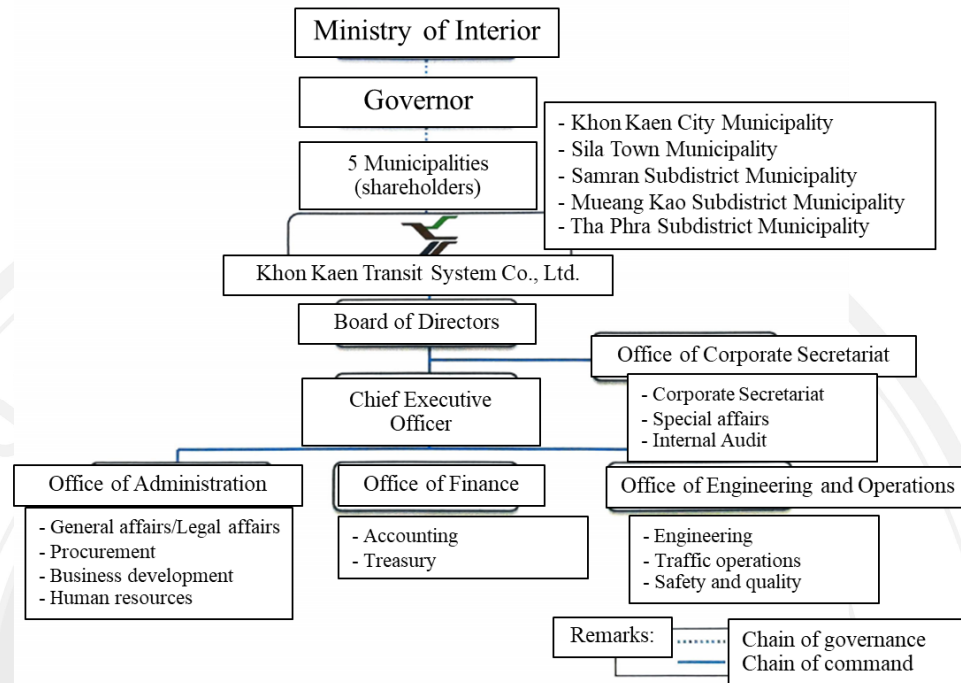


Figure 4.6 The Management Structure, Operations, and Corporate Governance of
Khon Kaen Transit System Co., Ltd.

Vision of Khon Kaen Transit System Co., Ltd.

KKTS is mainly responsible for managing and developing the transport system project, promoting, and enhancing efficiency of the system for international excellence in order to raise the quality of life among people in Khon Kaen Province, as well as being one of the organizations helping drive Khon Kaen Province to become a sustainable Smart City.

Mission of Khon Kaen Transit System Co., Ltd.

- 1) Initiate, implement, and manage the mass transit system project in a regional city, Khon Kaen Province.
- 2) Initiate, implement, and manage the project for development of areas relevant to the transport system to generate commercial income.
- 3) Control and oversee operations of the contractors responsible

for the structure, traffic operations, maintenance, services, and commercial development to comply with the agreement, with strong emphasis on safety, convenience, and punctuality.

Policy of Khon Kaen Transit System Co., Ltd.

1) All of transactions with people, business partners, and employees have to be made with a good governance, integrity, fairness, transparency, and traceability.

2) Expedite the implementation of Khon Kaen Smart City Project (Phase 1): Construction of the North-South LRT Line, and carry out TOD to generate commercial income as assigned so that the construction can be completed and the project opened as planned.

3) Focus on preventing and reducing possible ill effects from operations in order to show corporate, social and environmental responsibility.

4) Implement the communication/public relations, and listen to opinions from all sectors so that people perceive, understand, and support the operations of the Company.

5) Place an emphasis and conducting activities for promotion of related projects continuously in order to stimulate learning and recognition of the target groups which will become clients of the Company.

6) Place the highest emphasis on safety of the structural engineering, traffic operations, maintenance, and services, all of which are the heart of the project, so that the review and development of quality service is achieved continuously and sustainably.

According to the data of Khon Kaen Transit System Co., Ltd. or KKTS, the Company is responsible for managing the Khon Kaen city development project, instead of the 5 Municipalities, with the Municipalities being shareholders of the Company. However, the number of shares held by each Municipality are different, as follows: each of 4 small Municipalities, namely, Tha Phra Subdistrict Municipality, Samran Subdistrict Municipality, Mueang Kao Subdistrict Municipality, and Sila Town Municipality, hold 5% of shares, totaling 20% of total shares, while another 80% of shares are held by Khonkaen Municipality, which is the largest municipality (The

Third Representative of Local Government, 2018; The Third Representative of Private Sector, 2019; The Sixth Representative of Local Government, 2019).

As for the operation of Khon Kaen Transit System Co., Ltd. or KKTS, the Company is operated based on the endorsement of 5 Municipalities which hold joint meetings and report operating results continuously (The second representative of a local administrative organization, personal communication, 2018; The sixth representative of a local administrative organization, personal communication, 2019). In other words, these 5 Municipalities serve as the executive board to drive the Project under the administration of Khon Kaen Transit System Co., Ltd. or KKTS, and oversee operations. The Company will manage operations based on policy formulated by 5 Municipalities. The operating budget is funded by the private sector. Khon Kaen City Development (KKTT) Co., Ltd. will transfer money to Khon Kaen Chamber of Commerce and the Federation of Khon Kaen Industries, and further provide money for Municipalities through donations, as well as specify the purpose of spending money. Then, the Municipalities will give an amount of money to the Company (The fifth representative of a local administrative organization, personal communication, 2019). The reason is that Khon Kaen Transit System Co., Ltd. or KKTS has not currently earned any income because the LRT construction project has not been completed, and the Municipalities do not have enough budgets to allocate to the Company. Moreover, a certain amount of income will come from selling bidding documents (The third representative of the private sector, personal communication, May 31, 2019). However, the income is not sufficient for operating business, so it is likely to rely on the budget from the private sector.

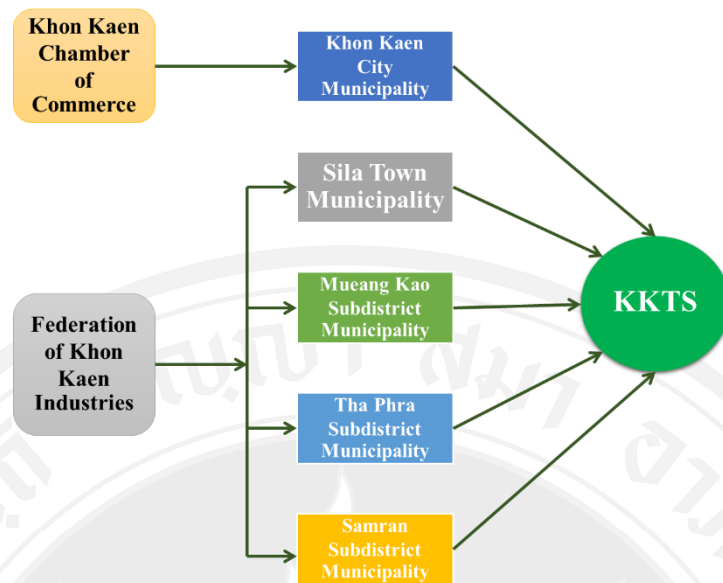


Figure 4.7 The Budget for Khon Kaen Transit System Co., Ltd. or KKTS

Khon Kaen Transit System Co., Ltd. or KKTS is an enterprise of Municipalities (The third representative of the private sector, personal communication, 2019), while having a similar administration to the Krungthep Thanakom Co., Ltd. (The first representative of the private sector, personal communication, November 24, 2018; The fifth representative of a local administrative organization, personal communication, February 13, 2019), of which the shareholders are the Bangkok Metropolitan Administration holding shares valued at 49,994,000 baht, representing 99.98% of the registered capital, and another 0.02% held by the private sector. Due to the shareholding of more than 50% of the Company, all operations of the Company are under the supervision of Bangkok Metropolitan Administration (The Krungthep Thanakom Co., 2019). Meanwhile, the administration of Khon Kaen Transit System Co., Ltd. or KKTS, is originated by 5 Municipalities holding shares of the Company without any shareholding of the private sector. Nevertheless, as mentioned above, these 5 Municipalities have not been allocated their own budget from the said shareholding, but they oversee the operations and share benefits when the project becomes profitable in the future.

The third representative of the private sector explained the role of Khon Kaen Transit System Co., Ltd., stating that the Company is an operator of the LRT project, but not a contractor or concessionaire. The responsibilities of the Company are to

select contractors for the LRT construction, manage traffic operations, and ensure an income generated by the project. In other words, the Company is the representative of the Municipalities. The reason for the establishment of the Company is to have more flexibility at work rather than having the Municipalities implement the project by themselves, because the Municipalities, which are public authorities, are obliged to comply with regulations or laws, possibly causing project delays. Taking the status of the project owner, the 5 Municipalities are responsible for overseeing businesses, formulating policy, and monitoring operations of the Company. The Company and Municipalities will jointly have ordinary meetings of shareholders once a year, while an extraordinary meeting could be held in any urgent case as deemed necessary.

Apart from the 5 local administrative organizations, Khon Kaen University is also engaged in the city development partnership. The University will provide assistance related to academic knowledge and research studies in order to provide supportive academic information for the city development project and promote credibility of the project (The first representative of a local administrative organization, personal communication, 2018).

As the LRT construction project, which is a part of Khon Kaen city development, has been driven by both public and private sector, this project has achieved substantial progress, and the progress of the project has been unique. Although the project has not entered the construction phase, there has been some progress to be further explained in the following part.

4.5 The Light Rail Transit (LRT) Project

The transformation of Khon Kaen into a Smart City is a city development concept which has gained interest from several provinces, and possibly becomes a model for city development in the future. Its transformation into a Smart City requires the city to be modernized in various aspects. Khon Kaen city realized the importance of public transport that can solve traffic problems of Khon Kaen city, reduce the use of private vehicles, and create green spaces, so the LRT Project was proposed for consideration, and became one of primary projects for development of Khon Kaen

city, with the aim of enhancing efficiency in public transport in the regional city, as well as developing the city with public transport as a main mechanism. As such public transport should be able to solve the traffic problems of Khon Kaen city in the long run (The sixth representative of local government, personal communication, September 16, 2019).

The investment model of the LRT Project consists of 3 phases as follows:

Phase 1 – To establish Khon Kaen City Development (KKTT) Co., Ltd., with 20 organizations as founding members and the registered capital of 200 million baht;

Phase 2 – To do crowdfunding to raise funds from natural persons and juristic persons in Khon Kaen city and throughout Thailand; and

Phase 3 – To launch an infrastructure fund. After the first 2 years of the implementation of the project, it will be registered in the stock market (Khon Kaen City Development, 2018).

The construction of the Light Rail Transit, or LRT, is mainly comprised of 3 tasks which require a bidding process managed by Khon Kaen Transit System Co., Ltd. Details of 3 tasks are as described below. ("CHO in collaboration with Chinese investors to bid for the LRT construction under Khon Kaen smart city project," 2017)

1) The design and construction of the civil work and structure work, as well as production and installation of the light rail transit system classified as Tram, and Oriented Transit Development (TOD) or KK1 Task – There were a total of 16 operators making payment for bidding documents (TOR), but there was only 1 private enterprises group submitting a tender, namely, KCRT (Cho Thavee, Ktech Building, and MCC Overseas). The group participated in the bidding of the LRT Project of Khon Kaen Province valued at 15 billion baht. In this regard, Mr. Suradech Taweesaengsakulthai, Chief Executive Officer and President of Cho Thavee PLC. or CHO stated that the Company had entered into the bidding because this project was implemented within Khon Kaen Province, and CHO had been familiar with the project for a long time and acknowledged related details to the extent that banks were interested in offering loans for the investment. Nevertheless, Khon Kaen Transit System Co., Ltd. postponed the schedule of opening the bid and announcing the bid results because the feasibility study needed to be finished prior to consideration of the tender submitted by the private sector.

2) The traffic operations, maintenance, and services for a period of 30 years, or KK2 Task - There were a total of 14 operators making payment for bidding documents (TOR), but there was only 1 group of private enterprises submitting a tender. Similarly to KK1 Task, the schedule of opening the bid and announcing the bid results had to be postponed.

3) The hiring of independent engineering consultants, or KK3 Task – Khon Kaen Transit System Co., Ltd. already announced the results that the first-ranked selection was WCE, and the second-ranked selection (substitution) was APMBW Consortium.

Initially, the Office of Transport and Traffic Policy and Planning in association with the Sustainable Infrastructure Research and Development Center, Faculty of Engineering, Khon Kaen University conducted a study on an estimation of the budget required for the LRT construction and concluded with an amount of 16,864,755,457 baht, excluding the annual maintenance costs and investment in tram cars and systems in each phase valued at billions baht. Details of preliminary expenses of the construction are as described below.

Table 4.2 Preliminary Expenses of the LRT Construction

No	Description	Tal Amount (Baht)
1	General Requirement	135,540,000
2	Earthworks	278,984,000
3	Road and Station access depot Park&ride	1,267,355,100
4	Railway bridge	2,817,330,000
5	Station / depot / Park&ride	2,150,487,500
6	Drainage system	763,725,000
7	Utility (include ee sub station & 2 circuit)	1,137,050,000
8	Railway system	8,279,283,857
9	Provisional sum	35,000,000
Total Amount		16,964,755,457

Source: Khon Kaen University, (n.d.).

It would not be possible to start such investment if the project had some significant problems and obstacles that could not be negotiated to an agreements between the related authorities. The following part will provide the information on the Light Rail Transit (LRT), comprising general information, public fundraising, transit oriented development (TOD), and the current and future situation of the LRT.

4.5.1 General Information of the LRT Project

Light Rail Transit: LRT Project (Phase 1) is a project to transform Khon Kaen city into a Smart City. This project is related to public transport, or Smart Mobility, which has been initiated under the cooperation of both public and private sector. The LRT construction was approved in principle and endorsed by Head of the National Council for Peace and Order (NCPO), including the development of the urban structure and the establishment of an infrastructure fund from investment of the private sector for sustainable development of the infrastructure (Khon Kaen Transit System Co, 2018). Moreover, the areas along the LRT line will be developed properly as planned. The project will request for permission from the government to renovate the areas into a public park with a large pool so as to create green spaces, provide common areas for Khon Kaen people to do activities, and have learning centers, such as a science museum and areas for outdoor activities (Khon Kaen City Development, 2018).

Light Rail Transit: LRT Project (Phase 1) is regarded as a pilot project in a regional city, aiming to provide an alternative mode of travel in daily life for more convenience, and help enhance efficiency by providing public transport services in the regional city, as well as develop a city led by the public transport systems (Transit Oriented Development), while serving as the pilot project of Khon Kaen Province. This is a North-South LRT line between Tha Phra Subdistrict Municipality and Samran Subdistrict Municipality, with a total distance of 26 kilometers, and 21 stations. The LRT will use tram cars produced in Thailand, totaling 15 trains and 3 bogeys in each train, with a passenger capacity of 180 passengers per train (Khon Kaen City Development, 2018). The fares will cost approximately 17-20 baht ("Khon Kaen LRT Prepare for the second phase," n.d.).

The 21 stations of the LRT line include the following: 1) Samran; 2) Ban Nong Kung; 3) Ban Non Muang; 4) Khon Kaen University Demonstration School (Modindang); 5) Provincial Police Training Center Region 4; 6) T-junction at Khon Kaen University's Gate; 7) Food and Service Center 1; 8) T-junction at Khon Kaen University Roundabout; 9) Srinagarind Hospital; 10) Toyota; 11) Thai Samut; 12) Sam Liam Intersection; 13) City Gate Intersection; 14) Khon Kaen Grand Station; 15) Big C Supercenter; 16) Charoen Sri Intersection; 17) Homepro; 18) Tesco Lotus; 19) Khon Kaen Bus Terminal 3; 20) Kud Kwang; and 21) Tha Phra (Khon Kaen City Development, 2018). However, according to a public hearing report from November 14, 2019, a study of the Office of Transport and Traffic Policy and Planning (OTP) revealed that there would be a total of 16 LRT stations in Khon Kaen city, consisting of 6 elevated stations and 10 at-grade stations. Meanwhile, Khon Kaen Transit System Co., Ltd. would like to have 20 stations, consisting of 8 elevated stations and 12 at-grade stations. In this regard, the choice of the North-South LRT line between Samran Subdistrict and Tha Phra Subdistrict came from data analysis of the study on Bus Rapid Transit: BRT, which concluded that this route would be the most popular for passengers, especially from Khon Kaen University, Central Plaza Khon Kaen, to Khon Kaen Bus Terminal 3, as well as being able to connect passengers from Khon Kaen Airport to Khon Kaen University and Central Plaza Khon Kaen (The sixth representative of a local administrative organization, personal communication, February 13, 2019).

The location of most stations would be clustered within Khon Kaen city, while there are only 2 stations located far away from the city, namely, Tha Phra and Samran Station, both of which are the terminal stations at the end of the line located more than 2 kilometers away from the previous station.

Nevertheless, the LRT line consists of both elevated parts and at-grade parts along Mittraphap Road. The areas of the traffic island and roadside will be utilized as the LRT route, while these areas are under responsibility of Department of Highways, Ministry of Transport. In addition, the use of maintenance areas is being negotiated with Khon Kaen Rice Research Center. Also, areas around the LRT line will be developed to create green spaces and commercial areas or TOD (Khon Kaen City Development, 2018).

As for the construction of the LRT in Khon Kaen Province, Khon Kaen is the first regional city which has gained approval from the government to carry out the construction project itself in appropriate methods. Nevertheless, the Project Committee did not only focus on the LRT construction, it also plans to develop commercial areas around the LRT line (Transit Oriented Development: TOD). The third representative of the private sector admitted that only fares might not generate sufficient income, especially since the LRT route in Khon Kaen city is a stand-alone type without any connecting line, as the approval was given to construct only 1 line. Therefore, it is necessary to develop commercial areas around the LRT line in order to generate more income for the project.

The station area development, or Transit-Oriented Development (TOD), is a kind of development of areas around the public transport system in order to promote mixed land uses in the form of residential areas, commercial areas, offices, or other facilities. This kind of land use would not be far from the public transport systems so it would motivate people to use the public transport rather than private vehicles. A target was set to develop the areas within a radius of 500 meters from the stations along both sides of Mittraphap Road, according to the report of the Sustainable Infrastructure Research and Development Center. The development of areas around the LRT stations would generate more income and raise confidence in the project, causing investors to make investment (The fifth representative of a local administrative organization, personal communication, 2019; The sixth representative of a local administrative organization, personal communication, 2019).

Nevertheless, according to a study by the Sustainable Infrastructure Research and Development Center, Department of Civil Engineering, Faculty of Engineering, Khon Kaen University, the development of commercial areas around the LRT stations in Khon Kaen city need to involve land owned by the private and public sectors. Such development requires a large amount of investment budget, and some areas have had problems regarding the request to use areas owned by the public sector, especially the Khon Kaen Rice Research Center, which was planned to be utilized as the LRT maintenance center. Currently, the negotiations are being made to find mutual agreement.

In addition to construction of the LRT line and TOD, another significant matter is the budget. Although the project implementation will be funded by budget from the private sector, the project needs to have a guideline on fundraising so as to have an administrative budget, especially when the project has not started construction, and is not yet profitable.

With regard to the administrative budget for the LRT construction project, fundraising has been planned in several ways. Initially, the entire budget came from donation from the private sector for all of the related 5 local administrative organizations, to be further given to Khon Kaen Transit System Co., Ltd. for purpose of administration of the LRT construction project while the project is not able to generate income. To plan on how to allocate the budget to the LRT construction project is a significant issue to be taken into consideration by the project operator, because this project has not been funded by a government budget.

Initially, the construction budget would come from the bidding tendered by both domestic and international private companies to be selected as the LRT contractor. The construction would not be funded by both local administrative organizations and Khon Kaen Transit System Co., Ltd. because they had no budget to be allocated to the LRT construction project. After completing the LRT construction, the project operator plans to distribute shares of the project to Khon Kaen people, without reserving shares only for the local administrative organizations. People would be able to hold shares of this project in the form of the infrastructure fund. This is likely to spread income to the Khon Kaen people, as well as fundraising for the project (The third representative of the private sector, personal communication, May 31, 2019). Apart from earning income from fundraising, the project operator plans to generate income from the development of commercial areas around the stations (TOD), possibly through providing spaces for lease (The fifth representative of a local administrative organization, personal communication, February 13, 2019).

Nevertheless, LRT construction project of Khon Kaen city is rather behind the schedule. Despite the continuous progress of the project, there are several problems and obstacles, especially regarding the request to use public assets, which have strict rules, and need to be aware of public benefits. Details are as described in the following part.

4.5.2 Current and Future Situation

The Light Rail Transit: the LRT is the public transport system to be constructed in Khon Kaen city (The representative of local media, personal communication, 2018). This is just one part of a development project to transform Khon Kaen city into a Smart City. The project was initiated by people in the private sector and local administrative organizations in Khon Kaen city. Local administrative organizations gathered to establish a company, and assigned that company to manage the LRT construction project in partnership with the private and public sector instead of 5 local administrative organizations. These 5 local administrative organizations submitted a request to use areas of each local administrative organization for the LRT line to the municipal councils for their consideration, and the councils approved to use of the municipal areas for the LRT line. At present, the LRT project is being operated by Khon Kaen Transit System Co., Ltd., while Khon Kaen City Development (KKTT) Co., Ltd. reduced its role to being only supporter (The fifth representative of a local administrative organization, personal communication, 2019).

Currently, even though the LRT construction project of Khon Kaen city gained approval from the government, received support and assistance from the governor, the private sector, and several academic institutions, and achieved continuous progress, there have been some obstacles causing the project to fail the start of its construction. The main reason is that the project has found more difficulties with using public assets and areas rather than using areas of the private sector even though the use of public assets aimed to utilize valuable public resources for the utmost benefits of the city (The sixth representative of a local administrative organization, personal communication, September 26, 2019).

As mentioned earlier, the use of areas for the LRT line does not involve only local administrative organizations, whose areas are within the LRT line, it also involves several regional authorities. One of main authorities is the Khon Kaen Rice Research Center (under the supervision of Ministry of Agriculture and Cooperatives). The areas are in a type of Ratchaphatsadu Land (State Land) (under the supervision of Ministry of Finance), and located at Mittraphap Road in the heart of Khon Kaen city, with an areas of approximately 251 Rai. Such areas were considered appropriate to be used as a maintenance center, and possibly developed to be open to the general public,

including commercial development. Thus, it is necessary to have a mutual discussion about the request to use the areas. In this regard, a committee was nominated to study the request guideline, find replacement areas, and develop the areas at Khon Kaen Rice Research Center according to the Order of Khon Kaen Province No. 5138/2559 dated November 18, 2016 signed by Mr. Pongsak Preechawit, Khon Kaen Governor. The responsibilities of this committee are as follows: 1) Study and provide a guideline on the request to use areas at Khon Kaen Rice Research Center; 2) Explore appropriateness of replacement areas; 3) Study and provide a guideline on the development of areas at the Khon Kaen Rice Research Center; 4) Summarize the progress of the operations to be submitted to the supporting committee on 15th and 30th of every month; and 5) Perform any other action as assigned by the supporting committee and Khon Kaen Governor.

In order to find mutual agreement in using the areas, a meeting was held to consider the use of Ratchaphatsadu Land for the implementation of the Smart City project in Phase 1 – Construction of the North-South LRT line as a prototype in a regional city, Khon Kaen Province. The meeting was chaired by Mr. Amnuay Premonwong, Director - General of the Treasury Department, and attended by Mr. Satta Kachaplayuk, Khon Kaen Deputy Governor, Mr. Teerasak Teekayuphan, Mayor of Khon Kaen City Municipality, Maj. Gen. Chatchai Praditphong, Chief Executive Officer of Khon Kaen Transit System Co., Ltd. (KKTS), Mr. Suradech Taweesaengsakulthai, Associate Dean of the College of Local Administration, Khon Kaen University, Miss Nonticha Wansawang, Deputy Director-General of the Rice Department, and representatives from related authorities. The meeting resolved to have a mutual discussion about guidelines on land utilization via the nomination of a committee comprising related central, regional, and local authorities, as well as academicians. The said committee is chaired by Director - General of the Treasury Department, and the committee members include representatives from Ministry of Agriculture and Cooperatives, Royal Irrigation Department, Rice Department, Khon Kaen Deputy Governor, Mayor of Khon Kaen City Municipality, Mayor of Sila Town Municipality, Mayor of Tha Phra Subdistrict Municipality, Mayor of Mueang Kao Subdistrict Municipality, Mayor of Samran Subdistrict Municipality, Dean/ Associate Dean of the College of Local Administration, Khon Kaen University, and related

people taking responsibilities for considering the request to use the location of Khon Kaen Rice Research Center so that local administrative organizations can utilize and be entitled to manage the areas (Khon Kaen News.com, 2019).

The Treasury Department, which is the owner of the areas, has no objection if local administrative organizations and Khon Kaen Transit System Co., Ltd., would like to utilize the said areas in the case that the agreement can be made with Khon Kaen Rice Research Center regarding the methods of exchange or compensation, because the Treasury Department is able to allow both public and private sector to seek benefits in the state property according to the regulations (The third representative of public sector, personal communication, December 17, 2019; The fourth representative of the public sector, personal communication, December 17, 2019). However, the Khon Kaen Rice Research Center proposed some exchange, for example, the private sector would have to find replacement areas which are appropriate for rice farming based on the rice production potential in Thailand and located not more than 30 kilometers away from Khon Kaen city, with sufficient sources of water for rice farming throughout the year without any flooding problem. It would have to cover the whole area of approximately 700 Rai, consisting of the administrative building, meeting room, training center, dormitory, laboratory, workshop, seed vault, seed conditioning area, drying slab, residence, reservoir, ditch, paddy fields for research and seed production purposes, and a surrounding fence, including the availability of public utilities such as schools, nearby hospitals for providing staff welfare, road, electricity, water supply, telephone, and internet.

At present, there has not been any conclusion regarding the request to use these areas of Khon Kaen Rice Research Center. The negotiation on the agreement is supposed to take a certain period of time because the relocation of public authorities is rather complicated and affects many people, especially public officers in such public authority, and the exchange has not been agreeable to both the Khon Kaen Rice Research Center and the private sector. Therefore, consideration of this matter needs to be taken for a while and in a careful manner.

Apart from Khon Kaen Rice Research Center, another public authority inevitably involving in this matter is the Department of Highways, because the route of the LRT in Khon Kaen city is along Mittraphap Road from Tha Phra Subdistrict to

Samran Subdistrict. The route is partially under the responsibility of Department of Highways (under the supervision of Ministry of Transport). In case Khon Kaen Province, Office of Highways 7 (Khon Kaen) has to get involved in the LRT construction project, the Khon Kaen Governor (under the term of Mr. Pongsak Preechawit) appointed the Director of Office of Highways 7 (Khon Kaen) as the chairman of the committee for the request to use the traffic island and roadside of Mittraphap Road according to the Order of Khon Kaen Province No. 5138/2559 dated November 18, 2016, signed by Mr. Pongsak Preechawit, Khon Kaen Governor. The main responsibilities of this committee are as follows: 1) Study regulations and laws regarding the request to use the traffic island and roadside of Mittraphap Road; 2) Provide a guideline and report of the request to use the traffic island and roadside of Mittraphap Road; 3) Summarize progress of the operations, to be submitted to the supporting committee on 15th and 30th of every month; and 4) Perform any other action as assigned by the supporting committee and Khon Kaen Governor.

With regard to the request to use the traffic island and roadside of Mittraphap Road, which is a main road in the Northeast region, the LRT rail would have to be installed at the same level of the road, along the traffic island, as per the construction plan, while some parts would be elevated rail. In other words, the rail would be installed at the same level as the road when located outside the municipal areas, while the rail would be elevated within municipal areas. However, Department of Highways would like to have the elevated trail throughout the route, causing the construction cost to increase (The third representative of the private sector, personal communication, May 31, 2019).

The department of Highways does not refuse the request to use the traffic island and roadside of Mittraphap Road, but Director General of Department of Highways listed the conditions of the request to use the traffic island and roadside of Mittraphap Road according to the Notification of Department of Highways No. KorKor 06143/AorTor.4843/701 signed by Mr. Arnon Luangboriboon, Deputy Director General, Acting Director General of Department of Highways. It requires KKTS to provide additional information on the investment pattern and other details, submit the results of traffic volume calculation and estimation of future traffic volume in order to perceive the effects on traffic lanes around the construction area, propose

details regarding the construction methods around U-turn, intersection, areas in front of-behind road tunnels in compliance with the development pattern of the Department of Highways and the prospective traffic improvement in the future.

Normally, as Department of Highways which is directly in charge of overseeing and managing the road transport and has to take convenience and safety of all road users into consideration, the aforementioned conditions would help assure that the LRT construction project would not affect road users on Mittraphap Road, and road users would be able to use the road safely in the same way as before construction. In addition, traffic lanes might have to be rearranged properly, and such action requires budgetary support, so the discussion has to be made clearly (The second representative of public sector, personal communication, November 27-28, 2019). Thus, public authorities have to be cautious of the request to use public areas due to the necessity to be accountable to all road users. Consequently, it is necessary to consider possible impacts, and be prepared to solve problems in the future.

Based on the context of Khon Kaen city, private organizations, public organizations, and details regarding the LRT construction project, this indicates that Khon Kaen city is rather enthusiastic in having local people in association with local administrative organizations to manage the city. The project has been continuously driven forward, but in a gradual manner, and has to face many obstacles due to its large scale and impact on various people, as well as the requirement to share resources with the public sector. An analysis of the context is made in the following chapter.

CHAPTER 5

ANALYSIS

Khon Kaen is regarded as one of the fastest growing cities in the country. The city is an economic hub of the Central Northeast, and a target area in the government's economic development plan for the future, as well as being a center of education, medicine, and public administration, so Khon Kaen has attracted people from other areas to earn a living, study, or do other activities in the city. As a result, Khon Kaen city needs to increasingly accommodate a large number of people from both Khon Kaen Province and other neighboring provinces each day.

As Khon Kaen city has experienced rapid growth, Khon Kaen people, especially those who live in Khon Kaen city, do not neglect the rapid growth of their city. Although the city's growth can generate excessive income for business entities and local administrative organizations, it is unavoidable that it will face several problems arising from that city growth. Therefore, Khon Kaen has attempted to solve significant problems of the city along with developing the city's capability to achieve economic competitiveness and elevate the quality of urban life with the construction of large infrastructure. Willoughby (2013, as cited in Delmon, 2017) noted that a lack of infrastructure was one of the key factors contributing to a deteriorating quality of life in the same way as illness or death.

Therefore, a concept of Khon Kaen city development for accommodating its future growth was initiated. The concept was not from the central or regional government, but from local people in the private sector, local administrative organizations, the people sector, and educational institutions, all of which have cooperatively determined the direction for city development and encouraged the city development project to gain recognition from regional authorities and the government until becoming a remarkable mega project, with no intention of being on a waiting list to receive a limited budget from the government. In this regard, Khon Kaen people

have realized that Khon Kaen is not one of the primary provinces in the development plan of the country. This, therefore, resulted in a public project called the “Khon Kaen Model”, in which local development is no longer carried out only by the public sector, but also involves local people, the private sector, and local government. As a consequence, city development has not only brought about the development, but also contributed to actual decentralization.

The attempt of Khon Kaen people to drive the city’s development has succeeded in gaining recognition as the “Khon Kaen Model”. To be named as a role model of city development, it should be distinguished from the development of other cities. This Chapter will analyze the driving of Khon Kaen city development through the implementation of the LRT construction project based on the city’s development policy.

5.1 Khon Kaen City and City Development

Khon Kaen city development in the form of the “Khon Kaen Model” is the driving force of a public project initiated by local people (the private sector, local administrative organizations, people, and educational institutions), all of which have jointly planned how to develop the city so as to transform Khon Kaen into a Smart City. This transformation started from Smart Mobility, which was implemented to push forward a public transport system project in the form of LRT construction for the first time in the region by local people, not by the central government. In other words, this should be viewed as a request for the right of self-government ("Special report," 2019, p. 7). Thus, the Khon Kaen Model is a participatory driving process of all sectors. Khon Kaen development did not originate from a government policy, but the development came from the partnership and the driving force of public policy by local authorities and communities (Piyamart Tupmongkol, 2018).

Considering the country’s development, it was found that development and growth is likely to be clustered in Bangkok and its vicinity, resulting in rising inequality between Bangkok and other provinces. Although other regional cities tend to have continuous urban growth momentum, they have not been able to sufficiently receive budget allocations for city development from the central government because

the budget for development has usually been allocated to the capital and its vicinity, or some cities that have been listed in the national development plan only.

Khon Kaen is one of fastest growing provinces. Although its economic growth has not been at the same level as Bangkok vicinity provinces, Khon Kaen city is regarded as a regional hub. Its strategic location at the center of the Northeast has all types of transportation, including main highways, airport, bus, and train routes, as well as a top ranked university, modernized hospitals serving as the medical hub of the Northeast, and it's located along the main international economic route, contributing to increased economic growth and employment rates. Therefore, such convenient public services and employment opportunities have continuously attracted large numbers of people moving to Khon Kaen city.

Currently, Khon Kaen is one of the provinces in the Northeast with a high population and population density. The most densely populated area is certainly the area of Khon Kaen city. In 2018, there were 146,005 people in Khon Kaen city. The population in Khon Kaen city has continued to increase as per the following numbers: 141,403 persons in 2014; 142,548 persons in 2015; 143,947 persons in 2016; and 144,972 persons in 2017 (National Statistical Office, 2019a). This population increase is possibly due to rising birth rates and more migration from rural to urban areas.

Nevertheless, a continuous increase in population has caused Khon Kaen city to deal with many problems, such as an increase in crime, from 1,644 cases in 2011 to 2,659 cases in 2015 (National Statistical Office, 2019b). Moreover, there are overcrowded communities in the area of Khon Kaen City Municipality, totaling 13 communities and 1,792 households (Khon Kaen Municipality, 2016). Another problem encountered by Khon Kaen city in the same way as other cities is a traffic problem, as Khon Kaen Province has the second highest number of registered vehicles in the Northeast, after Nakhon Ratchasima Province.

Due to the population density, employment opportunities, and economic importance of Khon Kaen city, which are key indicators of urbanization (Sivaramakrishnan, 2011, p. 49), a leap in growth is causing Khon Kaen city to face several problems. Coupled with economic development prospects, various sectors in Khon Kaen Province mutually agreed to consider the issue of Khon Kaen city

development in order to solve existing and future problems of the city, as well as ensuring preparedness of the city for development and growth in the future.

Therefore, a brainstorming session was held to seek opinions on Khon Kaen city development from the public sector, private sector, people sector, and educational sector, and it came up with the conclusion that Khon Kaen city should be developed based on the concept of a “Smart City”.

Each country has different methods of development. However, in the case of a city transforming into a Smart City, which is gaining increasing attention, such a city should be resource-efficient, sustainable, and livable (Agachai Sumalee, as cited in Orathai Kokpol, 2016, p. 90). The methods of city development are varied, depending upon each city’s requirements, but they mainly aim to develop technology, innovation, and convenience for a better quality of urban life.

The Smart City concept as applied to Khon Kaen city, in the viewpoint of Mr. Teerasak Teekayuphan, Mayor of Khon Kaen City Municipality and who is supposed to be the leader of 5 Municipalities participating in the Khon Kaen city development project, is described below ("Special lecture on “Capability and direction of Khon Kaen city development," 2017).

Smart People means a city which has social equality, provides facilities for disabled, underprivileged, and elderly people, and allows people in the city to get involved, such as the Khon Kaen Universal Design Project, or Khon Kaen People Not Forsake Each Other Project.

Smart Living means a livable and safe city, with facilities for education and healthcare, such as CCTV installation, a blueprint for educational development, and excellent centers for health services.

Smart Environment is a city focused on energy savings, or reducing energy consumption and greenhouse gas emissions, such as with the Khon Kaen: Low Carbon City Project.

Smart Economy refers to a business-friendly city, providing support for innovation in products and services, such as its Fundraising Project.

Smart Mobility is when a city promotes convenient communication and safe transportation, such as the LRT Project, and Wifi City Project.

Smart Governance is a city which has a transparent administration, and efficient cooperation with the private sector, such as the Digital Municipality Project.

Based on the concept of city transformation into a Smart City, it was found that the infrastructure of Khon Kaen city would be developed to make it modernized and convenient for improvement of both quality of life and the environment. At present, many cities focus on developing their infrastructure, coupled with placing an emphasis on the environment. Particularly, developed countries which have fully developed their infrastructure turn to focus more on the environment, especially by launching campaigns to encourage people in the city to use public transport in order to reduce traffic problems, energy consumption, and carbon emissions. Khon Kaen city has formulated an environmental plan as part of its city development, as well. As for developing countries, the emphasis is usually made on developing only infrastructure, or developing infrastructure while enhancing the environment.

Considering the development plan to transform Khon Kaen into a Smart City based on the strategy for urban development of Hausner (1993), after the implementation of Khon Kaen city's development, the city will achieve viability, prosperity, and competitiveness, because Khon Kaen city will be focusing on developing its infrastructure (Smart Mobility), promoting education of its people (Smart Living), and supporting business operations (Smart Economy), because good infrastructure, high potential of people, and business development in the city will provide opportunities for Khon Kaen to be competitive with other cities, resulting in higher growth momentum and more income for the city. In addition, with regard to solutions to the city's problems, the transformation into a Smart City includes some remarkable plans for solving those city problems, namely, traffic problems (Smart Mobility), promoting equality in the city, especially for people with disabilities (Smart People), and the environment (Smart Environment). All these aspects of development could contribute to innovation, technology, and opportunities for the people in society. Nonetheless, all the development plans would not be realized if not for the cooperation of local people in both public and private sectors who work together to improve their urban quality of life (Smart Governance).

Nevertheless, the transformation of Khon Kaen into a Smart City has not been carried out in all aspects. But for those that have, the first aspect to be initiated, and

the one that shows the most progressive outcome, is Smart Mobility. This is for pushing forward the LRT construction project, aiming to provide people with more choices of public transport, alleviating traffic issues in Khon Kaen city (because people in the city will probably switch to use the new public transport more than private vehicles), and possibly minimizing pollution problems in Khon Kaen city.

Thus, Smart Mobility development has achieved the most progressive outcome and become a role model for other cities interested in starting an urban development project. Khon Kaen is the first regional city in which the private sector has collaborated with local administrative organizations and the people sector to create large-scale public services requiring a huge budget, when the government cannot allocate such a budget alone. In fact, in many countries, such as Japan and Brazil, city development is supervised by local administrative organizations while the central government acts as a supporter only. However, in Thailand, the main role in making development still belongs to the central government, because local administrative organizations have no sufficient budget to carry out large-scale projects. Thus, this LRT project is challenging to the traditional practices of the public administration system whereby the government formulates the policy and allocates the budget to specific areas as deemed appropriate. Therefore, Khon Kaen city is one of the few primary provinces requesting to carry out city development funded by their own budget. The process of driving this city development by the locality will be hereinafter analyzed.

5.2 Urban Development of Khon Kaen City

Normally, public administration in Thailand is a form of centralization in which the administrative power and decisions belong to the central government, including the planning and determination of administrative direction in the form of public policy. The government sector usually plays a significant role in policy formulation and the policy implementation process in order to achieve their goals.

To have the government sector take on the status of administrator of the country in order to formulate policy, make decisions, and control how to implement that policy, represents a top-down approach, or policy implementation from the top to

the bottom level, which places an emphasis on the role of the government affecting the success or failure of said public policy. As a consequence, the initiation or conduct of the public policy or public services is monopolized by the government sector because the government possesses various resources, ranging from the budget, specialized personnel, body of knowledge, as well as regulations utilized as tools to achieve successful policy implementation. In principle, public policy would be finalized based on the decision of the administrator of the country or the government, and further deployed to related authorities, namely, the central authority, regional authority, or local authority, as shown in the figure below.

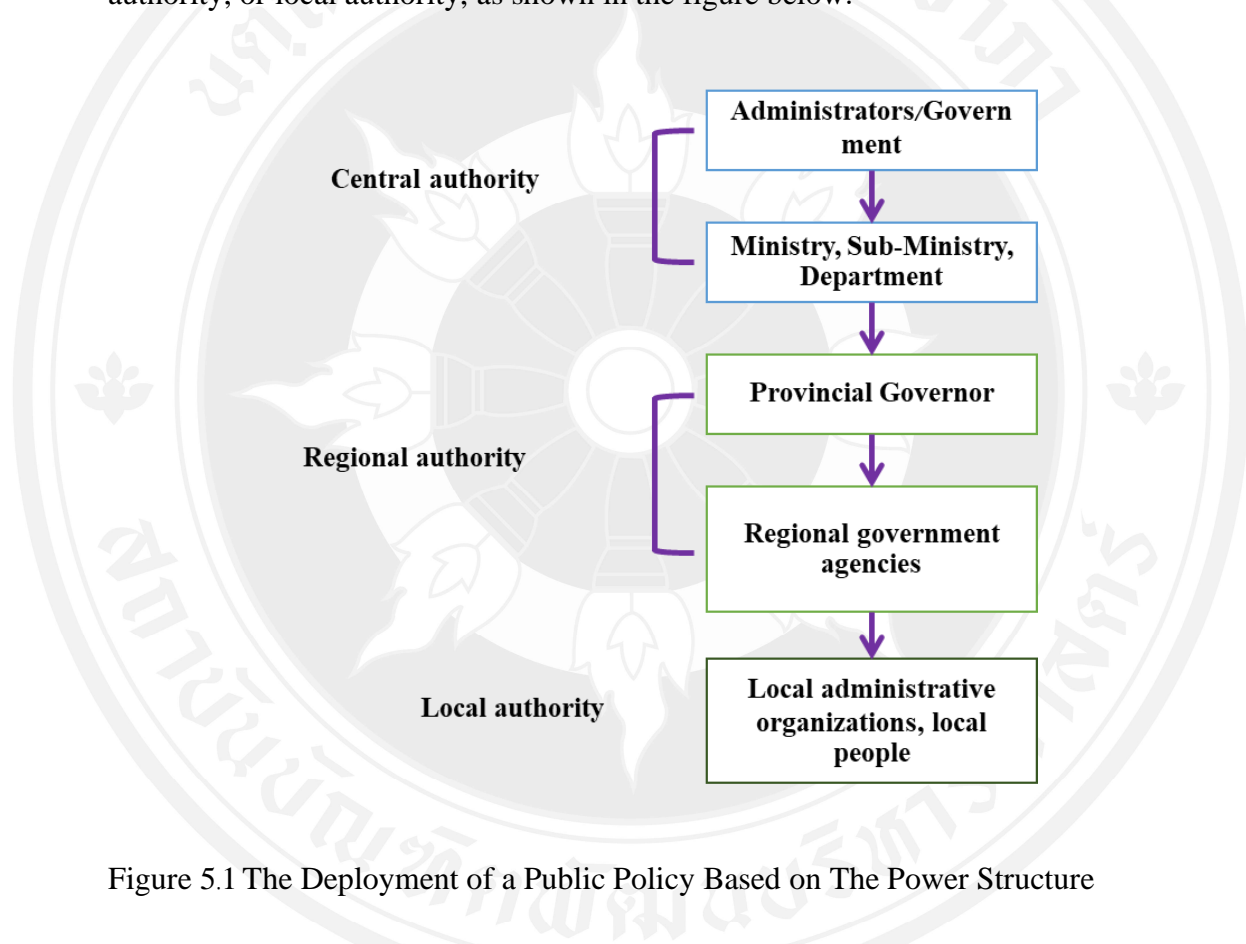


Figure 5.1 The Deployment of a Public Policy Based on The Power Structure

However, policy implementation is not only relevant to executives, law enforcement, or the strategic administration, nor does it involve only the government sector or the central government, it also includes interested social groups (Knoepfel, Larrue, Varone, & Hill, 2011, p. 200), or local administrative organizations located in the areas relevant to the public policy, or possibly stakeholders of the policy implementation. These people, whether it be local people or local administrative

organizations, probably wish to carry out several projects on their own based on government policy without waiting for the government's decision on whether their province will be provided with a budget allocation for the development project.

Waiting for a limited budget from the government might cause some provinces or cities with the capability to carry out large-scale projects on their own to lose opportunities to compete with other provinces, or to solve city problems in a timely fashion. Moreover, the government is often unable to thoroughly allocate the budget, and needs to choose the provinces or cities appropriate for development which can generate the highest income, such as a central city of the country, tourism cities, industrial cities, and so on. Therefore, any city apart from these said unique cities would not be primarily chosen by the government to receive a development budget.

Furthermore, any budget from the central government that comes together with a project determined by the government will likely not meet with the requirements of the local people. On the contrary, the government usually has no budget to be allocated that is sufficient for their own projects and the projects required by local people. Therefore, the best practice is to allow local authorities and local people to decide what they want, and then provide the local government and local people with the opportunity to play a major role in implementing the project that's most relevant to the public policy in that locality in order to actually respond to local requirements. Such practice demonstrates the bottom-up approach.

With regard to urban development using the top-down approach, the initiation of public policies or projects depends on those who are authorized to make decisions, namely, politicians in the government who are in charge of determining the target areas for development and allocating necessary resources so as to achieve the development goal. As for the target areas, related public authorities within the areas would deploy policies to achieve a desirable outcome. In reality, not only areas determined by the government are in need of development, other areas also need budgets from the government for development as planned. However, as such areas are not often primary targets, and the government has no sufficient budget to be thoroughly allocated, non-target areas have to wait and wonder when they will be chosen as the next target area for development.

Khon Kaen is one of the provinces requiring urban development, but Khon Kaen is not listed among the primary provinces to receive a budget from the government in order to build infrastructure or provide large-scale public services, because Khon Kaen is simply an ordinary province in the Northeast, even though Khon Kaen city is currently in a strategic center for domestic and international economic development. Khon Kaen has been less prioritized, compared to several other provinces, so it is not one of the primary provinces to receive a development budget.

Despite these limitations, Khon Kaen people who wish to see the development of Khon Kaen city have not resigned themselves to their fate. On the contrary, they have started to find ways to develop their city without relying on or waiting for a budget from the government, coming up with the idea that if a city has capabilities in self-development, the government should allow the city to implement their development on their own. Finally, Khon Kaen is the first city in which the government has permitted a private company, as a representative of local administrative organizations, to carry out an LRT construction project without receiving their budget from the government.

Presumably, these requirements came from the bottom of the power structure, comprising local people and local government who collaborated in enabling the Province to implement a large-scale city development project, ranging from determining the city's development direction to managing those large projects that are relevant to public services. Thus, the driving force of Khon Kaen city development is a bottom-up approach, as shown in the figure below.

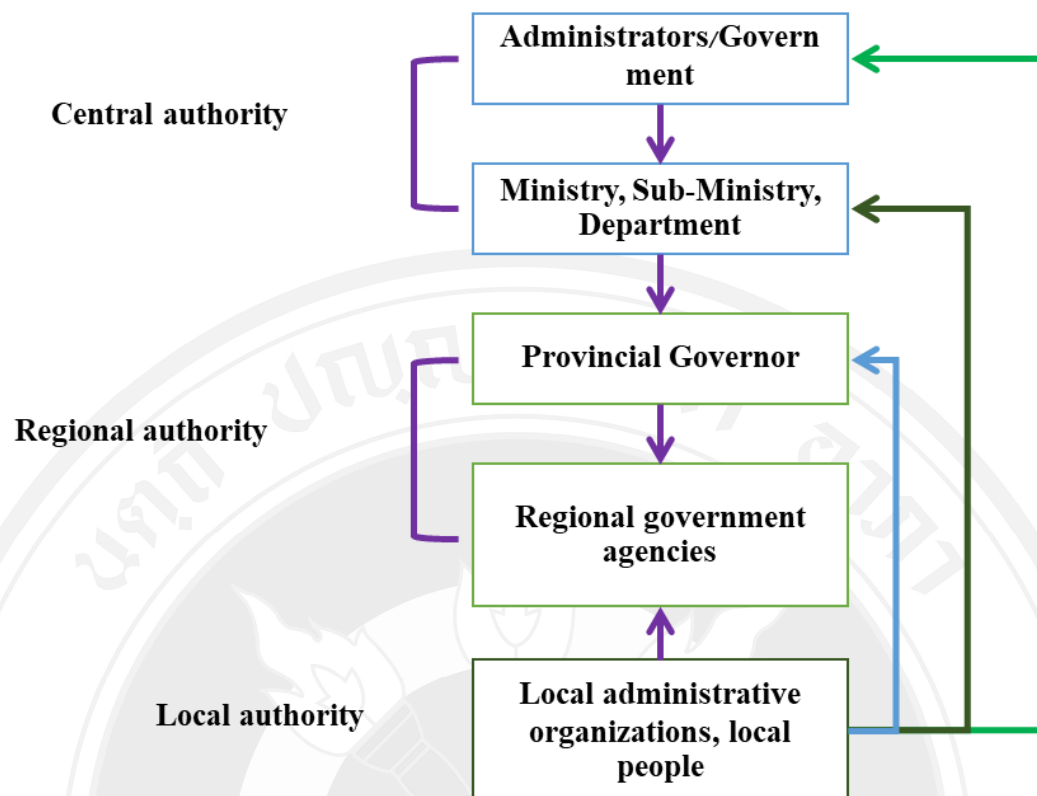


Figure 5.2 The Direction for Driving the Urban Development Project of Khon Kaen City

The implementation of the LRT construction project as a part of Khon Kaen city development started from a discussion between people in several sectors, comprised of new generation business operators in the private sector, the people sector, media, and educational institutions, who inherited businesses from their parents. These people cooperatively determined the development direction necessary to transform Khon Kaen into a Smart City. In this regard, the LRT project, as a part of Smart Mobility based on the Khon Kaen city development concept, was born. Nevertheless, if Khon Kaen was a province eligible to receive a budget for its project implementation, it would have no problems. However, those who are involved in driving Khon Kaen city development are of the view that the city hardly ever gets the chance to receive a budget from the government, and it could possibly take several years waiting for any support, resulting in the loss of opportunities in several aspects. Thus, Khon Kaen city decided to implement their city development project on their

own, without relying on and waiting for a budget from the government. Thus, Khon Kaen city became the first case of urban development that was originated at the bottom level of the structure (local authority), and the project can be self-administered.

The first step of driving the LRT construction project was made when a conclusion was drawn regarding the city's development direction, and a joint decision was made that Khon Kaen city should have a modernized and convenient public transport system to convince Khon Kaen people to use public vehicles instead of private vehicles. Also, implementation guidelines were provided so that a company representing 5 Municipalities would be established to manage the LRT construction project, and a project feasibility study was conducted to acquire the data needed for requesting approval.

Following the preparation process, the Project Committee consisting of the public and private sectors started the discussion with the government in order to ask for permission to implement the LRT construction project. The Project Committee discussed with various parties, and met with General Prayut Chan-ocha, Prime Minister and Head of the National Council for Peace and Order at that time in order to discuss and ask for approval of the LRT construction project to be totally managed by Khon Kaen city itself. The Head of the National Council for Peace and Order signed the Order to approve, in principle, the public transport system project, which is a light rail transit system, or LRT. Moreover, the Project Committee met with General Anupong Paochinda, Minister of Interior, in order to report on the progress of the project, as well as ask to get the design output from the Office of Transport and Traffic Policy and Planning (OTP), Ministry of Transport, who was regarded as the significant authority. If the project was studied and endorsed by the OTP, Khon Kaen city would be entitled to implement the project righteously, regardless of any change in the government in the future (The first representative of the private sector, personal communication, 2018). Meanwhile, the Project Committee steered the project via the Khon Kaen Governor, who is authorized to oversee the regional administration. In this regard, the discussion was made to build understanding about the necessity of this LRT construction project. The feedback was favorable, as evidenced by the fact that the Project Committee meetings were always chaired by the Khon Kaen Governor or

Deputy Governor, who also served as a mediator between the Project Committee and related public authorities (The first representative of the public sector, personal communication, September 25, 2019). Such occurrence became a new dimension of public policy driven by local people and proposed to the government, while gaining recognition as the first model of its kind in Thailand, called the “Khon Kaen Model”.

With regard to the beginnings of the Khon Kaen Model, the 1st representative of the private sector noted that people had to attempt to express their requirements directly to authorized politicians, and take charge of autonomous problem-solving. Learning from previous lessons, it was apparent that both politicians and public officers focus more on their own problems rather than the problems of the population. Therefore, Khon Kaen city came up with the idea of submitting the people’s requirements to the authorities at each level, ranging from local public officers to authorized decision-makers. According to the public administration system, this might not lead to concrete problem-solving or feedback toward requirements, possibly due to several limitations on budget and personnel, and public officers are normally burdened with workloads, so they probably do not place much emphasis on people’s needs. Consequently, Khon Kaen city utilized the capabilities of local administrative organizations and local people to make a strong request to authorized politicians by bypassing public officers in between the government and the people. This is regarded as disruption of the middle of the power structure, quite possibly leading to a smaller structure in the future.

Nevertheless, using this channel to make the request does not mean they gain no cooperation from local public officers. It would not be possible to initiate this project without cooperation from the public sector, including the central government and regional authorities, namely, the Commission for the Management of Road Traffic (CMLT), and the Office of Transport and Traffic Policy and Planning (OTP), Ministry of Transport, which helped study details of the LRT construction in Khon Kaen city. Also, great cooperation was provided by the Khon Kaen Governor, who realized the requirements of Khon Kaen city and acted as a supporter and consultant for driving the LRT construction in Khon Kaen city, as well as coordinating with authorized politicians, related Ministers, and public authorities in Khon Kaen Province (The first representative of the public sector, personal communication,

September 25, 2019). The public transport system development project of Khon Kaen city has gone forward through 3 Governors, as follows: 1) Mr. Kamtorn Thawornsatit who took up the position of Khon Kaen Governor from June 2, 2014 to September 30, 2016; 2) Mr. Pongsak Preechawit who took up the position of Khon Kaen Governor from October 1, 2016 to September 30, 2017; and 3) Dr. Somsak Jangtrakoon who has been Khon Kaen Governor from October 1, 2017 until the present.

It was found that the LRT construction project, as part of Khon Kaen city development, is using a brand-new approach. Traditionally, a construction project for the sake of the general public is under the responsibility of the government, but local people wanted to implement the project by themselves, due to the limitations on budget allocation by the government. Thus, the strategy of Khon Kaen city is a bottom-up approach, starting from seeking opinions from local people until achieving the outcome of the concrete project, and further submitting to the Prime Minister for decision-making in order to request for endorsement and ensure the righteousness and sustainability of the project, regardless of any change in the government in the future.

Although the request to have local authorities and local people implement large public service projects would be a brand-new issue in Thailand, similar projects in several countries are under the responsibility of local government. For example, in Japan, city development is supervised by local government, which can initiate and implement such development by themselves, representing the bottom-up approach.

In the case of Khon Kaen city, apart from the driving of the public project by the locality, the cooperation of local people in all sectors is also interesting. Moreover, this public project did not originate in the public sector, but through the people sector, the private sector, and local administrative organizations. Although a local administrative organization is regarded as part of the public sector, it does not have sufficient power and resources to implement a large project without relying on budget from the central government. Therefore, progress of the project can only be achieved from the collaboration of all sectors. An analysis of the issue will be made in the following part.

5.3 Urban Development under a Partnership between the Public and Private Sectors

In several provinces, the trend of urban development has gained more interest because every province wishes to be modernized and achieve growth similarly to other cities, especially Bangkok. However, urban development requires a large budget, and the government is usually unable to allocate the budget to all areas equally and thoroughly. Thus, several provinces have attempted to find out how to develop their cities without relying on a budget from the government. This reflects the attempt of the locality to be involved in planning the urban development direction so as to fulfill requirements of the people in the city as much as possible.

People in many cities have been enthusiastic in jointly planning city development, possibly because they realize the limitations of a government which is unable to allocate resources to each area equally and thoroughly because the government has to take multiple and excessive responsibilities, and the government's decisions on resource utilization have to consider several factors regarding sufficiency and cost effectiveness. However, according to the concept of urban regimes, valuable and essential resources are not only clustered within the government, but also widespread in the society, especially in the private sector.

5.3.1 The Private Sector's Accessibility to Resources

In fact, the government is a center of resources that are valuable and essential for the country's development, including the budget, personnel, body of knowledge, and technology. Thus, the government needs to be responsible for providing people with public services, especially in relation to large infrastructure, in order to level up and solve problems within the area. As people and local administrative organizations are unable to establish large infrastructure by themselves due to insufficient budget, the government needs to be in charge of providing large-scale services for people. However, the government has budgetary limitations as well. Despite the government's budget centralization, the government is unable to allocate the budget to all areas due to its own budgetary limitations.

Thus, it may be necessary to seek the budget or resources from the non-government sector so that the locality will be able to drive the policy or large project on their own. Resources of the private sector probably help supplement limited resources of the public sector. Both parties may share resources with each other, or the private sector may invest in the budgeting, while the public sector may allow the private sector to use some public assets.

In the case of Khon Kaen city, city development was initiated by local people and local administrative organizations. Thereafter, Khon Kaen city development projects gained attention from the private sector, which further participated in driving Khon Kaen city's development, while realizing the directions, opportunities, and limitations of city development with large-scale public transport system construction. A key limitation involves the budget, as the people sector and local administrative organizations are unable to raise sufficient budget. Therefore, the private sector saw many opportunities from this public transport development, for instance, enhancing a good quality of life for the people in Khon Kaen city, reducing the use of private vehicles thus contributing to less traffic congestion and air pollution, gaining economic opportunities from more investment and employment, and so on.

Based on the concept of urban regimes, Khon Kaen city should be classified as a development regime which tried to change the social and economic pattern by means of private investment in a public action (Stone, 1993), and demanded change. In this case, the private sector, in association with local administrative organizations and the people sector, proposed to seek the budget needed for investment in a large infrastructure construction project which had never taken place before, especially in a city of a province other than the capital. As for this investment, the private sector is confident in favorable changes. Accordingly, an in-depth analysis found that the Khon Kaen city development concept did not stimulate demand from the mass public. Rather, the demand came from the privileged or elite groups in society, namely, media, local politicians, and business operators, all of whom cooperatively persuaded people in Khon Kaen city to get involved in planning their city's development. However, such cooperation has a component featuring key characteristics of urban regimes, that is to say, this cooperation consists of a partnership between the public

and private sectors which tries to share their own resources for the sake of the general public.

In addition, it is remarkable that the case of Khon Kaen city is different from other kinds of cooperation in Thailand, as this case started when the private sector provided assistance in driving the project in relation to the budget, personnel, and body of knowledge, without any request from the central government. Therefore, this case may use the budget from the private sector, while the public sector will share resources necessary for the city's development project. According to the theory of urban regimes, the public sector tries to persuade the private sector to share their own resources for urban development and economic benefit (Stone, as cited in Ward, 1996). In contrast, in the case of Khon Kaen city, the private sector proposed to use their own resources, and asked the public sector to allow the private sector to use some public resources.

Nevertheless, although the LRT construction project will not be funded by a government budget at all, it does not mean that public resources acquired by the government budget will not be utilized, because this project still needs to use public assets, such as road surfaces or lands occupied by the public sector. Therefore, the use of public assets has to comply with regulations or laws stipulated by the public sector. Related public authorities should not only take requirements of any one group of people into consideration, but also the overall benefits of people at large who engage in using public assets. In this regard, the LRT construction project will involve 2 main public assets, namely, highways and Ratchaphatsadu Land (State Land).

As for the first public asset, road surfaces, the Department of Highways is in charge of Mittraphap Road where the LRT Project Committee requested to use the road surfaces for construction and traffic operations. This would possibly affect the convenience and safety of general road users who may not be residents of Khon Kaen city because this road is a main route of the Northeast passing through several provinces and used by various people. Therefore, this is not only a specific matter for Khon Kaen Province, there could be impacts on other groups of people, too. Thus, the Department of Highways has to determine the conditions of the request to use road surfaces quite concisely in order to ensure convenience and safety for all road users,

including people in Khon Kaen city and other passersby from outside Khon Kaen city (The second representative of the public sector, personal communication, 2019).

The request to use Ratchaphatsadu Land should be no problem if there is no public authority located on the land. However, in the case of Khon Kaen city, the land for the LRT maintenance center and commercial development, as required by the LRT project, is not only Ratchaphatsadu Land under the supervision of the Treasury Department, but also the location of the Khon Kaen Rice Research Center. Thus, the request to use this land is not only a use of public assets, it also affects related public authorities and public officers in case of the relocation of their workplace due to changes in residence and commuting patterns. If the existing public authority agrees to move off the land after both parties are satisfied with the exchange, the Treasury Department will be able to allow local administrative organizations to utilize the land according to the regulations of the Ministry of Finance (The third representative of the public sector, personal communication, 2019). The administration will be under the responsibility of Khon Kaen Transit System Co., Ltd.

Nonetheless, the permission to use Ratchaphatsadu Land given to public organizations and private organizations have different conditions. Normally, the Treasury Department would open bidding for those who are interested in requesting to use Ratchaphatsadu Land. However, in the case that public authorities, such as local administrative organizations, would like to use Ratchaphatsadu Land, the bidding could be exempted. Nonetheless, the land must not be utilized to generate commercial income (The third representative of the public sector, personal communication, 2019). Therefore, considering the request to use Ratchaphatsadu Land for the LRT construction, the objective of the land use might be for commercial income purposes, because even though the said land is to be used as a maintenance center, the LRT project also aims to generate commercial income. If the project gains approval to use the land, the Treasury Department is supposed to review the criteria of the request to use that land.

The private sector, represented by local business operators, has been engaged in the Khon Kaen city development project, while providing assistance in formulating the operating plan in cooperation with local administrative organizations, supporting the budget, and seeking the budget for ensuring the continuity of the project. In

addition, 5 local administrative organizations have jointly implemented the Khon Kaen city development project via a private company hired by these 5 organizations, formulated the directions and policies, and controlled the operations of the company. An analysis of the issue as mentioned above will be made in the following part.

5.3.2 The Public and Private Sectors in Khon Kaen City

Khon Kaen city development via the private sector in association with local administrative organizations and local people is receiving curiosity about the next direction for the project and the chances of success. Initially, Khon Kaen was the only province permitted by the central government to have the private sector and local administrative organizations jointly implement an LRT construction project without any budget investment from the central government. The government viewed that Khon Kaen Province was ready to implement the urban development project on their own. As a result, the government approved the urban development project, in principle, to be implemented by Khon Kaen city as requested.

It is well-known that one group which currently plays a significant role in driving the progress of this Khon Kaen city development project consists of the private sector represented by Khon Kaen City Development (KKTT) Co., Ltd. and 5 local administrative organizations in the public sector. However, the project has been implemented and managed by Khon Kaen Transit System Co., Ltd. Although the concept of Khon Kaen city development was actually originated by the civil society sector, the group which plays the most significant role in driving urban development consists of the private sector and local administrative organizations, who are trying to push forward and ensure the continuity of the project. Therefore, both parties are major role players in implementing this project.

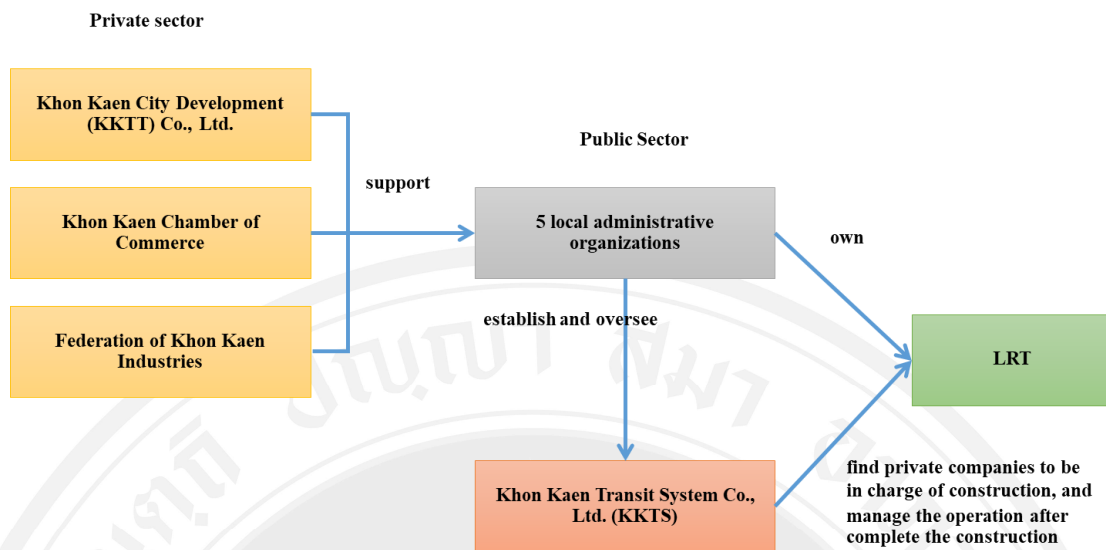


Figure 5.3 The Partnership between the Public and Private Sectors in Driving the LRT Construction Project in Khon Kaen City

5.3.2.1 The private sector: Khon Kaen City Development (KKTT) Co., Ltd.

Khon Kaen City Development (KKTT) Co., Ltd., or KKTT, is a private company founded to be a think-tank, which will help plan how to develop the city and drive the city development project to achieve a concrete outcome (The first representative of the private sector, personal communication, 2018). Then, the project will be transferred to the responsible authority, for example, the LRT construction project of Khon Kaen city as a part of Khon Kaen city development. This project was driven by the Khon Kaen Think-Tank, represented by Khon Kaen City Development (KKTT) Co., Ltd. in association with 5 local administrative organizations. After the project was initiated, local administrative organizations were further in charge of the project's implementation. This project will be jointly managed by 5 Municipalities represented by Khon Kaen Transit System Co., Ltd. Nonetheless, when Khon Kaen City Development (KKTT) Co., Ltd. transfers the project to be further implemented by the local administrative organizations, it does not mean that Khon Kaen City Development (KKTT) Co., Ltd. will no longer play a role in the project's implementation because, in several cases of problems with the LRT construction project, representatives of Khon Kaen City Development (KKTT) Co., Ltd., in

association with local administrative organizations, especially Khon Kaen City Municipality, will have ongoing discussions with authorized politicians or the government in order to find solutions. Thus, Khon Kaen City Development (KKTT) Co., Ltd. remains a major role player in the project, especially when meeting with authorized decision-makers in the country.

The co-founders are new generation business operators in Khon Kaen city who inherited or expanded businesses from their parents. Their businesses are rather large and stable and not only in Khon Kaen Province, but throughout the Northeast and at the national level, namely, real estate businesses, including housing estates, large markets, shopping malls, car or truck dealers, large manufacturers of goods for export, contractors and construction material sellers. All of these operators are keen in business management, and some of them used to take up key positions in Khon Kaen Province, including President of the Khon Kaen Chamber of Commerce, President of the Federation of Khon Kaen Industries, and other key positions in the management structure of business organizations, such as the Council of the Khon Kaen Chamber of Commerce. The current President of the Council of Khon Kaen Chamber of Commerce is Mr. Kamonpong Sanguantrakul, who is a co-founder of Khon Kaen City Development (KKTT) Co., Ltd. As well, there are other co-founders and consultants who take up positions on the Council of the Khon Kaen Chamber of Commerce (current management team) as follows: Mr. Surapol Taveesangkulthai (KKTT consultant); Mr. Phiyabutr Promlakano (KKTT consultant); Mr. Chokechai Khunwasi (co-founder and KKTT Executive Director); Mr. Suradech Taveesangkulthai (co-founder and KKTT Executive Director); Mr. Kungwan Laovirojjanakul (KKTT co-founder); Mr. Channarong Buristrakul (co-founder and KKTT Executive Director). In addition, some co-founders of Khon Kaen City Development (KKTT) Co., Ltd. previously or are currently taking up key positions in Khon Kaen business entities as per the following details:

Table 5.1 The Name List of Co-founders and Consultants Who Previously or are Currently Taking up Key Positions in Business Organizations of Khon Kaen Province

No.	First name-Last name	Status	Position
1	Mr. Thana Sirithanachai	KKTT co-founder and Executive Director	President of Khon Kaen Real Estate Association
2	Mr. Channarong Buristrakul	KKTT co-founder and Executive Director	Former President of Khon Kaen Real Estate Association
3	Mr. Chanvit Tangtanawat	KKTT co-founder	Vice President of Khon Kaen Real Estate Association
4	Mr. Mana Kansaksiri	KKTT co-founder	Former board member of the Federation of Khon Kaen Industries
5	Mr. Kemchart Somjaiwong	KKTT consultant	Former President of Khon Kaen Chamber of Commerce and former President of Khon Kaen Tourist Business Association
6	Mr. Sming Yimsiri	KKTT consultant	Former President of Khon Kaen Chamber of Commerce
7	Mr. Samart Angwarawong	KKTT consultant	Former President of the Federation of Khon Kaen Industries

Because the co-founders and consultants of KKTT are business operators who have operated businesses for several decades and have taken up key positions in economic organizations of Khon Kaen Province, as well as being in the business elite group of Khon Kaen city, it is not unusual they would be able to persuade a large number of economic organizations and private companies to engage in the partnership and investment in this Khon Kaen city development project. As a consequence, they could provide support for the implementation of the LRT project even though the project has not yet been able to turn a profit for the project-owned company.

From the aforementioned data, it was found that these people could provide resources for Khon Kaen city, while acknowledging that this investment funded by their personal budget would possibly not gain profits in return, and it is quite possible that they would not receive anything in return if the LRT construction project of Khon Kaen city could not be implemented. It is also remarkable that the reason for causing these people to make the investment without a profit guarantee is because these co-founders of Khon Kaen City Development (KKTT) Co., Ltd. are local people, or their ancestors settled down and operated businesses in Khon Kaen city for several decades, so they have an attachment with Khon Kaen city and province. Also, they are in the same age group and mostly familiar with one another, since the generation of their parents, resulting in mutual reliability. Moreover, the project has been driven by forms of networks comprised of business networks and friends & relatives networks. As a result, the relationships within these networks could be strengthened and become the social capital for enhancing cooperation in generating mutual benefits (Putnam, 1995). Such relationships are regarded as the heart of social capital (Viengrat Nethipo, 2011) which can enhance the efficiency of operations in any network.

With regard to their role in the private sector, Khon Kaen City Development (KKTT) Co., Ltd., or KKTT, is interested in participating in Khon Kaen city's development because the company believes that Khon Kaen city should be prepared for its development in advance, and their capabilities should be able to help initiate and drive the project. In this regard, they have clearly determined their role in thinking through and providing implementation guidelines, as well as collaborating

with authorized decision makers and related authorities at the central and regional levels. Evidently, representatives of Khon Kaen City Development (KKTT) Co., Ltd. Have already met with authorized persons and worked together with the public sector, for example, requesting to use the areas around Mittraphap Road and Khon Kaen Rice Research Center, participating in public hearings to ask for opinions from local people, and attending meetings to follow up on progress with the Governor and related authorities, as well as being able to gain access to authorized politicians for discussions when the project has some problems, while having connections with other private sectors in the network.

However, Khon Kaen City Development (KKTT) Co., Ltd. limited their role to planning and determining the city's development direction, supporting information, and negotiating with authorized politicians or decision makers to find solutions to deal with problems of the project. Once the project can be further implemented without any difficulties, they will let the 5 local administrative organizations manage the project until the construction is completed (The second representative of the private sector, personal communication, 2019). In this regard, Khon Kaen Transit System Co., Ltd., or KKTS, will act in the capacity of these 5 local administrative organizations, while Khon Kaen City Development (KKTT) Co., Ltd. will take the role of thinking and planning to further drive other projects relevant to Khon Kaen city development.

Even though Khon Kaen City Development (KKTT) Co., Ltd. has tried to limit their role by not getting involved in management issues, the company is likely to be considered a major player in driving the LRT construction project, similarly to the public sector led by Khon Kaen City Municipality. This is because these business operators could gain accessibility to national politicians, as evidenced by how they could meet with General Prayut Chan-ocha, Head of the National Council for Peace and Order (NCPO) at that time, as well as the Minister of Interior, Minister of Transport, and heads of other related public authorities, including the Khon Kaen Governor and Deputy Governor. Also, these business operators have good relationships with the local politicians in Khon Kaen city. Furthermore, these operators have created reliability among the politicians by not voting in elections, in order to disqualify themselves from entering into election contests, causing them to be

unable to compete with local politicians in elections. Therefore, the business operators have gained trust from local politicians and are thereby involved in driving the project together. In addition, some local politicians had previously been in business circles, or socialized with friends in business circles, so the relationship between the business operators and local politicians has been strengthened, coupled with mutual reliability and smooth cooperation.

Thus, the business operators under the name of Khon Kaen City Development (KKTT) Co., Ltd. do not have only a budget, body of knowledge, and a variety of information, but also accessibility to national politicians who are authorized to make decisions. This is a significant factor, possibly enabling the LRT construction project to be continued. In addition, there is a network of business organizations participating in the support of necessary resources, especially the budget and personnel, which will further help reinforce the project's implementation.

Apart from those business operators from the private sector in Khon Kaen city who gathered to establish the company, the public sector at the local level, namely, local administrative organizations, have also participated in driving the project in association with the private sector, but they manage the project under a private company which is their representative. Therefore, there is another kind of private sector within the public sector which is different from the former private sector. Despite having the same status as a company, the background is different, that is to say, another kind of private sector was established from the requirement of local administrative organizations to have a representative in the private sector to manage the construction project and operate the LRT so as to ensure flexible and speedy operations. Related details are provided in the following part.

5.3.2.2 The Public Sector: Local Administrative Organizations and Khon Kaen Transit System Co., Ltd. (KKTS)

As for the public sector, to go forward with Khon Kaen city development's first LRT construction project in the region, local authorities were required to implement the project by themselves and use their own budget without relying on a budget from the government. There are 5 local administrative organizations, comprising Khon Kaen City Municipality, Sila Town Municipality, Mueang Kao Subdistrict Municipality, Samran Subdistrict Municipality, and Tha Phra

Subdistrict Municipality, participating in the LRT construction project in Khon Kaen city.

The reason for having 5 Municipalities to jointly operate the LRT construction project is because the route of the LRT in a north-south direction runs through the areas of these local administrative organizations. In this regard, the project was initiated by Khon Kaen City Municipality in association with the private sector, and the Municipalities with accessibility to the LRT route were persuaded to manage the project together, especially regarding management within their own areas, leading to the established network of these 5 local administrative organizations.

As a matter of fact, the LRT stations are clustered mostly in the areas of 3 Municipalities as follows: Khon Kaen City Municipality, which is located in the heart of Khon Kaen city; Sila Town Municipality, which is located next to Khon Kaen City Municipality in the northern part adjacent to Khon Kaen University; and Mueang Kao Subdistrict Municipality, which is located next to Khon Kaen City Municipality in the southern part adjacent to Khon Kaen Bus Terminal 3. However, another 2 Municipalities, Samran Subdistrict Municipality in the northern part and Tha Phra Subdistrict Municipality in the southern part, are located several kilometers away, being unusual from the typical distance between each station, with only 1 station in their areas according to the construction plan. The inclusion of Tha Phra Subdistrict Municipality and Samran Subdistrict Municipality into the route is possibly due to anticipated expansion of the city and business growth, which is likely to extend to these northern and southern parts, so the transport system planned in advance to alleviate city crowdedness if business units foresee the capability of areas located slightly away from the city but within the LRT route. The requirement of the project to be driven by more participants, from 3 Municipalities to 5 Municipalities, would increasingly empower local administrative organizations undertaking the project. Both of these Municipalities also see the opportunity to develop their municipal areas, possibly leading to prosperity and more income for their Municipalities. However, due to a rather far distance from other stations, both stations in Samran Subdistrict Municipality and Tha Phra Subdistrict Municipality are likely to be removed if it is considered not cost-effective (The fifth representative of a local administrative organization, personal communication, 2019).

Five Municipalities have determined their roles in driving this project in association with the private sector regarding the plan for the city's development direction, and are pushing forward with public authorities and local people. The local administrative organization has a major role is Khon Kaen City Municipality. This is possibly because Khon Kaen City Municipality is of a large-scale, with the highest amount of annual budget. This Municipality initiated the LRT construction project in association with the private sector at its initial stage. In addition, other components of LRT, such as the maintenance center and the development of station areas and tracks (TOD), are mostly within the area of Khon Kaen City Municipality rather than the other 4 Municipalities. However, the roles and responsibilities of each Municipality have not been designated yet. Every Municipality will attend meetings and jointly make decisions (The sixth representative of a local administrative organization, personal communication, 2019). The 5 Municipalities also take a role in overseeing and formulating the direction and policies of Khon Kaen Transit System Co., Ltd., or KKTS, which acts in the capacity of the 5 Municipalities to handle operations relevant to the LRT.

Khon Kaen Transit System Co., Ltd., or KKTS, is a private company hired by the 5 Municipalities comprised of Khon Kaen City Municipality, Sila Town Municipality, Mueang Kao Subdistrict Municipality, Samran Subdistrict Municipality, and Tha Phra Subdistrict Municipality. Their objective is to be a representative of the 5 Municipalities to implement the LRT construction project. This is in compliance with the Municipal Act, B.E. 2496, which legislates that 2 or more municipalities are able to jointly perform tasks in the form of a Syndicate in order to manage public utility services, while the municipality is obliged to hold shares of not less than 50%. All of the 5 Municipalities jointly established Khon Kaen Transit System Co., Ltd. in order to implement the LRT construction project in Khon Kaen city, which is classified as a public utility system. 100% of shares of the company are held by the 5 Municipalities in compliance with the conditions as stipulated, with 80% of those shares being held by Khon Kaen City Municipality, the majority shareholder, and 5% of the shares held by each of the 4 other Municipalities. The operations of the company are funded by conditional donations from the private sector for the Municipalities to manage the company, so these 5 Municipalities do not use their own

budget for the project's implementation, except for conducting a feasibility study of the public transport system in Khon Kaen city (The first representative of the private sector, personal communication, 2018).

The 5 Municipalities need to jointly establish a private entity to act in their capacity, because a local administrative organization is regarded as a public authority required to comply with the regulations and procedures. Therefore, a representative in the form of a private company to act in the capacity of the local administrative organizations was adopted in order to avoid or reduce delays and the complicated procedures of the public system, and ensure flexible operations (The second representative of the private sector, personal communication, 2019). Nevertheless, although Khon Kaen Transit System Co., Ltd. was established within the private sector, this company is a representative of the public sector, namely, the 5 Municipalities who are in charge of planning the direction and administration policies, plus overseeing and monitoring the operations of the company.

The administration of Khon Kaen Transit System Co., Ltd., or KKTS, is carried out by hiring an Executive Committee. Invited persons consist of business operators in Khon Kaen city who are not involved with any local administrative organization in order to ensure transparency and professionalism. 4 out of 5 Committee members are former Presidents of the Khon Kaen Chamber of Commerce, former Presidents of the Federation of Khon Kaen Industries, or take up positions in business associations in Khon Kaen Province. Although the Executive Committee of Khon Kaen Transit System Co., Ltd. was selected from those who are not involved with local administrative organizations, these people are supposed to be familiar with the business operators in Khon Kaen City Development (KKTT) Co., Ltd. Moreover, the Chairman of the Board of Directors, Mr. Kemchart Somjaiwong, also serves as a KKTT consultant. Evidently, those who have gained enough trustworthiness to manage Khon Kaen Transit System Co., Ltd. are among this group of business operators in Khon Kaen city. These people probably have no experience or in-depth understanding of public transport management, though there is one person, Maj. Gen. Chatchai Praditphong, the Board member and Chief Executive Officer, who has some experience managing the public transport system of the MRT, so he is supposed to

take a major role in managing the LRT construction project during the preparatory stage.

Nevertheless, it may not be unusual to feel safe in the administration of these business operators, because administration of the LRT can be considered as a kind of business administration that focuses on making profits or minimizing losses in order to ensure the continuity of the project. Thus, it is necessary to recruit people experienced in operating businesses because they should have the vision and business strategies for dealing with future circumstances better than inexperienced people.

Khon Kaen Transit System Co., Ltd. was designated as the representative of the 5 Municipalities to implement the LRT construction project and manage LRT operations. The 5 Municipalities serve as the project owner and function similarly to the board members of a company, so Khon Kaen Transit System Co., Ltd. is not a contractor or concessionaire, but a representative of the Municipalities for flexible operations. Management of the project started with searching for construction companies, seeking traffic operation companies, implementing the project, and generating income (The third representative of the private sector, personal communication, 2019). In addition to playing a major role in managing the project, Khon Kaen Transit System Co., Ltd. also helps push forward the project, and joins with the Committee in finding mutual agreement between public authorities, local administrative organizations, and the private sector in Khon Kaen city.

Although Khon Kaen Transit System Co., Ltd. is only a representative of the 5 Municipalities and does not have an outstanding role at this stage, if the LRT construction gains approval, the company should have a major role in the project. This is because when the project is approaching the construction stage, the private sector represented by Khon Kaen City Development (KKTT) Co., Ltd. will be likely to gradually reduce their role and serve only as a supporter, while local administrative organizations will help oversee Khon Kaen Transit System Co., Ltd. to ensure that the management of KKTS meets with the directions as required by the 5 Municipalities.

Considering the participation of the public and private sectors in the LRT construction project, including their roles, it was found that both public and private sectors have not clearly determined their roles and responsibilities, but they have provided mutual assistance and support based on their available resources. In

other words, the private sector provides support in relation to the budget, information, and implementation guidelines because local administrative organizations have no budget for the project, and they are not business administrators, or if the budget is available, there could be legal restrictions on the allocation of the budget for the project. Therefore, it would be easier and more flexible to receive financial support from the private sector. Local administrative organizations play a major role in driving the project in association with the private sector and overseeing the company, which was established and assigned to implement the LRT project in place of the Municipalities. The company was interpreted by the 5 Municipalities as a private entity which will take part in driving and mainly implementing the project at present and in the future.

Nonetheless, although the roles and responsibilities of implementing this Khon Kaen city development project of LRT construction have not been clearly determined by the public and private sectors, it was found that those who play major roles in continuing to deal with several problems of the project, also as known as the agency, comprise the backbone of the private sector who is supporting the budget for this city development project, as well as administrators of local administrative organizations, who are some of the project's initiators. The role of these agencies is visible in the meetings between the public sector (regional and local authorities) and the private sector, and the meetings held to build understanding among the general public, as these meetings are mostly attended by these agencies. In addition, they are also the representatives who meet with authorized decision makers in the government.

With regard to the project's implementation, which involves several sectors, it is usual that not everyone in the project fully participates in the project, though it is likely to involve those who better realize the significance of the project, have more relevance, or gain more benefit. These people play a major role in driving the project. In particular, if the benefits from the project enhance personal benefits, those agencies are motivated to further push the project forward until it achieves success.

Currently, all 3 sectors, including Khon Kaen City Development (KKTT) Co., Ltd., 5 Municipalities, and Khon Kaen Transit System Co., Ltd., have cooperated on the LRT construction project in Khon Kaen city based on their own

resources and capabilities. These 3 sectors have collaborated in solving ongoing problems and obstacles that have caused the project delays going into the construction stage. However, this cooperation came from the public sector represented by local administrative organizations and the private sector represented by the whole private sector (not including the public and private sector established to represent the public sector i.e., the 5 Municipalities), not by the central government. This cooperation was made to fight with the public sector, comprising the central government and public authorities, in order to have rights to develop the city, resulting in inevitable impacts on the public sector. Therefore, such partnership is rather unique. An analysis and explanation is made in the following part.

5.3.3 The Partnership Between the Public and Private Sectors

At present, the public and private sectors are not opponents who are unable to work together, although they do have different operating targets. In fact, both sectors can cooperatively implement some public operations in the form of a partnership between the public and private sectors, as generally seen in several countries. Delmon (2017) provided an explanation as follows:

Cooperation between the public and private sectors is made for purposes of creating public services of large infrastructure. This kind of partnership is different from the traditional way of the government. The cooperation is in the form of a partnership for solving problems and establishing infrastructure. The government does not hire the private sector in this case. The partnership is to combine the strengths of the government in relation to a mandate to create public services and issue regulations, coupled with the strengths of the private sector in relation to profitability and commercial efficiency.

Thus, a partnership between the public and private sectors is more than a collaboration for performing tasks together. The operation is based on the same guidelines and target, aiming to achieve the target of the public sector - to create public services; and the target of the private sector - to seek profits from long-term projects, with shared risk management. In this regard, the private sector is usually in

charge of the investment in the project, which is implemented and owned by the public sector (Queiroz & Martinez, 2013), and service charges are collected from service clients (Duffield, 2010). The public and private sectors negotiate to find mutual agreement on the income from such public services.

Thailand is another country that allows the public and private sectors to jointly develop large infrastructure. The Private Investment in State Undertaking Act, B.E. 2535 was the first law regarding joint ventures between the public and private sectors. At present, the Public-Private Partnership Act, B.E. 2562 is referred to as a practical framework. This is possibly either for a joint venture or the sole investment by the private sector via a concession or a license. In this regard, the amount for the joint venture required to comply with the Act is 5 billion baht or more, while a joint venture in an amount less than 5 billion baht is subject to the announcement of the Committee. The private sector to be in partnership with the public sector will be selected by a bidding process, or the bidding may not be applied if gaining approval from the cabinet.

The first collaborative project between the public and private sectors in the form of a Public-Private Partnership was the BTS Line Extension Project. The Krungthep Thanakom Co., Ltd. was awarded a 30-year concession. This project took place in Bangkok, the capital of the country. In other provinces, there had not been any Public-Private Partnership projects until Khon Kaen city applied for a Public-Private Partnership to invest in its large infrastructure construction project. The city foresees that a modernized public transport system would help elevate the quality of urban life and develop economic capabilities in Khon Kaen city.

Apart from Khon Kaen city, Chiang Mai and Phuket cities are also establishing Public-Private Partnerships for public transport system construction. Nevertheless, Khon Kaen is the first city to apply a Public-Private Partnership for creating large public services for urban development and it is distinguished from other projects in Thailand. If the project is successful, Khon Kaen will be the primary regional city to develop a public transport system under a Public-Private Partnership.

As mentioned earlier, Khon Kaen is a primary city which has applied the Public-Private Partnership concept to its public transport system construction project, namely, an LRT project, which was initiated by the people of Khon Kaen city,

comprising the civil society, local administrative organizations, and the private sector, who all agreed that Khon Kaen city required systematic development. Therefore, the concept of Khon Kaen city development was initiated in a concrete manner. Several aspects of Khon Kaen city development have been planned, including development of the public transport system, or LRT construction. The major role players in both the public and private sectors are as follows:

- 1) The public sector includes 5 local administrative organizations, comprising Khon Kaen City Municipality, Sila Town Municipality, Mueang Kao Subdistrict Municipality, Samran Subdistrict Municipality, and Tha Phra Subdistrict Municipality.

- 2) The private sector is comprised of 2 types as follows: The private sector, which consists of business operators in Khon Kaen city under Khon Kaen City Development (KKT) Co., Ltd.; and the private sector, which involves the business operations of Khon Kaen Transit System Co., Ltd. under the supervision of local administrative organizations.

In the case of Khon Kaen city, the city originally tried to avoid using a Public-Private Partnership because it did not want to undergo the project under the Public-Private Partnership Act, B.E. 2562, due to difficulties and complicated legal processes. However, in theory, cooperation between the local administrative organizations and the private sector of Khon Kaen city should be regarded as a partnership between 2 sectors. This is because the cooperation between the public and private sectors in Khon Kaen city is made by utilizing resources of both sectors to a create public service (Skelcher, 2005). This is a long-term cooperative effort, although both parties have not entered into the agreement yet in writing (Gormley & Balla, 2004). Moreover, this is in compliance with 5 components of the Public-Private Partnership proposed by Schuppert (2013), as follows: 1) Participation – Several sectors, including both public and private sectors, participate in implementing the Khon Kaen city development project; 2) Relationships – The sectors participating in driving the project in Khon Kaen city have a mutual relationship and cooperation in a continuous manner; 3) Resources – Each related sector shares necessary resources with each other, such as the budget, network, body of knowledge, and accessibility to authorized decision makers; 4) Sharing – Both public and private sectors participating

in the project share responsibilities and risks with each other; and 5) Continuity – Every sector has worked together for several years, and this indicates the continuity of the project.

As for the Public-Private Partnership Act, a revision was recently made in 2019 by repealing the Private Investment in State Undertaking Act, B.E. 2556. The Public-Private Partnership Act, B.E. 2562, as announced in the Royal Thai Government Gazette, Volume 136, Part 29kor, dated March 10, 2019, provided the reason for the revision of the Private Investment in State Undertaking Act, in that “The selection of the private sector participating in the investment project of the government needs to be carried out with transparency, traceability, as well as having no interest in the selection process” so that the joint venture according to this Act is made efficiently for the sake of the general public.

The reason for the revision of the Public-Private Partnership Act, B.E. 2562 and the content of the Act places emphasis on a neutral way to acquire the private sector. Also, every operating process has to be considered and endorsed by related Committees and Ministers, as well as the Cabinet. However, in the case of the joint venture between the public and private sectors in Khon Kaen city, participants from the private sector were already designated, although it is not the private sector which is making the investment in the LRT construction. The private sector provided financial support for the city development project prior to the construction stage. Besides, Khon Kaen city probably determined that if the city needs to comply with the Public-Private Partnership Act, B.E. 2562, Khon Kaen city’s development project would be delayed, because every process has to be endorsed by the nominated Committee at each stage, as required by the Act. Moreover, if the Committee does not agree with the proposal of the team members, the consideration results have to be further submitted to related Ministers as well as the Cabinet. Therefore, rather complicated and diverse processes might be one of reasons why Khon Kaen city would not implement the city development project under this Act.

Another reason Khon Kaen city was trying not to be under the Public-Private Partnership Act, was possibly due to different assumptions between the public and private sectors. The private sector focuses on speedy operations for rapid achievement because benefits would be returned rapidly as well. On the contrary, the public sector

mainly focuses on accuracy and public benefits, so every process has to be verified to prevent mistakes, because a mistake made by the public sector always has widespread impacts. In this case, the public sector is the central and regional authority relevant to the LRT construction project, while the private sector includes Khon Kaen City Development (KKTT) Co., Ltd. and Khon Kaen Transit System Co., Ltd., or KKTS. Meanwhile, 5 Municipalities are in the capacity of the public sector which oversees Khon Kaen Transit System Co., Ltd., or KKTS. Therefore, the LRT construction project of Khon Kaen city is like the operation of 2 sectors which have inconsistent working characteristics, and possibly different working objectives. This may be the origin of the conditions put down by public authorities (Department of Highways and Rice Department) and submitted to those who are driving Khon Kaen city development for further consideration.

Nevertheless, non-compliance with the Public-Private Partnership Act, B.E. 2562 for any reason, like speedy operations or not relying on a budget from the government, may lead to questions regarding the good governance of the Khon Kaen city development project. This is because a refusal to comply with the Act may be considered as the Khon Kaen city development project not being verified according to the process as stipulated by law, and thereby all processes of the project would be implemented by related local administrative organizations and the private sector, who was established to be the representative of the local administrative organizations. Thus, the implementation may not be verified by external authorities in order to ensure the transparency and traceability of the project.

5.3.4 Remarks from the Study on the Partnership between the Public and Private Sectors in Khon Kaen City

When considering the partnership between the public and private sectors in Khon Kaen Province, there are many specific characteristics that are different from other cases, although Khon Kaen city has tried to imitate the partnership between Bangkok and the Krungthep Thanakom Co., Ltd. (The first representative of the private sector, personal communication, November 24, 2018; the fifth representative of a local administrative organization, personal communication, February 13, 2019). An explanation of those differences is provided as follows:

1) As for the partnership between the public and private sectors in general, the public sector is mostly the central government or large local administrative organizations with a large budget, such as Bangkok, which is a special local administrative organization responsible for the capital of the country. However, in the case of Khon Kaen city, the public sector consists of local administrative organizations in the same way as Bangkok, but local administrative organizations participating in Khon Kaen city's development project are smaller, with smaller budgets than Bangkok, so the capability to manage the project is possibly lower than Bangkok, despite cooperation between up to 5 Municipalities.

2) The 5 Municipalities chose to work together with more than 2 local administrative organizations in the form of a "Syndicate" according to Section 58 of the Municipal Act, B.E. 2496 by establishing Khon Kaen Transit System Co., Ltd., or KKTS, to be the representative of the 5 Municipalities and serve as "an operator of the LRT construction project for the 5 Municipalities, not a contractor or a concessionaire" (The third representative of the private sector, personal communication, May 31, 2019), and ensuring that said company be a private company for quick operation without getting delayed by public regulations. If the project was implemented by local administrative organizations, they would have to comply with every process of public regulations, possibly resulting in delayed operations and a lack of independence. However, even though the development of Khon Kaen city by a private company has been in progress at a certain level, it is still necessary to comply with public regulations, especially when the project requires using public assets, namely, highways and Ratchaphatsadu Land currently occupied by the Khon Kaen Rice Research Center. Therefore, the implementation of this project could not avoid the compliance with public regulations.

3) As mentioned earlier, although the 5 local administrative organizations jointly manage the LRT construction project, the budget is not sufficient to support all the expenses of the representative company because only Khon Kaen City Municipality has a budget in an amount of over 1 billion baht, while the budget of the other Municipalities ranges between 60 and 100 million baht. Furthermore, the said amount of budget is unable to be allocated for the entire project, or is only able to be partially allocated due to many other tasks of the Municipalities. Thus, the budget

for managing and operating Khon Kaen Transit System Co., Ltd., or KKTS, came from the private sector, namely, Khon Kaen City Development (KKTT) Co., Ltd. Apart from providing financial support and specifying the purpose of spending money for the 5 Municipalities (via the Khon Kaen Chamber of Commerce and the Federation of Khon Kaen Industries) to be further transferred to Khon Kaen Transit System Co., Ltd., or KKTS, KKTT also plays a major role in driving and initiating this project (The third representative of the private sector, personal communication, May 31, 2019). In other words, the partnership between the public and private sectors had already started when both sectors jointly pushed forward with the establishment of the project.

4) Basically, in the case of joint venture projects between the public and private sectors, the public sector needs to hold shares of more than 50%, as required by law, in order to ensure that the project's administrative power belongs to the public sector, not the private sector. However, in the case of Khon Kaen city, the public sector is represented by the 5 Municipalities holding aggregate shares of 100% in Khon Kaen Transit System Co., Ltd., or KKTS, without shareholding by the private sector. Therefore, the 5 Municipalities are currently deemed to have sole ownership and authorization to manage the LRT construction project, while management is implemented by Khon Kaen Transit System Co., Ltd.

5) A joint venture between the public and private sectors, according to the Public-Private Partnership Act, starts when any public authority in the public sector wants to implement a large project and seeks the private sector to join the investment through a concession, bidding, or other method, as shown in the below figure.

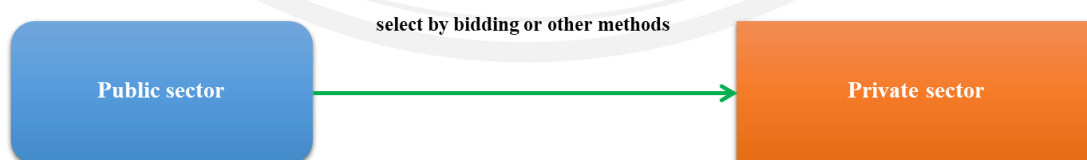


Figure 5.4 General Partnership between the Public and Private Sectors

Nevertheless, in the case of Khon Kaen city, the private sector initially participated in implementing and providing financial support for the project due to a lack of budget from the government, no accessibility to authorized decision makers in the central government, and a lack of other resources, such as information and a body of knowledge on LRT construction. Therefore, such partnership between the public and private sectors involves more collaboration than just joint investment in the budget because both parties want to make the project come true. Moreover, there is also the private sector, which is a representative of local administrative organizations. This private sector is not the company responsible for the construction, but simply the project administrator in place of local administrative organizations. However, the selection of the private sector for investment in the LRT construction project in Khon Kaen city will be made by a bidding process in the same way as other public projects. Such selection will be implemented by a private company representing the 5 Municipalities, as shown in the figure below.

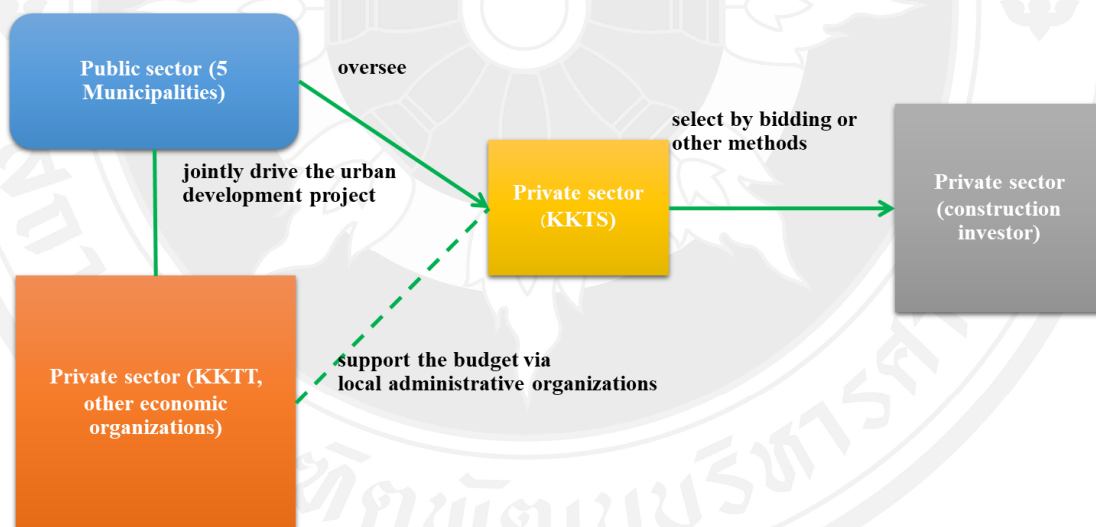


Figure 5.5 The Partnership between the Public and Private Sectors in Khon Kaen City

6) Despite having a partnership between the public sector (local administrative organizations) and the private sector, the enforcement of law regarding joint ventures between the public and private sectors (the Public-Private Partnership

Act, B.E. 2562), and compliance of the investment budget with the Public-Private Partnership Act, Khon Kaen city would not like to comply with the Public-Private Partnership Act because the city is afraid of delays in the project (The first representative of the private sector, personal communication, 2018). However, although the government will not be involved in this investment, and this partnership does not comply with the law regarding joint ventures between the public and private sectors, it does not mean that this project is not involved with the government or public authorities, because local administrative organizations were at least designated as the project operator under the name of Khon Kaen Transit System Co., Ltd., or KKTS. Also, the LRT construction project has to unavoidably get involved with public authorities, which will engage in giving cooperation and allow the use of public areas, comprising the Department of Highways, which is responsible for taking care of road surfaces relevant to the LRT construction; the Provincial Electricity Authority, which plays a role in supplying electricity and controlling the use of sufficient electricity; and the Rice Department, which has to move out of its existing area in order to have the area renovated for the LRT maintenance center. If without the cooperation from these public authorities, the LRT construction would not be completed.

7) Khon Kaen city has tried to not implement city development under the public system, for example by refusing to comply with the conditions of the Public-Private Partnership Act, or trying to establish a representative of the 5 Municipalities in the form of a private company. However, the nuts and bolts of the project still relies on the public system in order to ensure continuity of the project, including the use of official places (City Halls) to hold meetings, have high-ranking public officials of the province (Governor and Deputy Governor) act as the Chairman of the meetings, and use official correspondence issued by the Province in order to enhance the formality and credibility of the project. This indicates that Khon Kaen city's development project still relies on the public sector to drive the project so that the project remains ongoing and progresses.

Based on these considerations of the LRT construction project as a part of Khon Kaen city development, it was found that some unique characteristics of the Khon Kaen Model include the establishment of a representative in the form of a

private company, a budget from the private sector provided for the project's implementation, which probably does not gain a financial return, and the intention not to comply with the Public-Private Partnership Act, even though the investment amount of the LRT construction project meets the criteria to comply with the Public-Private Partnership Act. In other words, the partnership between the public and private sectors of Khon Kaen city may not comply with the Public-Private Partnership Act, but this partnership is in compliance with academic principles (The first representative of the private sector, personal communication, November 24, 2018). Therefore, the driving of Khon Kaen city development is a kind of partnership that draws the attention to see whether it will enable Khon Kaen city to achieve its target.

Although the LRT construction project is currently under negotiations between public authorities responsible for public assets and the project operator, and not entering into the construction stage yet, the form of the prospective partnership can possibly be estimated. In general, joint ventures between the public and private sectors varies, depending upon the agreement between both parties.

In the case of Khon Kaen city, the joint venture between the public and private sectors may not show any clear pattern because it is still at the beginning stages of the project. Nonetheless, according to this study on the partnership in the LRT construction project, it should be in the form of "Build Operate and Transfer (BOT)", which has the private sector make the investment, operate the project as scheduled in the agreement, and transfer ownership to the public sector at the end of the agreement. Khon Kaen city will adopt the bidding process to recruit private companies to make the investment in the LRT construction project. After the completion of construction, an agreement is to be made regarding the project operator, chosen from one party or as joint project operators from both parties. Finally, ownership of the LRT will be transferred to the public sector under the supervision of the 5 local administrative organizations.

However, this partnership does not involve only investment in the LRT construction, but also other types of investment from the private sector. In other words, the implementation of local administrative organizations via Khon Kaen Transit System Co., Ltd., or KKTS, incurs some expenses, while local administrative organizations do not have the budget subsidy for this purpose. Therefore, the budget

for implementation is provided by the private sector, and this may be regarded as another kind of partnership. However, the private sector has authorized the local administrative organizations to oversee Khon Kaen Transit System Co., Ltd. without demanding any compensation.

If the LRT construction project in Khon Kaen city can be successfully implemented, it will be a role model for other cities. Anyhow, it is undeniable that the project will have obstacles and risks, at present and in the future. In this regard, it is necessary to have players who can take and manage possible risks.

5.3.5 Risk

It is inevitable to mention risk when an investment is made. Although this is a partnership between the public and private sectors, it does not mean that there will be no risk. Particularly, a project in the form of a partnership is usually of a large scale, with a high investment amount and a rather long period of agreement, so the risks should be dispersed to related sectors so as to clarify responsible persons throughout the term of the agreement. The risks may result in increased investment, delays, or possibly cause the project to be unable to achieve its target (Monteiro, 2010, p. 263; Queiroz & Martinez, 2013, p. 85). Such risks can arise from both external and internal factors of the project (Li et al., 2005).

Partnerships between the public and private sectors pose a kind of risk diversification. In principle, the public sector is unable to load all the risk onto the private sector, while the private sector has to find how to manage possible risks and solve related problems in the future. Certainly, the LRT construction project should provoke risks as well. Both public and private sectors participating in this project will realize some risk, and must try to find out how to prevent or manage such risks. The explanation will be divided into 2 parts, consisting of the risks of the public sector, and the risks of the private sector, as well as an analysis of the overall risk.

5.3.5.1 The Risks of the Public Sector

The public sector engaged the private sector into this partnership partly in order to mitigate risks against the public sector, especially local administrative organizations, which are not highly capable of managing possible risks. The risks of a large project are likely to be more severe than a small project, therefore, the local

administrative organizations participating in the LRT construction project of Khon Kaen city need to find out how to mitigate risks and avoid risk impacts, because the local administrative organizations may be unable to tolerate the risks of this project (The fifth representative of a local administrative organization, personal communication, February 13, 2019).

Considering the possible risk of the project affecting local administrative organizations, many cases could arise, for example, changes in rules and regulations, loss of the investment budget (regarding the feasibility study) if the project is unable to be continued, or the risks from mistakes in planning or formulating policies, and so on. These risks may not be severe, but could possibly affect the confidence of external parties and other people towards the local administrative organizations.

One approach to mitigate risk among the 5 local administrative organizations is to cooperatively operate via Khon Kaen Transit System Co., Ltd., which has professional administrators consisting of business operators and former executives of economic organizations who manage the company. This would partially mitigate risks in management because the local administrative organizations may be unable to manage the project by themselves due to limitations of time, knowledge, and regulations. Thus, Khon Kaen Transit System Co., Ltd. was established to perform some actions instead of the public sector, and possibly help mitigate risks before the risks are imposed on the local administrative organizations, such as the risk of financial loss, and so on. However, the local administrative organizations viewed that their organizations might be only slightly affected by risk or have no risk at all (The fourth representative of a local administrative organization, personal communication, December 18, 2018). On the contrary, the local administrative organizations decided that they would receive benefit from the land development and gain more income from various types of taxes (The fifth representative of a local administrative organization, personal communication, February 13, 2019), or the possible risks may not severely affect the local administrative organizations because they do not make the budget investment in the same way as the private sector, which is directly burdened by profit/loss results.

When the public sector represented by the local administrative organizations tries to find how to minimize the impact of possible risks, it is undeniable that the risks are likely going to affect the private sector, consisting of those who have already made an investment in the project and those who are submitting a bid in the future. The private sector probably encounters 2 main risks if the project can proceed to the construction stage.

5.3.5.2 The Risks of the Private Sector

The main risks to be imposed on the private sector are comprised of both business risk and political risk. The business risk is that the LRT does not gain popularity among people (The second representative of the private sector, personal communication, May 21, 2019), so there are few passengers, possibly resulting in the loss of the project. Although a feasibility study was conducted to estimate the route and stations, potentially drawing the attention of passengers, the estimation could not guarantee whether the future outcome would be exactly the same as the results of the study. Nevertheless, the private sector realizes such risk, and has sought how to increase income from other channels through TOD in order to provide another source of income for the project (The first representative of the public sector, personal communication, 2019; The sixth representative of a local administrative organization, personal communication, 2019). This alternative may make profits for the project (The fifth representative of a local administrative organization, personal communication, 2019). However, the private sector, especially Khon Kaen City Development (KKT) Co., Ltd., realizes this kind of risk, so a measure was placed for determining a loss limit. In case the actual loss reaches the limit, the investment would be terminated in order not to affect local people and local administrative organizations (The second representative of the private sector, personal communication, May 21, 2019). As for the private sector, which is about to make investment in the LRT construction, they should previously estimate the situation before joining the bidding, and probably have measures in place to deal with such situations.

Political risk is defined as risk regarding changes in regulations in case of a new government (The second representative of the private sector, personal communication, May 21, 2019) that could take place at any time. The new

government may not follow the policy of the former government and change some agreement. In this regard, such changes in regulations may not have so much impact that the project needs to be terminated, but it may obstruct the project's implementation, causing the project to be delayed and the investment cost to be affected. This kind of risk is unpreventable, but some strategies should be formulated so as to cope with changes.

It was found that the risks to the private sector are difficult to be controlled and estimated, as well as probably adversely affecting the investment. Nonetheless, the private sector is supposed to be familiar with such situations because any business operation normally faces this kind of risk. However, the LRT construction project does not belong to only one person, but is a public project which has a substantial impact, so it is necessary to plan how to manage risks carefully in order to prevent impacts against people in Khon Kaen city.

In addition, there are some other risks possibly affecting both public and private sectors which may severely affect the existence of the project, or just cause the project to be delayed. However, there are a few risks to be taken into consideration by both public and private sectors so as to find out how to mitigate such risks.

5.3.5.3 An Analysis of overall Risk

At present, although Khon Kaen city has been able to drive the LRT construction project in a concrete manner with the obvious responsible unit, there are several problems and obstacles to be resolved, especially the problem with the public authority located in the area of the project. Therefore, the first potential risk is that the project may be unable to proceed to the construction stage. In other words, no LRT construction at all, or the project gets indefinitely postponed. Such risk could adversely affect both public and private sectors, especially the private sector, which has made investment in several resources for the project. As for the public sector (local administrative organizations), although an investment budget was not made, termination of the project would have an impact on their image and confidence among the people.

There is another possible case where the project would continue but related public authorities would have some demands, causing the project to increase

its investment and raising the budget, because in this project it's unable to avoid a connection with local public authorities. However, this kind of risk may not have so much impact that the project would need to be terminated, but could possibly result in a delay in the project and higher costs, which could affect project management in the future. This risk directly affects the private sector, especially those responsible for the LRT construction. Meanwhile, the local administrative organizations may be indirectly affected, because if the project is delayed, people will firstly concentrate on the municipalities because they feel more familiar with the municipalities rather than other authorities.

Another risk to be taken into consideration is that the project may be resisted by some people who lose benefits or are affected by the project, such as those whose lands are expropriated or road users of Mittraphap Road. Both groups of people are directly affected by the project because, even though the first group receives compensation for land expropriation, they still need to move out of the place which is most familiar to them and find a new place. Meanwhile, road users of Mittraphap Road may have to face traffic problems during the long-term construction, and the construction may adversely affect road traffic safety.

To compare the risks of the LRT project with 3 levels of risk, namely, macro level risk, meso level risk, and micro level risk according to Bing, Akintoye, Edwards, and Hardcastle (2005), almost all the risk falls into the macro level, which takes place from external factors relevant to political, legal, economic, and social conditions. Such risks could come from forming a new government, changes in regulations, or legal interpretations which possibly affect the project, and so on.

The meso level risk that takes place within the project, involves implementation problems, including damages, location, design, and technology. These problems may be unclear because the construction has not started, but an initial risk appears to be the design, which utilizes traffic islands to install the track of the LRT without being elevated. This could possibly affect road traffic during the construction stage and when the LRT is open after completion of construction.

The last one is micro level risk, which comes from differences between the public and private sectors. The public sector needs to have social responsibility, while the private sector focuses on profitability. Therefore, this kind of risk partially

involves the structure because it highlights the differences between stakeholders of the project. The LRT project of Khon Kaen city is likely to face such risk because the project requires rather high investment costs, so the participating private sector may want to gain high benefits and charge costly fares. On the other hand, the public sector and local administrative organizations focus on providing services and wish to serve various groups of passengers. High fares may hinder some groups of people from accessing the service. In this regard, the public and private sectors should have a mutual discussion to optimize the balance in response to the requirements of both sectors, and maximize benefits for the general public.

Apart from the risks, there is the issue of benefits from the LRT project for both public and private sectors. They are likely to gain benefits, both directly and indirectly. An analysis is made in the following part.

5.3.6 Benefits

All sectors expect to gain benefit from making an investment, either in the form of tangible or intangible benefits. There are both direct benefits which can be clearly identified, and indirect benefits which have not been clarified at this moment. Expectations on future benefits is varied, depending on the role and characteristics of each organization. Likewise, the public and private sectors have different expectations towards benefits due to their different roles and characteristics.

The public sector mainly concentrates on public benefits. Although the public sector has made a lot of investment, the expected outcome may not always be financial benefits or profits, especially true for investment in public services for elevating the quality of life. Therefore, the public sector usually expects intangible benefits, such as increased quality of life, enhanced life security, or a better urban environment. Thus, the cost-effectiveness of the public investment cannot be calculated into financial profits. This does not mean that the public investment would always result in loss or should have no expectation of tangible benefits. However, gaining benefit in the form of tangible profits is not the main operational target of the public sector because, if the public sector aims to seek profits, several groups of people without financial potential may be hindered from accessing public services.

In the case of LRT construction in Khon Kaen city, the partnership between the 5 local administrative organizations (Khon Kaen City Municipality, Sila Town Municipality, Mueang Kao Subdistrict Municipality, Tha Phra Subdistrict Municipality, and Samran Subdistrict Municipality) representing the public sector and the private sector in managing the project, is regarded as a provision of public services in respect of the public utility, which is the duty of local administrative organizations. Benefits to the government could be both tangible and intangible, and could be received both directly and indirectly. It is undoubtable that the first benefit expected by local administrative organizations should be the alleviation of traffic congestion and a better environment in Khon Kaen city. A key objective of this project is to solve the traffic problem, with the expectation that people will reduce their use of private vehicles and turn to increasingly use the public transport system, possibly resulting in improved pollution levels in Khon Kaen city (output) and better quality of life (outcome). These benefits may not be measured in financial value. Nevertheless, in this project, apart from the investment in the feasibility study on the Bus Rapid Transit: BRT project, the public sector (local administrative organizations) did not make a financial investment in the construction (The third representative of a local administrative organization, personal communication, 2018; The sixth representative of a local administrative organization, personal communication, 2019), but did make other kinds of investment, for example, participation in driving the project, attending the brainstorm sessions to express opinions towards the project, joining in the public hearings, and so on.

As well, the local administrative organizations may gain other kinds of benefits, possibly in the form of indirect benefits. When the LRT runs through the areas of the 5 Municipalities, the city will absolutely expand, especially in the areas of Samran Subdistrict Municipality and Tha Phra Subdistrict Municipality located at the borders of Khon Kaen city, due to growth of the areas along the LRT route. Several large and small business units are likely to be set up, as well as areas developed for business operations around the tracks and stations (TOD) with business investment that should generate more income for the local administrative organizations (The second representative of a local administrative organization, personal communication,

2018; The fifth representative of a local government, personal communication, 2019). Also, local people will be able to go to Khon Kaen city more conveniently.

Contrary to the public sector, the private sector normally concentrates on seeking profits from investment. Thus, when it comes to benefits, the private sector will be our focus, rather than the public sector. In the case of LRT construction in Khon Kaen city, almost all investment, from the beginning, has been made by the private sector. Particularly, a budget of over 20 million baht from the private sector has been provided to support the operations of Khon Kaen Transit System Co., Ltd., which so far has not been able to earn sufficient income on their own (The fifth representative of a local administrative organization, personal communication, February 13, 2019; The third representative of the private sector, personal communication, May 31, 2019). This is a rather high amount of investment, so it is stimulating curiosity about the benefits to be achieved by the private sector from this investment.

It is generally known that Khon Kaen City Development (KKTT) Co., Ltd. was originated by the gathering of new generation business operators in Khon Kaen city who wish to see the proper development of Khon Kaen city, and to take part in helping elevate the urban quality of life in Khon Kaen city. Moreover, this development would be a basis for accommodating the economic growth of Khon Kaen city. Thus, business operators under the name of Khon Kaen City Development (KKTT) Co., Ltd. play a rather significant role in driving the LRT project in Khon Kaen city in association with local administrative organizations. The benefits to be returned to Khon Kaen City Development (KKTT) Co., Ltd. may not be a financial return, especially at the start of the project, which has not generated income for any party yet. However, when considering each partner in detail, it was found that there are business operators in the real estate business who own land next to the LRT route along Mittraphap Road, and in the automobile assembly business, or the construction material business. These businesses may gain many types of benefit from this project. Particularly in relation to the construction and assembly of the LRT, some co-founders of Khon Kaen City Development (KKTT) Co., Ltd. have owned this kind of business for some time, and have tended to join in the bidding of the construction or other related operations because they viewed that, although the concession of this project

given to Khon Kaen people would imply conflicts of interest, it would be better than having foreign investment (The fifth representative of a local administrative organization, personal communication, February 13, 2019). Another group of business operators to gain benefit from this project includes those whose land or business entities are located on Mittraphap Road. Although their lands or businesses were there before the start of the project (The fourth representative of the private sector, personal communication, September 3, 2019), it is undeniable that they will receive benefits from the project. For example, the LRT project may increase the price of land along Mittraphap Road, as well as housing estates or condominiums on that land, and the LRT helps people gain access to business centers, such as markets, more conveniently. In other words, the LRT project provides indirect benefits for these business operators. Considering this overview, the LRT may promote economic growth in Khon Kaen city, and that should be beneficial for business units in Khon Kaen city one way or another.

Nevertheless, the 2nd representative of the private sector affirmed that the participation of business operators in this project does not focus on personal benefits. Although the business sector would like to see profits, it is not necessary to always be like that. Moreover, the LRT project is planning to enter the stock market in the form of an infrastructure fund so that Khon Kaen people are able to hold shares and gain benefits from the project (The third representative of private sector, personal communication, May 31, 2019), as well as develop a social enterprise in order to distribute benefits to people, especially those in Khon Kaen city. After completion of the project, the private sector will try to fade out in order to continue driving other projects.

In summary, considering the overall benefits in terms of urban or provincial development from the LRT project of Khon Kaen city driven by the private sector in association with the public sector in the locality, Khon Kaen city and Khon Kaen Province should gain benefits from this project (The representative of local media, personal communication, December 18, 2018) because this project has the potential to accommodate economic growth in the city in the future. However, these benefits may be linked to some business groups, especially business operators who are co-founders of Khon Kaen City Development (KKTT) Co., Ltd. Nonetheless, if this project enters

the stock market, the benefits are likely to be distributed to people in Khon Kaen city, but not all people, just those who are able to invest in the stock market. In this regard, if this project can be developed into a social enterprise, some benefits should belong to a greater number of Khon Kaen people. Anyhow, next is to consider which form of benefit is to be provided, and which group of people should oversee the operations (control rights) and manage the income or benefits (income rights).

5.4 Factors Enabling Khon Kaen City to Drive the Urban Development Project

Khon Kaen is a city which is familiar with urban development by local people. Although they are currently facing problems that are causing the project to be delayed, it is remarkable that Khon Kaen city actually drives their urban development with local people, and without having the public sector take a major role in promoting the project in order to achieve Khon Kaen city development in a concrete manner. However, it is noticeable why local people pay attention to this urban development project, which is of a large scale and with a high investment amount, and usually under the responsibility of the government rather than local people.

The concept of urban development by the locality came from local people, especially those in the people sector and business operators in Khon Kaen city, those who would like Khon Kaen city to be developed to accommodate economic growth for the future. Khon kaen is not so large and significant that it would draw the attention of the government to make an investment in large infrastructure, and it's not one of the primary provinces in the country's development target. As a result, Khon Kaen city does not receive any feedback from the government (The first representative of the private sector, personal communication, November 24, 2018). In other words, "the partnership is stimulated by a lack of the government support for growth" (Pattiyra Poapongsakorn, 2017).

The driving of this large project as a part of Khon Kaen city development started with partial capital from Khon Kaen city, namely, the local people (in Khon Kaen city), comprising business operators, the people sector, and local administrative organizations. However, it is not easy to manage this matter, due to the impact on a wide array of related people, including the government and regional authorities.

Therefore, it is necessary to gain endeavor and cooperation from all related sectors based on the principle of a “triangle that moves the mountain”, consisting of knowledge power, people power, and State power (The sixth representative of a local administrative organization, personal communication, September 26, 2019). With regard to knowledge, the Project Committee conducted a feasibility study of the project and searched for information on project management. As for people power, there have been several brainstorm sessions for exchanging opinions. Lastly, the government approved in principle of the large public transport system to be established by the local administrative organizations of Khon Kaen city. Therefore, these 3 components could significantly enable Khon Kaen city to make a phenomenon that’s never happened in any regional city before.

However, this study can summarize the following factors contributing to the establishment of the LRT construction project and the ongoing progress of the project. Although there are some problems and obstacles at present, Khon Kaen is regarded as the first province attempting to implement a large public project on their own, without relying on a budget from the government.

1) Extraordinary political situation – The committee for driving Khon Kaen city’s development project proposed the concept of a public transport system for solving the traffic problem of Khon Kaen city. General Prayut Chan-ocha, Head of the National Council for Peace and Order (NCPO) at that time, has endorsed it in principle and provided his signature. The LRT construction project has continued up until the present. However, the use of this approach may not be in the way it should be. Nonetheless, driving the project in compliance with official regulations while waiting for budget allocation from the government can take several decades to start the project. Since the private sector, people sector, and local administrative organizations would like the urban development project to be initiated as soon as possible, they decided not to wait for the budget from the government. In gaining approval from the government to implement the project by themselves, the local authorities will seek the budget for the project’s implementation on their own (The fifth representative of a local administrative organization, personal communication, 2019).

2) Most business operators who are engaged in the urban development project of Khon Kaen city were born and raised in Khon Kaen Province. They are descendants of business operators who have been settled in Khon Kaen Province from generation to generation, not moving in from other places. Thus, these people are very fond of Khon Kaen Province, and wish to develop Khon Kaen city for a better future for their offspring. As a consequence, they agree to provide financial support in order to initiate this urban development project. Investment in the Khon Kaen city development project may help expand business opportunities as well.

3) Related sectors give cooperation and find solutions together. In particular, the public sector, represented by local administrative organizations, the private sector, and the people sector, have cooperatively driven the project in a continuous manner. In this regard, Khon Kaen city has a rather high social capital for driving projects for the sake of the general public or social development. Each group builds mutual trust. Particularly, the business operators have a clear standpoint that they would not enter into local political competitions by means of not voting in the election in order to disqualify themselves from political competition at all levels. Besides, each group has networks at the local and national levels to provide assistance or give advice for solving problems.

4) Regional administrators (provincial governors) have given cooperation with the concept of Khon Kaen city development (The third representative of the private sector, personal communication, May 31, 2019) at the initial stage of the concept under the governing period of Mr. Kamtorn Thawornsatit (2014-2016), 2nd Khon Kaen Governor during the stage of driving the Khon Kaen city development concept, Mr. Pongsak Preechawit (2016-2017), and the current Khon Kaen Governor, Dr. Somsak Jangtrakoon. All of these administrators have provided continuous support for the driving of the LRT construction project, as evidenced by the fact that the meetings for monitoring the progress of the project have been chaired by the Khon Kaen Governor or Deputy Governor. As for the reason for supporting Khon Kaen city development, Dr. Somsak Jangtrakoon viewed that both public authorities and the Project Committee had the same target of creating a good quality of life for the people (The first representative of the public sector, personal communication, September 25, 2019).

5) The construction of large-scale projects requires a large amount of budget. If the government has insufficient budget, it is necessary to request for loans from financial institutions. However, if local authorities are permitted to make the public investment without relying on the budget from the government, the country's public debt ratio would be decreased (The third representative of the private sector, personal communication, May 31, 2019).

6) It's been recognized that Khon Kaen city's development project can move continuously forward because leaders in the local administrative organizations and the private sector are self-dedicated, determined, and try to work in an attentive manner (The fourth representative of the private sector, personal communication, September 3, 2019). The running of this kind of project is not easy, and has to face several complicated problems and obstacles. Moreover, it is necessary to rely on cooperation to find solutions if they expect to successfully complete the project as planned.

The aforementioned factors have enabled the LRT construction project to continue right up to the present. This demonstrates strengths of the Khon Kaen city development project that are hardly seen elsewhere. Khon Kaen city possesses 3 outstanding strengths as follows:

1) A bottom-up approach (The first representative of a local administrative organization, November 20, 2018) is the driving force of this project by local people in both the public and private sectors which realize the importance of urban development for elevating the quality of life and accommodating the economic growth of Khon Kaen city. Moreover, the said investment in urban development does not require budget from the government because local authorities realize that the government has insufficient budget, and Khon Kaen city is not a target city for development by the government, anyway. In this regard, the city would not want to wait aimlessly for a budget from the government. Therefore, Khon Kaen decided to develop their city using its own resources and not rely on a budget from the public sector, especially the central government.

2) The driving of Khon Kaen city's development project demonstrates the synergy at all sectors (Patriya Poapongsakorn, 2017), comprised of the public sector (local administrative organizations, university), the private sector (business

units, media, and people sector), and the regional sector, especially Khon Kaen Governors in the past and at present, all of which cooperatively drive the project, solve problems, and find solutions to enable the project to achieve its target. The driving of this kind of project is not easy, and has never taken place before in Thailand. Thus, it is necessary to rely on information and cooperation from all related sectors. The Project Committee has continuously held meetings chaired by the regional sector to report on progress of the project. Additionally, public hearings have been held to listen to opinions from people and representatives of some groups, such as disabled people, youths, and so on.

3) The regional sector has a modern viewpoint towards the administration. The regional sector, especially the Provincial Governor, has no intention of prohibiting the progress of this project. On the contrary, the project has been provided with support and assistance based on the scope and responsibility of his authority, because the Provincial Governor came up with the idea to give first priority to the development of quality of life. Therefore, the regional sector is ready to fully support any project beneficial to the people (The first representative of the private sector, personal communication, September 25, 2019). It is fortunate that Khon Kaen city has been provided with helpful support and advice from the regional authority to drive this project.

Nevertheless, although there are several factors enabling Khon Kaen city to drive this project in a way never seen elsewhere, this project has faced several problems and obstacles, especially regarding the public authorities, causing the project to cease or slow down. The explanation is to be provided in the following part.

5.5 Problems and Obstacles of Khon Kaen City Development

Khon Kaen city is recognized as a role model of urban development, especially for development without the expectation of a budget from the government. Moreover, the urban development concept came from local people, it was not a project initiated by the government. Consequently, urban development in Khon Kaen city is distinguished from more typical development in Thailand, which normally waits for a decision from the government to designate the areas to receive a budget

and the issues to be developed. Meanwhile, areas which are considered unnecessary to be developed simply wait for consideration by the government in the future.

Considering the attempt of Khon Kaen city to stay away from the traditional development concept and practice. The city would not like to wait for a decision or offer from the government, but find how to develop their city in their own way without relying on the government. In the overview, the urban development implemented by Khon Kaen city is rather difficult due to a lack of clear practice guidelines, as it has never been implemented elsewhere. The involvement of multiple public authorities (The fourth representative of the private sector, personal communication, September 3, 2019), such as the Ministry of Transport, Ministry of Interior, Ministry of Agriculture and Cooperatives, Treasury Department, Department of Highways, and so on (The sixth representative of a local administrative organization, personal communication, September 26, 2019), include central and regional authorities. As a result, the project has faced several problems and obstacles. However, there are 2 that are significant problems affecting the progress of the project, as follows:

- 1) This urban development in the form of the Khon Kaen Model is the first of its kind.

The Khon Kaen Model is the driving force behind this urban development by local authorities and could be counted as the first project of its kind in Thailand (The sixth representative of a local administrative organization, personal communication, September 26, 2019). This kind of implementation is new to both public and local authorities. Thus, there has not been any clear practice guideline, as well as no formal procedures in the public sector. Moreover, the new model is contrary to the traditional practice whereby the government designates the areas to be developed, not from a request by local people. Thus, the government needs to be cautious due to a lack of clear regulations. Meanwhile, the Project Committee has to explore legal solutions to be able to continue the project. Therefore, the driving of this project seems to be a trial-and-error process, and needs to find unique solutions when facing any problems.

The new driving approach became a problem for the project, especially since the approach was unexpected by the public sector. In addition, although this is a

partnership between the public and private sectors, it does not comply with the Public Private Partnership Act. Therefore, this new approach brings about questions as well as the verification of regulations. For example, the classification of the company representing the local administrative organizations as a private company or a state enterprise. In this regard, the status of Khon Kaen Transit System Co., Ltd., or KKTS, could impact the driving of the project in the future.

This kind of problem has caused the urban development project of Khon Kaen city to be delayed because there has not been any formal implementation guideline and role model. Also, the public sector has to consider various elaborate issues so as to ensure compliance with regulations. Moreover, a large number of people will be affected, including people in Khon Kaen city and other people commuting into Khon Kaen city. Therefore, the new project is like a trial-and-error process which needs to solve problems continuously and search for information carefully, resulting in possible delays to the project.

2) Problems of Using Public Assets

The LRT construction project also uses public assets. The Project Committee realized that valuable resources of the government would be utilized to maximize benefit for the country and the (The sixth representative of a local administrative organization, personal communication, September 26, 2019). However, the use of public assets is not easily done despite their being used for the sake of the general public, because public assets are commonly used by various groups of people and these people could be negatively affected. Therefore, the public authority who is in charge of each asset has to take cautious consideration in order to prevent undesirable impacts.

The public assets to be used which remain problematic are the traffic islands and the road shoulder of Mittraphap Road which are to be developed into the LRT route. This is under the responsibility of the Department of Highways. Although the Department of Highways did not refuse the request to use the traffic islands and road shoulder of Mittraphap Road, there are many conditions that need to be fulfilled by the project according to the Notification of Department of Highways No. KorKor 06143/AorTor4843/701 dated January 27, 2017. The conditions are rather difficult and may take a long time to be fulfilled. Details are as described below.

(1) Requirement to submit the results of traffic volume calculations and estimations of future traffic volume in order to perceive effects on traffic lanes around the construction area and ensure that there will be no impact on the road extension of the Department of Highways in the future.

(2) Requirement to propose details regarding the construction methods around existing U-turns, intersections and areas in front of or behind Khon Kaen road tunnels in compliance with the development pattern of the Department of Highways and prospective traffic improvements in the future.

(3) Requirement to estimate the traffic volume, commutes between communities along the route, and how to widen traffic lanes, as well as demonstrate traffic management which enhances convenience and safety in each area at present and in the future.

(4) The proposal is required to present the construction methods, traffic management, and processes possibly causing excavated earth, filled land, or effects on traffic during the construction and on other areas nearby the project.

(5) The proposal is required to present the practice guidelines and approach for reducing impacts on the extension of highways in the future in case the Department of Highways is to implement an extension or improvement of highways.

(6) The proposal should add a drainage system in order to minimize impacts on existing drainage systems of the Department of Highways.

(7) The road surfaces, barriers, guard rails, traffic signs, traffic lines, retro-reflecting devices, lighting and traffic signals are required to be installed according to the standards of the Department of Highways, including during the construction stage.

(8) The installation/construction of materials is required not to obstruct public utilities and/or affect people whose residences are located next to the roadside during and after the installation.

It was found that the conditions demanded from the Department of Highways to be fulfilled by the LRT Project Committee emphasized safety and convenience of all road users. Although LRT construction has been permitted, people should be able to use the road as usual and safely, the same as in a normal situation before construction. It is the responsibility of the public sector in charge of public assets to

give first priority to the general public. There has been concern over the case of changing traffic lanes as a result of the use of the traffic island. This case requires budget for the implementation, but it has not been finalized as to which authority will be responsible for the budget allocation.

It may not be easy to achieve such conditions, especially the estimation of traffic volumes in the future or the construction plan required to comply with the prospective extension or improvement of highways according to the plan of the Department of Highways. Nevertheless, the Project Committee may be able to fulfill all conditions, but needs to take a certain period of time, possibly causing the project to be delayed.

Apart from the use of Mittraphap Road under the responsibility of the Department of Highways, the LRT construction project requested the use of Ratchapatsadu Land located at the heart of Khon Kaen city to establish the maintenance center, and may develop the area into a public space accessible to all people, as well as for commercial development. However, this area has been the location of the Khon Kaen Rice Research Center under the supervision of the Rice Department, Ministry of Agriculture and Cooperatives. If the project would like to use this area, the Khon Kaen Rice Research Center has to move out of the area. In this regard, negotiations have continuously been made between the Khon Kaen Rice Research Center and representatives of the Project Committee, but there has not been any clear conclusion. However, the Khon Kaen Rice Research Center proposed some conditions to the Project Committee in exchange for relocation to a new place, as follows: (The Third Representative of Public Sector, 2019)

- 1) The private sector has to find a new area which is appropriate for rice farming based on potential rice production zoning in Thailand and located not more than 30 kilometers away from Khon Kaen city.

- 2) Have sufficient sources of water for rice farming throughout the year without any flooding problem.

- 3) Have the whole area of approximately 700 Rai, consisting of the administrative building, meeting room, training center, dormitory, laboratory, workshop, seed vault, seed conditioning area, drying slab, residence, reservoir, ditch and paddy fields for research and seed production purposes.

- 4) Have a surrounding fence.
- 5) The area needs to have the availability of public utilities, such as schools and nearby hospitals for providing staff welfare.
- 6) Have the availability of roads, electricity, water supply, telephone, and internet.

It is undeniable that the relocation of official places is not easily done because it is necessary to prepare a new place to enable public officers to start working immediately and ensure continuity of service to prevent impacts on the general public. Moreover, there is another concern over public officers and their family members having to move to a new residence located over 10 kilometers from the current location and far from the conveniences in the city. This is regarded as another cost. Also, the Khon Kaen Rice Research Center needs to ensure that after moving to a new place, work efficiency would be equivalent to or better than working in the old place. Because the mission of the Khon Kaen Rice Research Center is to plant rice seeds, if they moved to any area inappropriate for planting and developing rice seeds, the output could be deteriorated. Therefore, the above conditions for compensation as requested by the Khon Kaen Rice Research Center requires a certain period of time to be prepared in order to prevent effects on the task and mission of public authorities in the future.

Thus, the request to use public assets is a significant problem of the LRT construction project, especially the use of the road surface at the traffic island and the shoulder of the road. Nevertheless, the railway public transport system featuring either elevated-track or at-grade track is supposed to affect the structure of the road during and after the construction stage, so the planning has to be made carefully and clearly in order to prevent prospective problems.

With regard to the use of the area of the Khon Kaen Rice Research Center, although the Treasury Department, the owner of the area, has no objection if the LRT project would like to use the said area, the Khon Kaen Rice Research Center is currently occupying that area. If the conditions of compensation are unable to be mutually agreed to, the project probably needs to consider another location for the LRT maintenance center to be able to continue with the project.

In conclusion, the necessity for local authorities to comply with conditions or legal requirements of the central government regarding the partnership between the public and private sectors in providing public services implies incomplete decentralization to local administrative organizations. Comparing this issue to overseas, local administrative organizations are able to decide and collaborate with the private sector to easily establish a railway public transport system, such as in every city in Japan, one of which is Kyoto, with the availability of public transport companies named Keihan, Kintetsu, JR, and so on.

Nonetheless, the LRT construction project has not made it half way yet because the construction stage has not started. Afterwards, when the project enters into the construction stage and starts operations, several problems and obstacles may arise and possibly affect project implementation.

The LRT construction project, which is part of the Khon Kaen city development project in respect to Smart Mobility, is regarded as a role model of urban development by local people. The partnership between 5 local administrative organizations and the private sector represented by business operators in Khon Kaen city, as well as cooperation from the university and people sector, enables the project to proceed for gaining approval from the government. However, there have been some problems and obstacles causing the project's slowdown while waiting for negotiations on an agreement between related public authorities.

CHAPTER 6

CONCLUSION

This thesis examines the operation of the City of Khon Kaen's urban development project to transform the city into a Smart City. The project focuses on the construction of Light Rail Transit (LRT) and how the City of Khon Kaen can be a model for other cities in the country. This thesis argues that Khon Kaen is a unique example of a new type of urban development in Thailand. Although certain problems are still outstanding and the LRT project has not made much progress, this thesis argues that the City of Khon Kaen is nevertheless a model to other provinces with similar urban development ambitions.

This chapter summarizes the overall findings of the thesis. It is about how Khon Kaen's urban development project has been promoted. A discussion of the findings, policy recommendations and limitations of this thesis are outlined accordingly.

6.1 Research Findings

The City of Khon Kaen is located in the center of the Northeast region of the country. It has experienced significant and fast-paced economic development. The population density is high because the city is a hub of education, public health and business units in the region. Economic expansion of the city is also due to the fact that the Northeast is a part of the Greater Mekong Sub-region Economic Corridor. Khon Kaen Province is more industrialized compared to other provinces. In the future, a dry port will be constructed near the city. Because of these factors, people from other provinces have migrated to Khon Kaen, especially to its urban areas, looking for work, business and educational opportunities, as well as public health care services. This could result in non-directed urban development in the near future.

Because of this situation, the population of the city is dense and the city is congested. The city faces several problems related to traffic, waste management and the environment. Local actors have come up with ideas on how to ensure sustainable urban development as the city's economy continues to grow. Therefore, the City of Khon Kaen is managed in a way to make sure that people have a better quality of life. There is now a partnership between the public and private sectors in Khon Kaen for its urban development, beginning with the construction of a Light Rail Transit (LRT) system, as part of an expanded public transport service.

The Light Rail Transit project, or LRT, (phase 1) is considered the starting point of an urban development scheme intended to transform Khon Kaen into a Smart City. The objective of this LRT construction is to facilitate everyday transport services and support the effectiveness of the public transport service in the province. The project will be run together with the Transit Oriented Development concept. The City of Khon Kaen, therefore, will be used as a model for LRT projects.

The route of the Light Rail Transit (LRT) comprises both an elevated part and a part on land along Mittraphap Road. The land rail part occupies the space between the road and the side of the road, that is, the road shoulder. The route is 26 kilometers long and runs from north to south, with 21 stations between Tha Phra Municipality and Samran Municipality. The LRT will use fifteen electronic trains, each of which has three carriages with a capacity of 180 passengers per train. The trains are produced in Thailand.

In addition to the LRT project, there is also a project by the Transit-Oriented Development (TOD) that will develop the land around the planned public transport stations. This project aims to create compact mixed-use areas around the stations that will include housing, groceries, business units and other facilities. They will be located near the public transport system to encourage people to use the public service instead of personal vehicles. The land development project will be within a five-hundred-meter radius of the stations and will be set up on both sides of Mittraphap Road.

In other words, the Light Rail Transit (LRT) of Khon Kaen is the first step in broader urban development plans to transform Khon Kaen into a Smart City. If this

project is completed as planned, the City of Khon Kaen will become a model for other cities with similar levels of capacity.

The beginnings of the urban development plan can be traced back to a seminar held in 2010 titled “Liao Lang Mong Patchuban Kap Khwam Wang Khong Khon Kaen Thotsawat Na”, which translates to “Looking Backward and Watching the Present with the Hope of Khon Kaen over the Next Decade”. The seminar was attended by representatives from the Khon Kaen Municipality, the Local Administration of Khon Kaen Province, the Lawyer Council, the Chamber of Commerce of Khon Kaen, the Khon Kaen Provincial Industries Council, Khon Kaen University, the Council of Organization Communities and many others. A number of topics were discussed during the panel. However, what attracted the most attention was a discussion on public transit. At the seminar arose the idea of Bus Rapid Transit (BRT). However, due to potential limitations in fund raising, it was decided that only a rail system would be possible. The BRT project was therefore changed to a Light Rail Transit (LRT) system so that the plan would meet the conditions for fund-raising in the future.

Building large-scale basic infrastructure such as a public transport service requires a significant amount of money. The budget from the local administration is insufficient. In the case of the BRT, the main problem was that the central government did not have funding for it. Consequently, the private sector had to provide the financial support. However, the cost of the BRT still created fund-raising concerns. Therefore, Light Rail Transit (LRT) was initiated with financial support from the private sector. It was agreed that the private sector would manage the project plan, budget and construction until everything was completed.

When it was decided that the City of Khon Kaen would construct the LRT in partnership with the private sector, Khon Kaen University and the Office of Transport and Traffic Plan (OTTP) collaborated by conducting research on the feasibility of the project. The plan was approved in principle by the National Council of Peace and Order (NCPO). This project would not require funding from the central government, which reveals a bottom-up approach in policy making. The construction of LRT was initiated and driven by local actors. The government only needed to approve construction.

When we consider the development of Light Rail Transit in the City of Khon Kaen, it is clear that it is not only mass media and civil society that can initiate local development projects, but also the private sector, such as the Khon Kaen City Development Co, LTD (KKTT), and the five local administrations of Khon Kaen, Mueang Sila, and Tha Phra Municipality advancing and putting the project into practice. The five local administrations have managed the project through the Khon Kaen Transit System Co. LTD (KKTS), which tried to define itself as part of the private sector.

The Khon Kaen Transit Development Co, LTD had its license registered on 9 January 2015 with a registered capital of 200 million baht. It was formed in collaboration with top business leaders in Khon Kaen who belong to a younger generation and recognize some of the problems the city could face if there is further unplanned urban expansion in the future. Therefore, basic infrastructure needs to be planned to tackle urban expansion. The co-founders include fifteen businessmen from the Khon Kaen Transit Development Co., LTD (KKTT) and seven advisors. Twenty large-sized companies are taking part in the project. Parts of it will be considered as their own business as well. The fund-raising costs totaled ten million baht each, and the total amount collected was 200 million baht. In addition, eight other economic organizations and twenty-four Chinese organizations in Khon Kaen were asked to join the partnership.

The role of the Khon Kaen Transit Development Co, LTD (KKTT) was formulated by a 'Think Tank' group that provided ideas for Khon Kaen's urban development. The 'Think Tank' is an organization that collects expertise, partnerships, collaborative forces, and funds. Its aim is to develop the basic infrastructure of Khon Kaen in terms of design and identity that urban development needs in line with recommendations from academic experts. Therefore, the expansion of the city has a clear direction to be a hub for Association of Southeast Asian Nations (ASEAN) and be transformed into a city of the future.

Considering the groups who took part in founding the KKTT, the younger generation of business persons in Khon Kaen inherited their businesses from their parents, which are quite large and well-established not only in Khon Kaen, but also in the northeastern region and even at the national level. In addition, these persons are

aware of how business management should be run. Some have held key positions in Khon Kaen business circles, such as the President of the Chamber of Commerce and the Council of Industries. These persons are the business elite of the city. It is no surprise that a number of economic organizations and private sector groups took part in the project and the investment partnership with the City of Khon Kaen. This has thus provided key support for the Light Rail Transit (LRT) project.

However, Khon Kaen Transit Development Co., LTD (KKTT) restricted its roles to only planning, providing advice on urban development, providing needed information and negotiating with authority figures in key decision-making positions about related matters. The five municipalities are responsible for managing the project through the company.

The municipalities (Khon Kaen, Mueang Kao, Sila, Samran and Tha Phra) are located along the planned route of the Light Rail Transit (LRT). These organizations are part of the public sector in the national administration structure. According to Khon Kaen's urban development plan, the five municipalities are key actors for collaboration with the private sector and civil society to drive the Light Rail Transit (LRT) project in the city. However, the public and private sectors are still seen as different units. The five municipalities are running the urban development project according to the Municipal Act BE. 2496 (1953), as it allows the municipalities to collaborate with other local administrations to form a project for basic infrastructure improvement. The public sector must have no less than 50% of the shares according to Chapter 4, Section 58. It indicates that two municipalities can form a partnership on certain duties that bring significant benefit to their communities. The Khon Kaen Transit System Co., LTD (KKTS) was founded to run the management of the Light Rail Transit Project (LRT) and other projects related to future urban development. The company is monitored by the five municipalities, as they are the owners of the company. Their total share is 100 percent.

The reason for creating a partnership in the form of the Khon Kaen Transit System Co., LTD (KKTS) is because local administration belongs to the public sector and must conform to stricter regulations and procedures. Therefore, looking for private sector organizations to operate in place of the local administration avoids or

lessens the burden of having to overcome time-consuming bureaucratic procedures. This may thus lead to a more agile operation.

The Khon Kaen Transit System Co., LTD (KKTS) registered its license on 24 March 2017. The initial registered share was 5,000,000 baht, which came from the 4,000,000 baht donated by the Chamber of Commerce to the Khon Kaen Municipality. Four other municipalities donated 250,000 baht, a donation approved by the Minister of Ministry of Interior. It was aimed at being the representative of the five municipalities for project management of the Light Rail Transit (LRT).

The Khon Kaen Transit System Co., LTD (KKTS) created an executive commission with positions that have a term of two years. Once the term is completed, the executives can resume the office for another term if they are re-elected. Those asked to join the executive team are business persons in Khon Kaen. They are not part of any local administrations to ensure the project remains transparent and professional. Four executives used to hold key business positions in the City, with the exception of General Chatchai Praditphong. He was appointed by the commission as the president of the executive commission. He was previously an executive at the Metropolitan Rapid Transport (MRT) of Bangkok.

These days, the role of the Khon Kaen Transit System Co., LTD (KKTS) is limited to management of the construction of the Light Rail Transit (LRT). The five municipalities have their own representatives that are part of the LRT project who advise management. Part of the income is from the selling of construction permits through an auction. At the moment, the Light Rail Transit (LRT) project is looking for ways to overcome some problems that have been obstructing construction of the Light Rail Transport (LRT).

As previously mentioned, the Light Rail Transit (LRT) of Khon Kaen is a project that is best described as a partnership between the public and private sectors. Although the five municipalities could work together as a private company, they are still part of the public sector. Khon Kaen City Development, Co, LTD (KKTC) is not part of the working team of the Khon Kaen Transit System, Co, LTD (KKTS). However, the former has looked for someone who can provide financial support to the company so that the operation of KKTS can be maintained, as it does not have its own income yet.

It is not yet clear what form the partnership will take at the completion of the project. However, according to analysis of the partnership of the Light Rail Transit (LRT), it is more likely to be in the format of “Build Operate and Transfer (BOT)”. The private sector are members of the investment and management team according to the timeframe indicated in the contract. When the contract is completed, the project will likely be transferred as state property. The City of Khon Kaen therefore employs the method of auctioning to look for private sector actors interested in participating in the construction of the LRT. Once construction is completed, a decision will be made about the management of the project, and who will become members of an executive team and who will be the manager of the project. Eventually, the Light Rail Transit (LRT) will become property of the municipalities of Khon Kaen under the monitor of the five local administrations.

However, it was noted that in the partnership between the private and public sectors of the City of Khon Kaen, the former was part of the local government, not the central government. Also, there was not only one local administration involved, but five. They resorted to channels made available through the Municipal Act B.E. 2496 (1953) so that the operation of the project would be flexible. The partnership between the public and private sectors insists that it will not operate under the Private Investment in State Undertaking Act, although the size of the investment conforms to the Act. There were doubts about whether the project would be completed on time if all the regulations in the Private Investment in State Undertaking Act were strictly observed.

The risks of the project can be divided between risks to the public and risks to private sectors. The risks are not just financial, because the public sector is not investing financially in the project. The risk for the public sector is largely about image if the project were not completed. On the other hand, the private sector faces more risks than the public sector, because it faces both business and political risk. Risks in the business domain include failure to make a return on investment, while the political risk comes in the avoidance of various regulations that may not be tolerated if there is a change in government. A new government might not continue the policy of the previous government, or there might be a change in the terms or condition of the project.

In conclusion, the risks to the Light Rail Transit (LRT) project are external and at the macro level. Most of the risks are concerned with possible political, legal, economic and social consequences the project might face, which can come as a result of a change in government or regulations. Legal interpretation could also affect the project.

Apart from the aforementioned risks, the public and private sectors expect both direct and indirect benefits from the project. For the public sector, the main expected benefit is to address the traffic problem and to improve Khon Kaen's air quality. Moreover, the five local administrations will benefit from an increase in income. The Light Rail Transit (LRT) route will help manage urban expansion along the LRT route as businesses get established along the rail roads.

For the private sector, the successful development of Light Rail Transit (LRT) could lead to economic growth and create economic opportunities for several kinds of business, especially real-estate and others who have participated in investment of the construction. However, it is not certain if the construction will directly benefit any party because construction has not yet started.

Although construction of the Light Rail Transit (LRT) in Khon Kaen has not been launched, its initiatives draw from many sectors. To a certain extent, Khon Kaen has already been successful because it has initiated a project that has never been attempted in any other province. What makes the City of Khon Kaen's plan successful so far is the province's unique political situation. Anyone who gets direct access to those with authority is more likely to get consent and collaboration from the public sector. Other related sectors are also willing to collaborate to look for ways out of the city's problems, such as civil society. The collaborative force to push forward with a mechanism to solve these problems can be witnessed here. The executive at the local level (the Provincial Governor) has pushed to establish the partnership for this urban development project. With these factors, the advancement of urban development in Khon Kaen will surely materialize.

Moreover, the project reveals some obvious strengths of the City of Khon Kaen. Its characteristic use of bottom-up policy formulation is a key example, and it would be difficult to achieve if centralization was more extreme. Also, the initiative reveals the collaborative success of all sectors, such as public sector actors (including

local administration and universities), private sector actors (business units, mass media and civil society) and provincial level actors, such as the Governor of Khon Kaen. These actors have helped drive the project forward. Another strength of the City of Khon Kaen is that the local actors have a modern perspective on organizational management. In other words, the local unit, especially the Provincial Governor, who has never obstructed this initiative, has helped facilitate and given recommendations to the working team.

However, the Light Rail Transit (LRT) project also has some weaknesses. First, the format of the Khon Kaen Model has never been used before and is new to the government and other related agencies in the public sector. Because of its novelty, there is no clear direction for the project to take. Therefore, it takes time for progress to be made. From the perspective of the public sector, it must ensure its legality, and sometimes, the working team needs to try new steps through trial and error. This often slows down the project, as previously noted. Second, there are concerns when public property needs to be used as part of the project. This includes the surface of the road, especially the road medians and side roads along Mittraphap Road. *Ratchaphatsadu* land, which is public property, is used by the Rice Research Centre. The bureaucratic units have provided the conditions of how public properties should be used by the working team of the project, but at the moment, the issue is still being negotiated.

Research on the partnership between the public and private sectors for large scale public service projects reveals that if the public sector maintains its authority in the form of a local administration, even if there is little to no decentralization, it is possible for local partnerships to be initiated. Yet, the partnership faces challenges, too. Although the central government does not have to finance the project, it still needs to finalize the decision-making. Moreover, if the central government interprets the local administration plans as not being in line with existing laws and regulations, it will be difficult for local actors to proceed with the project. Nevertheless, if this Light Rail Transit (LRT) partnership between the public and private sectors is successful, it will likely mark the beginning of a change in the direction of urban development in the country. In other words, in the past, people had to wait for the public sector to distribute funds and draft a plan for the development of each individual area. A partnership shows that, nowadays, local actors can take the

initiative in planning the urban development of their local areas by themselves. The public sector only needs to provide support.

6.2 Discussion of the Research Findings

This examination of an urban development project that is intended to transform Khon Kaen into a Smart City started with Light Rail Transit (LRT). With Light Rail Transit, people will be able to travel more comfortably through the city and the number of personal vehicles on the road could decrease, which would result in less traffic and pollution. Eventually, the people in the City of Khon Kaen could enjoy a better quality of life. Hence, Khon Kaen could be a model for urban development in other provinces. Khon Kaen is one of the first cities that has tried to put this kind of partnership into practice.

While Khon Kaen has set its own goals for urban development without having to rely on funds from the government, such a large scale infrastructure project is not easy and cannot immediately be put into practice. Each step of the project is challenging due to the limitations highlighted earlier. Nevertheless, the City of Khon Kaen insists that it will keep pushing this project until its goals are achieved. Therefore, the city is a model to study in this field. Many aspects of the project are unique and have never been attempted before in Thailand. Furthermore, it might not be perfectly in line with existing government policies. These factors make the project worth analyzing.

A discussion of the findings helps explain which factors have led to obstacles faced in the advancement of the Light Rail Transit (LRT) project. This research might help shed light on strategies of urban development for other provinces that want to adopt a similar project, despite some of the unique characteristics of the City of Khon Kaen. Because Khon Kaen is unique, the findings are worth analyzing in terms of decentralization, as it is a key factor that affects the urban development project.

Centralization is a central feature of the Thai bureaucratic system. The central government always dictates the direction of where the country should go. This includes development plans. If a particular area is not targeted by the government, there will be no funding set aside for development in that area. Urban development

requires considerable funding that is often beyond the capacity of local administration units. Although the Thai government has tried to decentralize power over many local areas in the past few years, thus far there has never been sufficient funding for implementing a large-scale development project. Furthermore, the local budget is often not adequate for mega projects of urban development.

The Khon Kaen Model is a consequence of the centralization of executive power. Local administrations at the municipal level have expansive authority but limited funding for urban development initiatives. As a consequence, they cannot respond to the problems of local communities. When a request for a large-scale expansion of basic infrastructure is submitted to the central government, it is likely that the bid will be rejected. The City of Khon Kaen is not the target of the central government's urban development initiatives, so this difficulty in getting central government funding has led the City of Khon Kaen to instead implement a partnership between local administrations and private sector actors, including Khon Kaen University and the civil sector, which will also participate in it.

Normally, one of the consequences of centralization is that local administrations cannot implement development plans without permission from the central government. Furthermore, there is no clear legal pathway that allows local administrations to initiative their own large-scale basic infrastructure projects. It is difficult for local administrations to implement such schemes in practice, especially when public resources distributed by the central government are involved. However, those who initiated Khon Kaen's urban development project tried to get access to central authority figures in charge of making decisions, namely the heads of the National Council for Peace and Order (NCPO), so that the bureaucratic process could be expedited. These meetings were unofficial, but the meetings allowed Khon Kaen to move forward with its urban development plan and the construction of Light Rail Transit (LRT). If the project had not been able meet with the heads of NCPO, getting approval for the project would likely have been slower.

When the project was approved in principle, the City of Khon Kaen started its Light Rail Transit (LRT) project. It collaborated with the Office of Transport and Traffic Policy and Planning (OTTP) until the final plan was submitted as a request to the Commission for the Management of Land Traffic. Afterwards, the project was

approved. It ensured that implementation would not take a long time and the project could be carried out without interruption. Consequently, the initiators of the project are confident that the construction will take place soon.

However, gaining access to those with authority and gaining approval for the project does not necessarily mean that construction of the Light Rail Transit (LRT) will run smoothly. A number of obstacles still exist, especially in terms of how public resources will be distributed for the construction of the Light Rail Transit (LRT). The City of Khon Kaen has faced challenges in working with the bureaucratic units responsible for the aforementioned resources.

Accordingly, implementation of the urban development project of Khon Kaen does not only rely on the approval or non-approval of the government. Other conditions and regulations can affect the project as well (The Representative of Scholar, personal communication, March 10, 2020), especially those that originate from the Rice Department and Highways Department. While both did not outright reject the request to make use of their space, they have created challenging conditions for the project to meet in order to use their land. It takes time to successfully negotiation past these challenges.

In other words, we witness in the case of the City of Khon Kaen a clash between centralization and decentralization, or top-down and bottom-up approaches. Indeed, the public sector at both the national and provincial levels represents a centralized and top-down administration. They try to maintain the status quo and ensure that the scope of their own authority is not challenged by local actors. If there are any mistakes, the local organization must be responsible for the damages. Meanwhile, the local administrations try to look for any channels that are legally permissible. However, tensions between the central and local governments have slowed down the project because one party always looks to minimize any negative effects to its organization, while the other looks for a way to implement the project successfully.

Therefore, the problems that the City of Khon Kaen are experiencing are part of the decentralization problem - both at the central and the provincial levels. Certain organizations continue to create obstacles to the successful implementation of the City of Khon Kaen's urban development project. Moreover, it is especially difficult for this

large-scale of a project because it cannot proceed without approval to use public property that belongs to other public sector actors. This case is different from other countries, such as Japan, where urban development is a local, rather than national, matter and is supported, rather than decided, by the central government.

In the case of Khon Kaen, urban development projects as a large-scale scheme will be continuously propelled when the executive power is decentralized (The first representative of private sector, personal communication, 2018). In other words, the local is allowed to manage the urban plan on its own with the support from the central government. It collaborates with the local administration units so that local actors can make the most of resources provided by the government (The sixth representative local administration, personal communication, 26 September 2019). Moreover, it helps lessen the burden of the central government because funding from the central government does not have to be distributed to the province. It might help lessen the public debt of the country as well, so urban development contributes to boosting the national economy (Hausner, 1993, p. 525)

6.3 Policy Recommendations

This research on the urban development of Khon Kaen through Light Rail Transit (LRT) has brought awareness to the obstacles that impede large-scale projects in a provincial city. The slow-down and incomplete implementation of similar projects can be observed in certain provinces. Therefore, there are two main policy recommendations.

- 1) To help lessen the burden to the central government and support the capabilities of the local government, there should be channels for the local administration to set up their own plans and projects. The government should support more flexible partnerships between the public and private sectors with urban development or large-scale basic infrastructure projects that benefit the most people in a particular city or area. Existing bureaucratic procedures can be cumbersome because it takes a long time to set up a number of committees, such as the Commission on Public-Private Partnership, the Commission that selects who can join the partnership, and the Monitoring Commission needed for such projects. Moreover, all steps must be

approved by the ministers from related ministries and operate in accordance with the Private Investment in State Undertakings Act. To avoid such complications, five local administrations have participated in the Light Rail Transit (LRT) project. They have their license registered as a private actor as the Khon Kaen Transit System, Co, LTD (KKTT), a company that does not have to go through these legal procedures. The public sector could promote these kinds of partnerships by setting up clear regulations and rules so that the public and private sectors in the provinces can more easily put them into practice. They would not have to go through a process of trial and error like Khon Kaen, a process which takes time and wastes a lot of resources. Moreover, if the partnership of Khon Kaen Transit System, Col, LTD (KKTS) is interpreted as a private company, the elements of the public sector that are not part of the five local administrations will not be able to monitor the project, despite the fact that it is the local administrations that are trying to implement the project. If that is the case, the people of the city could be taken advantage of in the future. If possible, the Private Investment in State Undertakings Act should be amended to be more flexible, especially when partnerships do not rely on funding from the central government. The Act should be distinguished between two conditions. The first is those instances when a project relies on funding from the central government and the second when it does not. This will make future partnerships more flexible. It would also decrease the risk of being deemed illegal when the private sector helps start a project instead of the local administration, as is the case with the City of Khon Kaen. Still, the public sector can participate in the monitoring the project.

2) Public sector actors should support decentralization. The central and provincial governments should support large-scale projects organized by local organizations. In the case of the City of Khon Kaen, local administrative units can only implement plans and activities according to their limited local authority. It is recommended that the central and the provincial governments should not only have a role in monitoring the local administration, but also in promoting the latter's implementation of such plans. If it is a large-scale project related to public property that is taken care of by the central and provincial government, and if the two participate in the local project, it will make the implementation of the local policy more flexible as indicated by the law.

6.4 Limitations of the Research

There are three limitations to the research that can be summarized as follows:

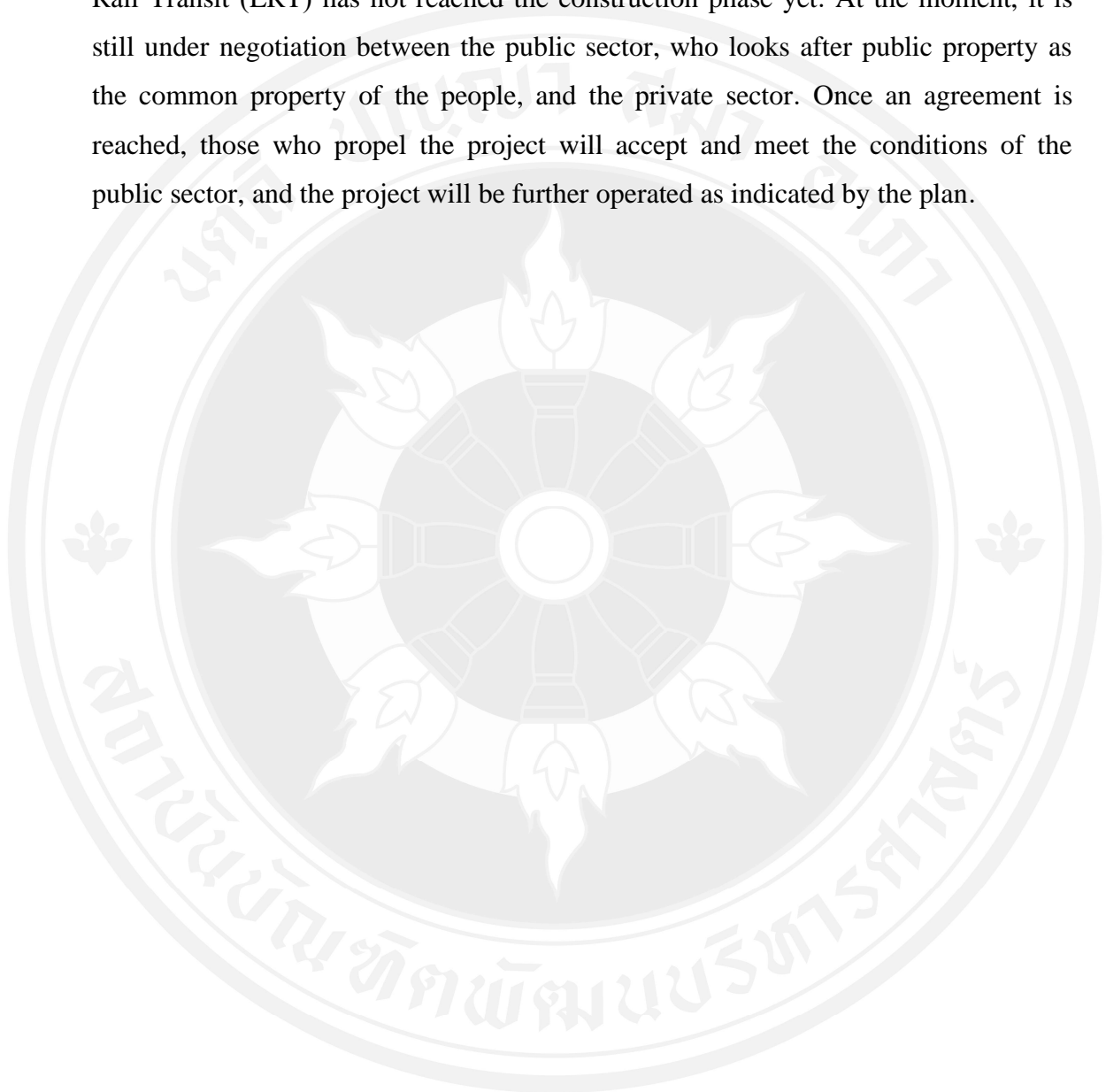
1) Because the urban development project of Khon Kaen is still ongoing, there is no clear data from any party that can summarize what has been achieved. The project is still being negotiated and awaiting a final decision by those with authority. For example, with regards to the concern regarding conditions between the public and those who encourage the urban development project of Khon Kaen, the public sector in Khon Kaen does not have the authority to make a decision - the matter is still being negotiated. Hence, there is no clear and concise data and the researcher is able to present only the most recent one as acquired from the related parties.

2) Initiation of this kind of urban development project has never been done before in Thailand. The initiators have chosen strategies that have never been put into practice before either. Those who provide data are quite careful in sharing it. It is not easy to get access to the documents related to the project as it is still ongoing. Certain documents are confidential, especially for the procurement and supplies management of the private companies and the public sector.

3) Furthermore, the researcher is not a Khon Kaen native, which has made establishing trust with local entities challenging. Participants and interviewees are reluctant to provide information on sensitive issues to outsiders. Nevertheless, the public and private sectors, as well as local people, are very happy to help provide assistance, and that has benefited this research significantly.

This research examines the urban development of Khon Kaen that will transform it into a Smart City in public transport service, and which has pushed forward the initiative of Light Rail Transit (LRT). The project covers the urban area from the north to the south of the city's downtown area. This is a new phenomenon in public transport service, as guided by a government policy that supports the development of basic infrastructure and the environment in many provinces. It is an initiative from the local, not the central, government, that is willing to drive the project by using local resources. Five local administrations in the City of Khon Kaen and the private sector are participating in the project.

A push of the urban development of Khon Kaen with the collaboration of the public and private sectors and the people, indeed helps plan the direction in accordance with the ways of life and needs of the city, as well as the direction of the economy to support the people's better quality of life. However, the project of Light Rail Transit (LRT) has not reached the construction phase yet. At the moment, it is still under negotiation between the public sector, who looks after public property as the common property of the people, and the private sector. Once an agreement is reached, those who propel the project will accept and meet the conditions of the public sector, and the project will be further operated as indicated by the plan.



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