

CHAPTER I INTRODUCTION

1.1 Background

Urbanization and urban sprawl are two common phenomena in the urban development. United nation in 2010, stated that 50% of world population live in urban area and it will reach 69.6% in 2050 (Wu and Zhang, 2011). Both phenomenons have influenced the development and transformation of peripheral area, such as physical, social economy, cultural, morphological, and functional transformation (Brook and Davila, 2000; Dupont, 2004 stated in Dutta, 2012). Peri-urban area can be defined as rural and urban transitional which has mix function characteristic of both area with heterogeneous socio, economic, and land use characteristic (Narain and Nischal, 2007; Malaque and Yokogari, 2007; Dutta, 2012). It also can be called as Rural-urban interface or PUI area (Dutta, 2012).

Urbanization and sprawl have influenced on the environmental changes in peri-urban area (Sanchez-Rodriguez et al., 2005 stated in Huang, Wang, and Budd, 2009). Land use transformation is the evidence of the physical and environmental changes. Land prices and land availability are the common factor behind land use transformation. Unbalance functional changes from farm use to non-farm uses emerges as the result of rapid modification and urbanization. Today, it has become a common

phenomenon in rural-urban interface development. In some cases, urban economic development has become the main factor in peri-urban transformation. In some cases peri-urban activities has been taken over by industrial and commerce activities like China, but in some other cases the development has been taken over by huge development of residential estate and settlement.

Development of residential estate in peri-urban area has attracted in-migration from the nearest urban area. Availability of cheap houses and land has been attracting people to come and stay. This phenomenon usually creates diversity in social economic characteristic. Farmers, industrial labor, civil servant, company workers from low income group until middle up income group can be found here (Narain and Nischal, 2007). It is a mixture of urban and rural activities and culture. In the other hand, development of residential estate and settlement also attracts commercial and services activities close to them. In developing countries including Indonesia, peri-urban development has become a popular issue in urban planning and development. This condition can be found in all big cities in Indonesia, one of them is Solo or Surakarta City.

Surakarta City is a cultural city located in Central Java Province, Indonesia. Solo City is a city with a mixture of heritage, tourism and commercial activities. These days this city is famous among urban studies practitioners with its green planning and development. Tourism and commercial activities in Solo have attracted not only foreign and domestic investments but also migrants. Migrants have pushed the development toward

peri-urban area and, once again, availability of land and houses become the main reason.

Peri-urban area of Solo City consists of some districts, i.e. Sukoharjo District, Sragen District, Karanganyar District, and Boyolali District. Colomadu Sub district is one of Solo peri-urban which is located in the northern part of Solo City. This sub district is unique although this area administratively stated as part of Karanganyar District, but geographically it is located closer toward Solo than Karanganyar itself. Thus, thus, it can be assumed that Solo City might have greater role in Colomadu's development rather than Karanganyar district. Today, Colomadu is the transitional area of urban Solo and rural Boyolali and also directly bordered with Kartasura which is part of Sukoharjo District. Those districts have brought different functional characteristic toward Colomadu as a transitional area. It has the definition of peri urban with heterogeneous social economic condition and mix characteristic of rural and urban area just like peri urban definition stated by McGee in Narrain and Nischal, 2007.

In term of land use characteristic, formerly this area is dominated by agriculture land that produces rice, corn and sugar cane, but currently the number of agriculture land decrease continuously. It occurs due to the development of residential estate and settlement. The number has been decreasing continuously. Today, there is only 519.9 ha farm land left compare while 895.9 ha for residential uses and the number keep increasing. Strategic location, supported by good infrastructure

and accessibility, has a crucial effect on the transformation of this sub district. As the main access to the Adisumarmo International Airport, Colomadu appeared as a gold land for many developers and investors. High movement from and toward Adi Sumarmo airport has not only triggered tremendous development of residential and settlement but also commercial activities alongside Adisucipto and Adi Sumarmo Street. It will be even greater when the development of Semarang – Solo and Solo – Kertosono toll road are finish and start to be occupied. In the development planning of the highway, the entrance and exit gate will be located in this sub district specifically in Klodran and Ngasem Village. Colomadu is going to be developed into a big interchange area of Joglo Semar and East Java Province movement. It can be assumed that in the future Colomadu probably is going to be develop as a new core city like Kartasura and Solo Baru though today it more looks like a dormitory city. it is because Colomadu is mostly used as residential area instead of economic activites with residential area rather than other economic activities. However, commercial and services activities have been growing rapidly.

Colomadu Sub district is not the only one and the most developed peri-urban area of Solo City. Solo Baru and Kartasura, which are part of Sukoharjo District, are two most urbanized area around Solo City. Both of them are highly developed compared to Colomadu. Solo Baru and Kartasura are dominated by commercial activities but Colomadu development dominated by residential area. Based on the sub district planning document

(RDTR 2013), Colomadu is planned to be a residential sub district. It means Colomadu will be developed as dormitory city, not as commercial cities like Solo Baru and Kartasura. Compare to those two commercial interface area, Colomadu is geographically located closer towards Solo City but the land prices seems to be lower. Solo Baru had the same residential development, but different with Colomadu, Solo Baru residential area is built for high class family with high financial background (Lestari, 2014). Meanwhile Colomadu residential area is built for more diverse financial background with domination of middle low income group. Solo Baru commercial development has been pushedover affordable land and houses development now. On the other hand, the development in Colomadu is still carried on although RDTR planning document stated that 520 Ha farm land in this sub district are categorized as preserved land (LP2B).

The invasion of residential estate by private developer had been causing not only environmental and land use transformation but also social economic transformation. The number of farmer keeps decreasing day by day. The questionnaire data result shows that there is 80% economic transformation from farm to nonfarm activities with only 3% farmer left from total number of respondents in Colomadu. Farmers tends to shift to urban activities like industrial labor, construction worker, and trader rather than manage their farm land. Farmers, face many difficulties in managing their farm land today as the result of residential and commercial development. One of the farmers in

Gawan Village said that the water is getting difficult to be found because the garbage blocks the drainage.

Although residential development seems to have more negative impact than the positive one but the economic growth of Colomadu seems to be unaffected. Besides the decreasing number of farmer the economic activity shifting without any complaint from its inhabitant. The urban activities have been replacing the former activity in these recent years. Three big industries and more than 200 small industries emerge as job alternatives for people in Colomadu. In the other side, economic facilities get even bigger with additional hotel, restaurant, shops, and supermarket.

As the nearest urbanize area, Solo City seems to have the biggest role in Colomadu transformation and development. Besides its potential and uniqueness, there is still limited research on Colomadu's development. Thus, this research will try to gives more information and understanding about Colomadu as one of the most potential peri-urban now. Then the questions that arise are how are the land use and socio economic transformation and development in Colomadu Sub district especially related to the farm to nonfarm shift? This question will be the main point for further observation in this study.

1.2 Problem Statements

Colomadu Sub district as one of peri-urban area of Solo City has been transforming since 10-20 years ago. Residential

area is the first function that occupied agriculture land in this area which is still happening until now. Since residential area dominates this sub district, many commercial uses appear as the responses toward good and service needs. Alongside the development of Semarang – Solo City and Solo – Kertosono toll road, likely the development and transformation of Colomadu Sub district will be going faster in the future. Semarang – Solo City and Solo – Kertosono toll road gate is located in this sub district. It is planned to be an interchange area of Joglo Semar and East Java movement. The toll gate will be located in Bolon, Klodran and Ngasem Village. It will definitely become one of the transformation push factors here in this sub district.



Sources: Researcher Documentation, 2013

FIGURES 1.1
NEW RESIDENTIAL DEVELOPMENT BY PRIVATE
DEVELOPER IN COLOMADU SUB DISTRICT

In terms of social and economic transformation Torres, Alves, and De Oliveira (2007) stated that residential development by private developer seems to be the main factor affecting those issues. Residential estate developers buy some agriculture lands and build a bunch of houses mostly occupied by middle-to-up class that works in Solo City. That phenomenon creates heterogeneous social economic condition of Colomadu Sub district inhabitants. Good infrastructure, strategic location, land availability and land price become the main attraction of this sub district.



Sources: Researcher Documentation, 2013

FIGURES 1.2
AGRICULTURE AND RESIDENTIAL LAND USE SIDE
BY SIDE



Sources: RTBL Colomadu, 2013

**FIGURES 1.3
COLOMADU SUB DISTRICT MAIN STREET,
ADISUCIPTO STREET (LEFT) AND ADI SUMARMO
STREET (RIGHT)**

Colomadu Sub district has the exact characteristic of peri-urban area with heterogeneous socio economic and mixed land use condition, so that it can be categorized into rural-urban interface or transitional area. The most unique founding is that although Colomadu is part of Karanganyar administration area but in the real condition, it is a transitional area between the urban area Solo City and rural area of Boyolali District. Like what Narrain and Nischal (2007) stated on their journal about rural-urban interface, this transitional area also has mix use characteristic between rural and urban activities. Agriculture, commerce, and industrial activities are stand side by side as the economic activities driving force in this area.

Today, the farm or agriculture land has been pushed to the limit by the emergence and development of new housing and settlement that are especially built by private sector. The farming activities have been continuously challenged by unsupported

environment that makes most farmers choose to sell out their farm land to the private company. It means that there will be a change and transformation in socio economic sector. Alongside with the land transformation process from farm to nonfarm uses, the socio economic condition has been pushed over toward urban economic sector. So that is why the research question will be how the transformation happening in Colomadu is.

1.3 Aim and Objectives

The aim of the study is to understand the condition of land use and social economic transformation and development in Colomadu Sub district as the rural-urban interface of Solo City, Boyolali, and Sukoharjo District. According to the aim above, the objectives of the research will be divided into three parts, including

1. identification of land use transformation,
2. Identification of social economic characteristic and its transformation,
3. Identification regional correlation of Colomadu Sub district towards Solo City as the final finding.

1.4 Research Scope

A brief description about the research scope will be stated in this sub chapter. The description consists of area scope and material scope of this research. Study area and material scope

will be explained generally to give a brief research illustration to the readers.

1.4.1 Research Study Area

Colomadu Sub district is administratively a part of Karanganyar District located in the west part of Solo City area. As a part of Karanganyar, this sub district is positioned completely separated from other sub district of Karanganyar. Kartasura Sub district of Sukoharjo, Banjarsari Sub district of Solo City, and some sub districts of Boyolali District. This sub district is a transitional or interface area of Solo City and rural area of Boyolali District. It has mixed land use characteristic; between agriculture, residential, and commerce uses. Most of the residential area of Colomadu Sub district is built by private developer. Diverse activities here creates heterogeneous social and economic activities of the people. The existence of agriculture land can be identified as a sign of farming activities condition although day by day residential area which is mostly occupied by in-migrant people from Solo City creates diverse activities. So the social economic condition of Colomadu Sub district now is in heterogeneous situation.

Colomadu Sub district location which tends to be closer toward Solo than Karanganyar is quite unique. On one side, the potential location of Colomadu gives a lot of benefit towards Karanganyar District as its owner. On the other side, some problems appear as the result of the distance between this sub

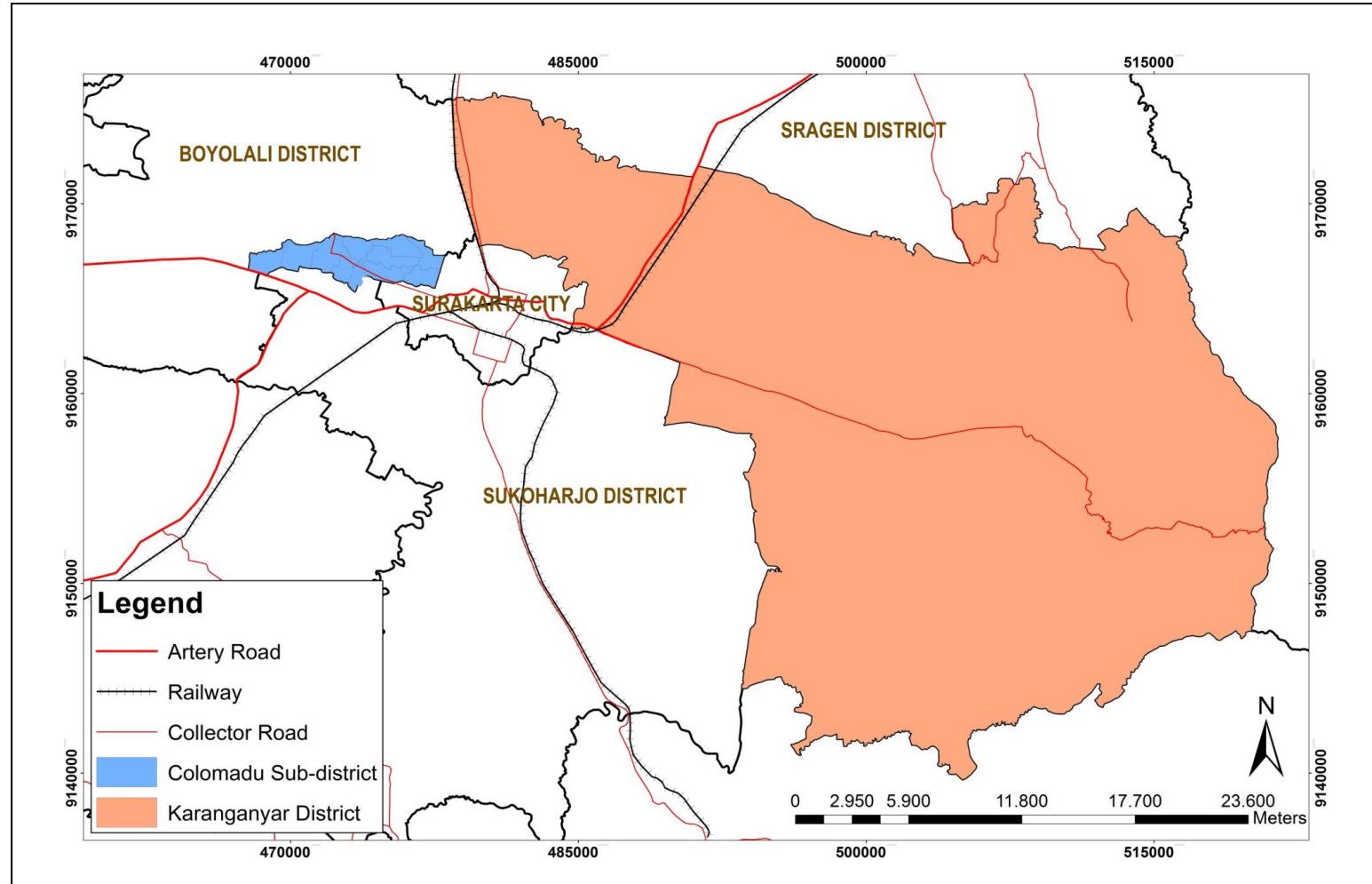
district and Karanganyar central government, which is about one hour to reach. Some protests, once, emerged in Colomadu triggered by irresponsible and unconcern local government performances. The road condition was the main problem. The road has been covered with big holes for years without any roadwork done, It was only after a big protest by some Colomadu people that the roadwork was carried out the street has been renovated. Now it has been developed into bigger street regarding with the increase of vehicle volume and upcoming Solo-Semarang highway project.

1.4.2 Research Material Scope

In line with the title shown in this research proposal cover, there are three important variables on this study. Land use transformation, social transformation and economic transformation are the limitation variable of this study. The influence of urban area rapid development towards peri-urban area becomes the general point of view on the transformation condition. Here is the variable general description,

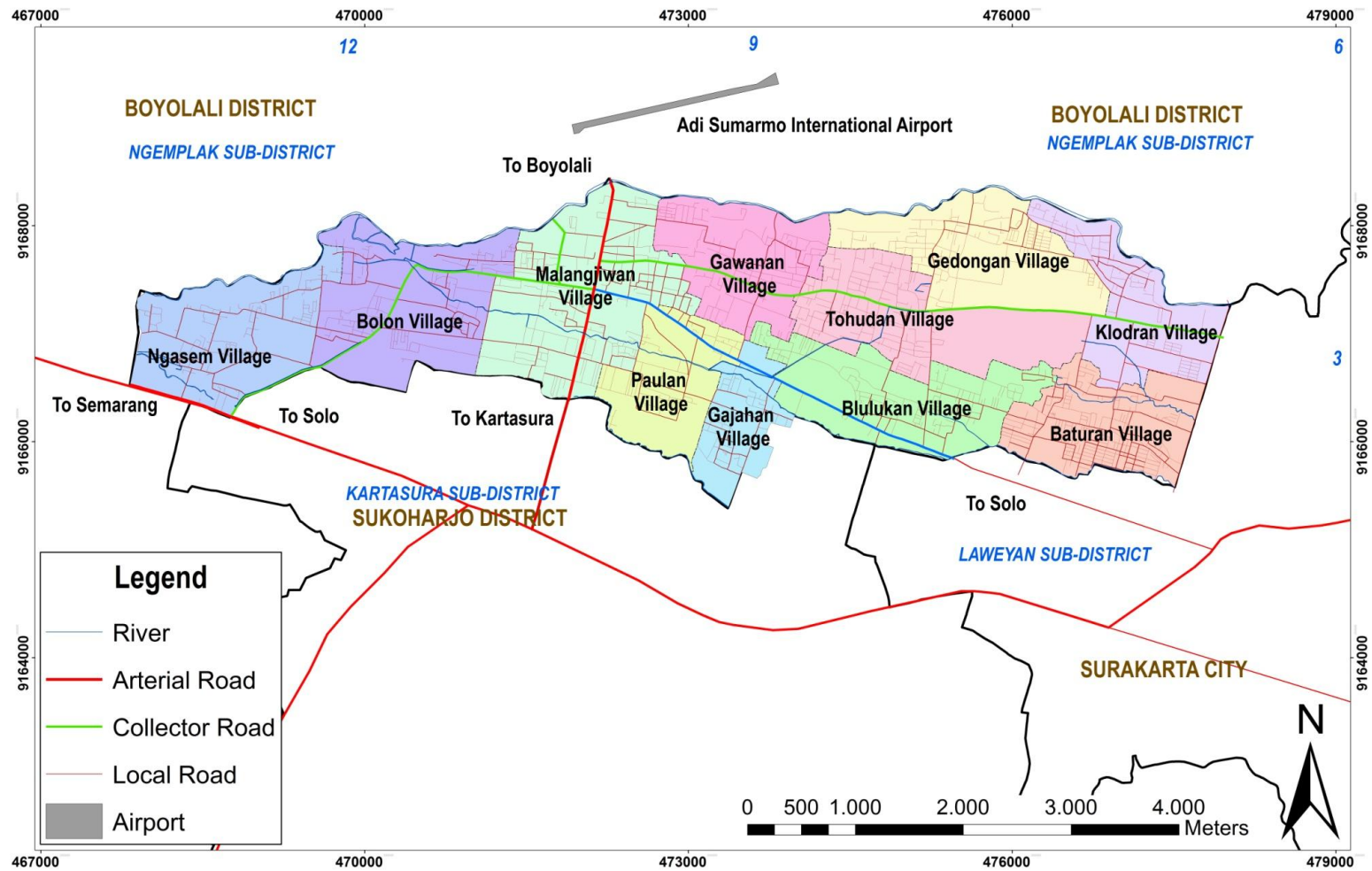
1. Land use transformation is the changes that could be seen in rural-urban interface which is mostly related with land use conversion from agriculture land to residential, commerce and other built up uses. Those conditions create a mixed characteristic of peri-urban land uses (Narain and Nischal, 2007; Dutta, 2012).

2. Social transformation in this study focused on the impact of land use transformation especially the one related to residential use stated by some researchers as the factor behind the social diversity in rural-urban interface. Residential development by private developer is seen as the driving forces of middle up income class in-migration from urban area (Toress, Alves, and De Oliveira, 2007) which creating heterogeneous condition.
3. Economic transformation usually develops together with the social condition. The combination of rural and urban activities here is the result of urban expansion phenomenon.



Sources: RDTR OF COLOMADU SUB-DISTRICT, 2013

FIGURES 1.4
COLOMADU LOCATION TOWARD KARANGANYAR DISTRICT



Sources: ANALYSIS, 2013

FIGURES 1.5
COLOMADU SUB DISTRICT ADMINISTARTION MAP

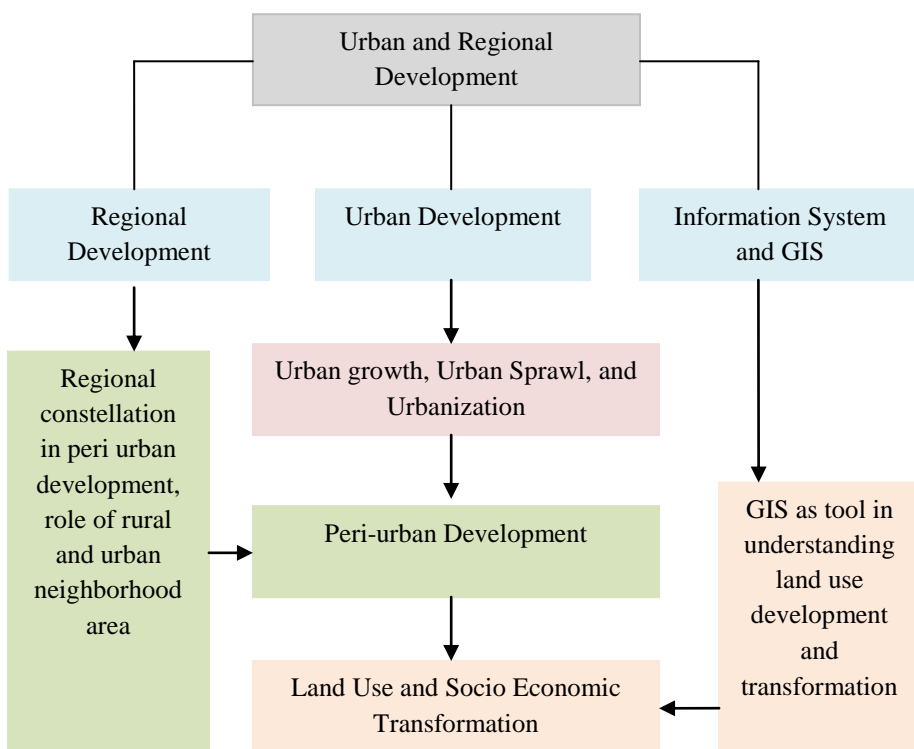
1.5 Research Position

Study of peri-urban dynamics condition of Solo City has been held by some researchers these days although the focus concern are different one to another. However, to avoids overlapped research position, description is needed. More over research position will support the importance of study towards planning or other disciplines. Colomadu Sub district and Kartasura Sub district in Sukoharjo are some area that had been studied so far.

Christanto in 2008 published an article based on peri-urban research of residential development from 2001 until 2007 in Sukoharjo District. This study focuses on the spatial transformation and interaction using gravitational model of residential area in Kartasura, Grogol, Baki, and Sukoharjo Sub district. The socio economic analysis was not identified in this study. Development study located in Colomadu Sub-district is once done by Nugroho Eko Sapto in 2012 that studied about settlement quality by Ikonos satellite images. In this study there are three main research goals, the first one is to underline the ability of Ikonos on identify the settlement quality in Colomadu Sub district. Second goal is to understand to understand the settlement distribution, and the goal focuses on the settlement quality by geography descriptive method.

Both are focusing on the spatial settlement and residential condition of Solo City Peri-urban area using maps and satellite images. Here, in this study mapping and satellite images will still be use to understand the spatial land use transformation but the

different point of this study is on the social economic transformation analysis. Analysis on the land use transformation and socio economic transformation correlation and Colomadu correlation with its surrounding area such as Solo City, Sukoharjo and Boyolali District will conclude the understanding of peri-urban development condition in Colomadu Sub district.



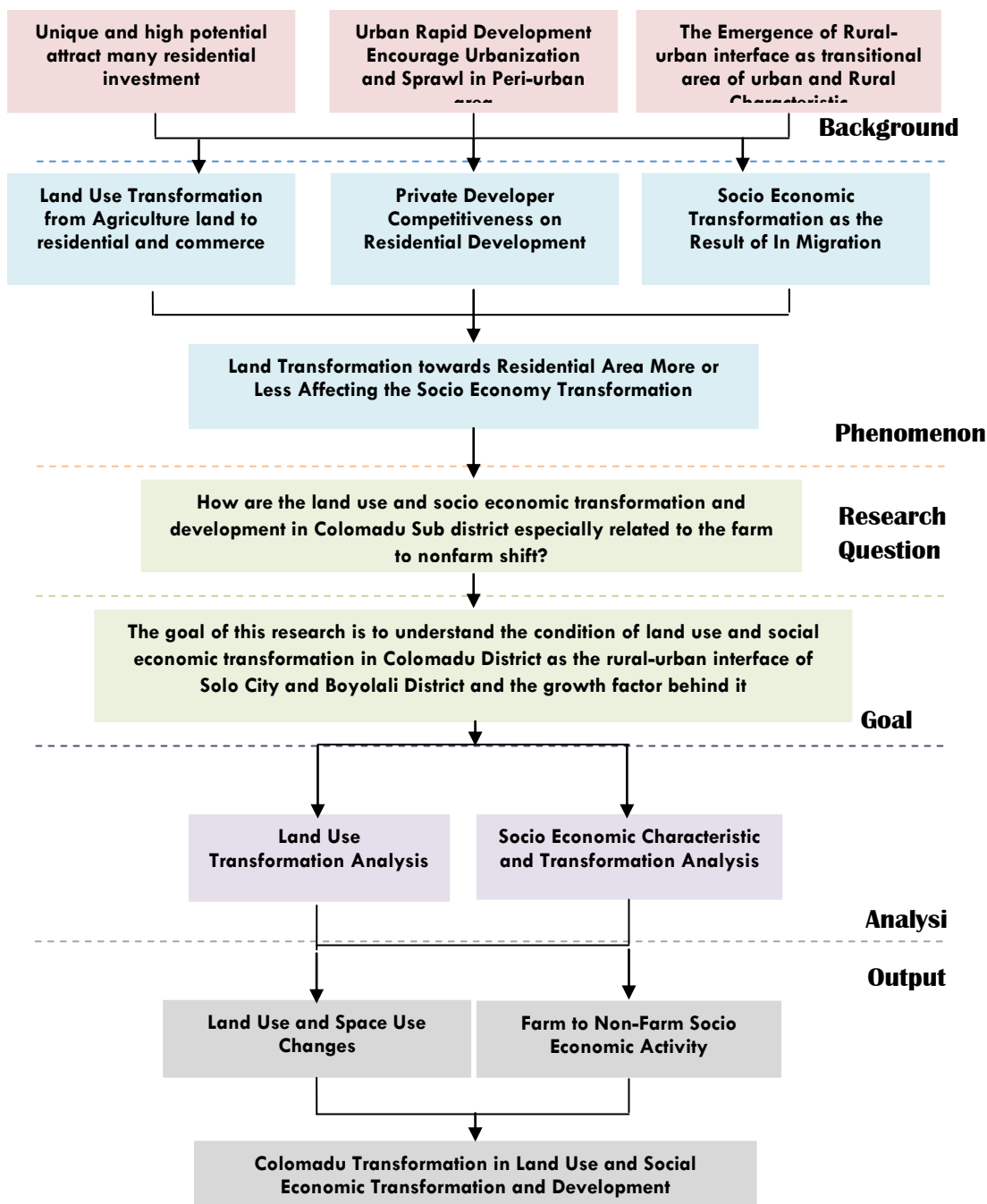
Sources: Analysis, 2013

**FIGURES 1.6
RESEARCH POSITION DIAGRAM**

In planning discipline, peri-urban development is one of the focusing issues of urban development and growth because peri-urban development itself is usually fully depends on the urban growth. Land and social economic transformation are some initial issues dealing with peri-urban development. In order to support the urban development, peri-urban area emerges to fulfill people's needs that could not be provide by urban. The essential first attraction in peri-urban is usually none other than land and settlement, which in no time bring socio economic impact in this transitional area. This phenomenon will be the focus issues in this research that is located in Colomadu Sub district, Karanganyar.

1.6 Research Framework

Research framework explains about the basic concept and background of this research in a simple diagram that will be divided into six main parts. Those parts include background, phenomenon, research question, goal, analysis and output. Here is the diagram,



Sources: Analysis, 2013

**FIGURES 1.7
RESEARCH FRAMEWORK**

1.7 Research Method

1.7.1 Research Approach

The purpose of this research is to understand the land use and social economic transformation of Colomadu rural-urban interface area. Thus land use and social economy aspects will be the main variable besides another supporting variable such as population growth, residential development, and urban invasion. The chosen approach should be able to find the precise ways to reach goals and objectives of the research. The approach that will be used in this research is quantitative positivistic where direct observation should be done and supported with as much as secondary data found from books, statistical data, and other information from related organization and agency. The data variables will be formulated from reading some references and conclusion of literature review related to the existing condition and phenomenon. Purposive interview has to be done to support the variables that will be used to identify the phenomenon and factors behind it.

Sampling will be used to do data collection activities so that it can be used as a valid and reliable research data. In addition, some purposive observation by questionnaire will be done to understand the real transformation in Colomadu Sub-district.

1.7.2 Research Methodology

Research methodology that will be used in this research is mixed method between the use quantitative descriptive method to determining research variables through literature and previous research review. Questionnaire is the main instrument in this study, although purposive interview will also be held to support the analysis later in the report. The variables used in this report include urban growth, urban sprawl, urbanization, rural-urban interface characteristic, land use transformation, and social economic transformation.

Secondary data, especially statistical data, will be important in order to understand the growth and transformation. Interview data that will be delivered in qualitative descriptive method is essential in analyzing the social and economic transformation. In this quantitative research, questionnaire is essential. The number of sample taken are important to support the hypothesis that already made. There are many ways to formulate the number of sample in the research activities, but the sample formula used here is based on Sukandarrumidi statistical formula (2004:56) took from Artiningsih, 2011. Here is the formula,

$$n = \frac{\lambda^2 \cdot N \cdot P \cdot Q}{d^2 \cdot N - 1 + \lambda^2 \cdot P \cdot Q}$$

N = Population size

d = error estimation = 10% = 0,1

λ	= Reliability	= 95% = 1.96
P	= Proportion	= 0.5
Q	= (1-P)	= 0.5

So the sample estimation would be,

$$n = \frac{(1,96)^2 \cdot 72760 \cdot 0,5 \cdot 0,5}{(0,1)^2 \cdot (72760 - 1) + (1,96)^2 \cdot 0,5}$$

$$.0,5$$

$$= 96$$

The sample calculation result is 96 samples from the total Colomadu population. This sample will be spread based on block sampling method where, in this research, the population will be categorized into four main groups based on area location towards Solo City and also the residential characteristic (Setya and Hadlari, 2008). The first two characteristics will be differentiated by the distance from Solo City as the fast growing area. The other two will be divided into private developer residential inhabitant and the second one will be unplanned settlement area.

Purposive interview methodology requires some basic criteria to choose the right respondent. It is also important to avoid time wasting and data error. Purposive interview criteria of this research consists of,

1. Staying period of respondent,

2. Position in the neighborhood (head of RT/RW, village head, etc).
3. Age variation, to see different perspectives of each generation.
4. House location, divided into private developer residential and self-built (unplanned) settlement.
5. Distance towards Solo City. It will produce different people's preference toward the importance of those city.

Interview here as one of the importance instruments will explore deeper the social conflict and governmental issues that could appear as the result of rapid development and the distance condition towards Karanganyar District center. Basis social economic data from the interview will be supported by questionnaire observation result which will shows general preference of Colomadu inhabitant. In addition to the observation, map analysis will be used to see the land use transformation quantitatively. Time series maps and images will be used to see the development and transformation from some time before in 1990.

1.7.3 Data Collection Methods

the data needed in this research would be collected using some techniques. The first step of this data collecting stages started with proposal writing to see the goals, objectives, and perspective and research instruments. That formulation supported

by literature review to see which variables will be needed and used and also to see its importance and priority. The literature review on some previous studies in the same theme circle will give perspective in the data collection.

Primary data collection is the most important data to figure out the existing condition which will be collected by direct observation, interview, and quick and simple questionnaire to the people. Interview is needed to understand the social and economic condition now and its transformation. Direct observation will be held to see and capture the existing land use condition and its transformation that will be analyzed and shown by maps and photographs. To complete the entire data collection, the use of secondary data will quickly show the transformation of land use and social economy aspect in the study location. Maps and statistical data are secondary data describing the changes precisely, including Statistical Central Bureau data, previous research data, satellite picture, and many others. All of those data will be delivered in maps so that it will be easier to be analyzed and interpreted. Those maps would be a big help on determining the transformation especially the land use. Here is the variables that will be use to understand the issues,

TABLE I.1
RESEARCH VARIABLES

No	Concept	Observation Scenario	Variables
1	Urban Growth	<ul style="list-style-type: none"> • Solo City as the core growth area 	<ul style="list-style-type: none"> • Population Number Data of

No	Concept	Observation Scenario	Variables
		influencing the development of Colomadu Sub district <ul style="list-style-type: none"> • The growth of Solo City can be identified from population growth statistical data 	Solo City Time Series 1990, 2003, 2011, and 2012 <ul style="list-style-type: none"> • Population growth of Solo City data time series 1990, 2003, 2011, and 2012.
2	Urban Sprawl	<ul style="list-style-type: none"> • The growth of Solo City created sprawl in term of settlement needs • Commuter line from Colomadu to Solo will be used to identify migrant data that emerge as the result of settlement development 	<ul style="list-style-type: none"> • Total Number of Commuter Origin-Detination (Colomadu to Solo) Latest Data
3	Urbanization	<ul style="list-style-type: none"> • Commercial and services facilities appear as a response to rapid development of settlement • Commercial and service facilities development in peri-urban area stimulates urbanization • Urbanization created mixed activities • Farm to nonfarm activities and land use transformation 	Farm to Non-farm Activities Data (Turn over Data) occupation statistical data time series 1990, 2003, 2011, and 2012.
4	Rural-urban interface	<ul style="list-style-type: none"> • Characteristic of Colomadu as Peri-urban interface • Mixed activities between urban and rural activities 	<ul style="list-style-type: none"> • Employment Statistical Data time series 1990, 2003, 2011, and 2012. • Land Use Data Existing Newest year
5	Land Use Transformation	<ul style="list-style-type: none"> • The existing condition of land use • The transformation of land use 	<ul style="list-style-type: none"> • Land Use Data time series from 2003, 2011 and 2014

No	Concept	Observation Scenario	Variables
		<p>from agriculture towards settlements and commercial use</p> <ul style="list-style-type: none"> • Private developer as the main actor on land use transformation • The role of local government (Karanganyar District) embracing land use transformation 	<p>including this recent years data (image and map data)</p> <ul style="list-style-type: none"> • Total number of residential estate area from Statistical Central Bureau, Sub district office and direct observation time series from 1990, 2003, 2011, and 2012. • Total number of unplanned settlement data time series 1990, 2003, 2011, and 2012. • Land use statistical data time series 1990, 2003, 2011, and 2012. • Total population number in Colomadu Sub district time series 1990, 2003, 2011, and 2012. • Population growth of Colomadu Sub district data time series 1990, 2003, 2011, and 2012.
6	Social and Economic Transformation	<ul style="list-style-type: none"> • Residential development creates migrants movement • Private developers tend to create exclusive settlement which eventually creates disparity • Social conflict caused by dissatisfaction for local 	<ul style="list-style-type: none"> • Income Level from Questionnaire Statistical Data Result and statistical data from statistical central bureau of Karanganyar District. • Commuter data seen by

No	Concept	Observation Scenario	Variables
		<p>government because Colomadu location is quite far from Karangnyar District location</p> <ul style="list-style-type: none"> • Depend on Solo City economic development and public facilities rather than Karanganyar • Economic dependency of Colomadu resident toward Solo City • The employment data of people in Colomadu 	<p>working location recent years from questionnaire and observation data.</p> <ul style="list-style-type: none"> • Origin-destination Movement Data from Questionnaire Statistical Result (Colomadu-Solo) • Employment Location Data from questionnaire and interview tabulation data. • Social Behavior Data from interview tabulation

Sources: Analysis, 2014

1.7.4 Analytical Framework

Analysis in this research is focusing on some essential point related to peri-urban and its issues. Land use transformation and social economic transformation will be the main issues besides the role of Solo City as the influence area in Colomadu development. There will be four analyses to support the research goal. Those four analyses include,

1. Land use transformation analysis

Land use is one of the most essential targets when talking about peri-urban area and its development. Most peri-urban development started from land use

changes and transformation. In term of this research, the transformation is mostly caused by rapid private developer activities on residential investment, especially when a big city like Surakarta or Solo cannot provide enough space and land. That is why this analysis would be useful on understanding the peri-urban condition today. The analysis will be supported by time series maps with GIS as its main tool and quickbird image as it data sources. The quickbird image will be processed in GIS to make it clearer and more detail.

2. Socio economic characteristic and transformation analysis

Socio economic aspect is the next important part in understanding peri-urban development after land use. Land use change, more or less, will influence the socio economic condition in a certain area because the potentiality will attract more people to come so that the socio economic condition would be more heterogeneous.

Rural-urban interface characteristic, function, and development analysis will be included on those two analyses. The characteristic of peri-urban is the basic data that will be delivered. In order to easily understand the next analysis, this stage is important so that not only the researcher that will be understand the phenomenon but also the reader. Colomadu Sub district,

based on its location characteristic, is located right in the middle of three different districts. Those districts are Solo City, Sukoharjo District and Boyolali District. From those three districts Solo City is the most urbanized one so it can be assumed that urbanization and development in Colomadu is mostly influenced by Solo. It can be proven by Colomadu-Solo corridor that until now shows a great development in commercial. These corridors are Adisucipto Street and Adi Sumarmo Street. Both of them connect Solo City and Adi Sumarmo International Airport that is located in Boyolali District.

Here in this analysis, the influence will be further seen in the development of its connected corridor and commuter movement that will show functional and spatial influence that brought by Solo to Colomadu. The Colomadu-Solo constellation analysis will also be described in both analysis land use and socio economic transformation analysis. In the end, we can see that there are some factors that influencing the transformation above, including the neighbor area of Colomadu Sub district which are Solo City and Karangnyar District as the authorized area above Colomadu. Influencing factors analysis will be directly delivered in both analyses and compiled and summarize together in the conclusion chapter.

1.8 Outline

There are five essential part of this research proposal that will be described briefly here in the first chapter.

1. Chapter 1: Introduction

This chapter is the initial chapter that generally describes the research and its importance. The basic reason behind the theme until the report structures are presented here, including background, objectives and purposes, study area, material scope, framework, methodologies and proposal structures.

2. Chapter II: Literature Review: Peri-urban Interface Land Use and Social Economic Transformation

Literature review is the basic data needed to start the research, especially when the research is quantitative with some variables mentioned from the start. In this research proposal, there are four parts describing the literature used for research. Variables need to be specified so that here the literature will be precise.

3. Chapter III: Colomadu Sub-district Rural-Urban Interface Profile

This chapter will introduce the general condition of Colomadu as one of the most developed sub-district in Karanganyar and its unique condition and position. To understand the further condition of land use and socio-economic condition, it also needs to see the basic condition first from this chapter.

4. Chapter IV: Land Use and Social Economic Transformation of Colomadu Sub-district

The main part of the research will be written here, including land use transformation analysis and social

economic analysis. The answer to the research question will be provided.

5. Chapter V: Research Schedule and Report Structures

Research schedule and structures are an expected time to do the research so that hopefully it does not take longer action in the future.