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## Who Benefits? The case of the Suramadu Bridge construction”

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### Abstract

Suramadu Bridge construction which connecting Suramadu and Bangkalan, expected to reduce development gap between two regions as well as to encourage the growth of economic activity in Bangkalan, Madura. Six years after Suramadu Bridge inaugurated, the various dynamics of the population, economic, and environment, has been going around the bridge. Nevertheless, it is still not known which region get the most benefit from this construction. This paper aims to determine the impact of Suramadu Bridge in Surabaya and Bangkalan. The approach used is system dynamic to see the impact of development along with the dynamics that occur around the bridge. The simulation results that the bridge is shifting the concentration of the growth of Surabaya to Bangkalan, characterized by an increased in-migration, increased investment, as well as changes in land use, although in value, Surabaya is far greater than Bangkalan. The dynamics change that occurred in the two areas must be followed by spatial planning, so that the big population and economic growth to suburban areas (Bangkalan) does not lead to the formation of the structure of urban sprawl on a regional scale.

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### 1. Introduction

Indonesia is a new center of regional and global economies in Eastern Asia. Studies conducted by Oberman et al (2012) showed that Indonesian economy will grow rapidly from rank 16<sup>th</sup> of the world in 2012 to 7<sup>th</sup> of the world in

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2030 and it estimated that economic growth exceeds the ASEAN countries and capable of being major exporters in the agriculture, trade, and services sector. Legget (2014), Santikajaya (2014), dan Rastogi et al (2013) adds that Indonesian economic development is caused by the growth of the middle class and consumption levels are higher, so if Indonesia is able to utilize the potential, Indonesia could become the new magnet of growth in Eastern Asia. Therefore, Indonesia should immediately improve its competitiveness, especially in terms of infrastructure and technology that is not optimal yet, referring to the results of a study conducted by Schwab and Sala-i-Martin (2014), which indicates that the infrastructure to be one of the biggest challenges in improving the competitiveness of Indonesia at the global level.

The challenges facing Indonesia are not only related to economic growth, but also related to equitable development. This is a major challenge for developing countries that are often economic growth is not accompanied by equitable development, as is the case in China (Chen and Zheng 2008; Keidel 2007; Fujita dan Hu 2001) and India (Chowdhury, n.d.; Noorbakhsh, 2003). The issue of equitable development itself has become a major issue for Indonesia, especially since the Gini ratio increased from 0.32 to 0.41 in just 13 years (1999 to 2012) (The World Bank, 2014). To overcome this problem the Government of Indonesia has set a wide range of policies, including infrastructure development. This policy is also based on various experiences in various countries as described by Fan and Chan-Kang (2005); Calderón and Servén (2004); Fox and Porca (2001); Nijkamp (1986); and Looney and Frederiksen (1981), which indicates that the development of strategic infrastructure in the region is able to encourage the equity, increase employment, decrease poverty reduction, and reduce disparities between regions.

Suramadu Bridge construction that began in 2003 connects the Surabaya City, Java and Bangkalan Districts, Madura. It is expected to reduce the development gap between East Java and Madura Island which has been focused on the Surabaya City. This can be seen from the high role of investment coming in Surabaya, so that GDP per capita in the city is very high, namely 31.77 million rupiah in 2013, outpacing the surrounding region, such as Bangkalan. In addition the level of poverty in the region is also relatively low, at 6.23% in 2013. This condition is inversely proportional to Bangkalan poverty levels by 24.62%. The unemployment rate in the Surabaya is higher than Bangkalan, namely 5.82%, but employment in the Surabaya has a more adequate education, so that their chances of getting a job is also higher. It is then pushed importance Suramadu bridge construction.

The Suramadu Bridge linking Surabaya to Madura Island by road is expected to reduce the development gaps that exist. Flow of land transportation quickly and effectively is expected to increase the competitiveness of Madura Island with other areas, so that the economy and social welfare can be improved. Besides that, focus of development is also no longer in the mainland Java Island, but it also spread to other areas such as Madura. The existence of Surabaya as one of the growth centers in the province of East Java is expected to provide a trickling down effect on the Madura Island, especially Bangkalan as long as the multiplier effect is running slow because it is separated by the sea.

Now, six years after the Suramadu Bridge inaugurated in 2009, a dynamic range of economic, social, and environment have occurred in the Surabaya City and Bangkalan Districts as the Suramadu Bridge construction impacts. But until now it still not known if the purpose of equalization between Surabaya and Madura (Bangkalan) via the Suramadu Bridge construction actually happening or even the development is still focused on the Surabaya City which is the growth center in East Java. Therefore this study will explore how much impact of the Suramadu Bridge construction in Surabaya and Bangkalan of the economic, social, and land and which region benefited greatly from the construction of this bridge.

## **2. Methodes**

The approach used in this study is a quantitative approach that reality is seen as something concrete, observable by the senses, can be categorized according to the type, shape, color, and behavior, has not changed and diversification and see the relationship between variables as causal relationship (Sugiyono, 2010). Furthermore, Sawitri & Andini (2009) states that the direction of the study of quantitative is to describe the state of the past, the state of the present, and the relationship between variables and the development of a model for future viewing and decision making associated with the physical aspects, economy, population, and means infrastructure. In the context of this study, this approach was chosen to look at the dynamic development of the region occurred in two

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