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CORRUPTION PATTERN IN INDONESIA: A GEOGRAPHICAL ANALYSIS

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Abstract

The Indonesian Corruption Perception Index (CPI) is one way to measure corruption practices in Indonesia. By using Geographic Information System (GIS),this paper divulged that high corruption inci-dence is existed in cities that has a play role as an economic growth pole. For instance,Jakarta and Surabaya as the bipolar economic growth centresin Java, and Medan, Pekanbaru and Palembang as the economic growth poles in Sumatera. Those findings drive us to think that economic growth centres theo¬ries are not pertinent with those conditions.

Keywords: Corruption Perception Index, Geographic Information System, Economic Growth Centres

Abstrak

Indeks Persepsi Korupsi (IPK) Indonesia adalah salah satu cara untuk mengukur praktek korupsi di Indonesia. Dengan menggunakan Sistem Informasi Geografis (SIG), penelitian ini berusaha meng¬ung-kap tingginya korupsi yang ada di kota-kota yang berperan sebagai tiang pertumbuhan ekonomi. Misalnya, Jakarta dan Surabaya sebagai pusat bipolar pertumbuhan ekonomi di Jawa; kemudian Medan, Pekanbaru dan Palembang sebagai pusat pertumbuhan ekonomi di Sumatera. Temuan-temuan tersebut mendorong kita untuk berpikir bahwa teori pusat-pusat pertumbuhan ekonomi tidak relevan dengan kondisi tersebut

Kata Kunci: Indeks persepsi korupsi, Sistem Informasi Geografi, pusat pertumbuhan ekonomi

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INTRODUCTION

Corruption has been a major problem in underdeveloped and developing countries (Dininio, 2004). Corruption is a global issue faced by all countries, governments, and communities (Ho and Huang, 2011).

Corruption blocks on nation's effort to be prosperous. Many resources are taken by people who not reserve the right. As a result, poor people cannot access many development programs and therefore they cannot enhance their lifes.This leads to worse condition, where several people live in wealthy condition and at the same time most people live in subsistence level (Morris, 2012). Corruption broadly as the abuse or misuse of positions or resources of public officials for private gains usually in the form of bribery (Lee and Oh, 2007).

Corruption in Indonesia can be tracked far before Indonesia gains its independence. In kingdoms era, local authorities must served king in the centre of authority. They did not get salary. Otherwise they could exploit economics resources in their territory and obtain revenue from those.After Indonesia gain its independence, condition is worse than before. Political instability drives to poor economic condition. This causes Indonesia experienced hyperinflation in period of 1965-1966 and hurt fixed income employees. Political parties also infiltrated to government. In this era, collusion and nepotism nuances are stronger. Recruitment, placement, and promotion are merely based on same political party (Widodo, 2006; Economakis, 2010).

In 2012, Indonesia positioned in 118th rank among 180 countries. This position is far beyond other ASEAN countries, for instance Malaysia and Singapore which positioned in 54thand 5th respectively. For more ten years, Indonesia is consistently occupied low level section of cleanest country from corruption.

In Indonesia, corruption is existed in every region. Transparency International Indonesia (TII), who published Corruption Perception Index (CPI) in Indonesia since 2004, conducts research in big cities Indonesia. In 2004, TII conducted survey in 21 cities; meanwhile in 2010 the survey covered 50 cities in Indonesia. The more cities included, the interesting the result gained. Corruption is not merely happened in big or capital cities. It also existed in small and medium cities.

It is interesting to reveal corruption practices in Indonesia, especially from geographical view.This research is aimed to explore geographical aspect about corruption in Indonesia.

RESEARCH METHODS

This is descriptive analysis research. This research will use secondary data obtained from statistical bureau, Transparency International Indonesia and other related institutions. Data obtained will be analyzed with Geographical Information System (GIS). Corruption level is approached by Indonesia Corruption Perception Index. Among 50 cities included in 2004 to 2010's surveys, researcher will only include 14 for data consistency.

GIS

Geographical Information System (GIS) is a special type of information system, concerned with the representation and manipulation of a geographic realty (Kuncoro, 2001). The main characteristics of GIS, as summarized by Martin (1996) cit. Kuncoro (2001), are as follows first, Geographic: The system is concerned with data relating to geographic scale of measurement, and which are referenced by some coordinate system to location on the surface of the earth. Second, Information: This represents the extraction of specific and meaningful information from a diverse collection of data, and it is only possible because of the way in which data are organized into a "model" of the real world. Third, System: This is the environment, which allows data to be managed, and questions to be posed. A GIS should be an integrated set of procedures for the input, storage, manipulation, and output of geographic information.

Thus, GIS is a special type of

information system, concerned with the representation and manipulation of a geographic realty. A GIS transforms data into information by integrating different data sets, applying focused analysis and providing output, all in manner to support decision making. This study follows some typical procedures involved in creating and using GIS, namely: data acquisition, preliminary data processing, database construction, spatial search and analysis, and graphical display and interaction. These procedures are listed in Table 1.

How to Measure Corruption?

Corruption is defined as misuse of power for private gain (TII, 2010). According to the Indonesian Law No. 31, 1999 in reference to Law No. 20, 2001, there are 30 types of criminal activities that can be classified as corruption. These crime activities can be grouped into seven categories; (1) Action of public officials that cause state financial loss. (2) Bribery. (3) Embezzlement. (4) Extortion. (5) Misconduct (in public procurement). (6) Conflict of interest (in public procurement). (7) Gratification.

Corruption has huge impact to the nation. Tanzi (1998) indicated that corruption increases income inequality and poverty through lower economic growth; biased tax systems favoring the rich and well-connected; poor targeting of social programs; use of wealth by the well-to-do lobby government for favorable policies that perpetuate inequality in asset ownership; lower social spending; unequal accessof education; and a higher risk in investment decisions for the poor.

That study is relevant in Indonesia. CEDS (2012) stated that corruption hurt Indonesia in many aspects: corruption has negative relationship to investment, not limited to physical investment but also foreign direct investment and human capital; corruption lowering ratio of investment to GDP; corruption lowering per capita income and surpress economic growth; corruption increases Gini Coefficient, inequality in education and factor ownership.

Eventhough several institutions defined clear definition of corruption and its impacts, it is very hard to measure corruption because corruption is an undercover activity. To breakthrough, TII compose Corruption Perception Index (CPI). This is a composite data that obtain perception through interviewing respondents. Perception is an intuitive judgment based on personal experience, heuristics and available information (TII, 2010).

An index is a numerical scale used to compare variable with one another or with some reference number. Meanwhile Indonesia Corruption Perception Index uses numerical scale for measuring the level of corruption in cities in Indonesia. This index is derived from respondents from businesspersons group. Range of index is from 0 to 10; 0 means very corrupt and 10 very clean.

The first survey in Indonesia was held in 2004. After that, the survey conducted every two years. Therefore, TII conducted four surveys to explore corruption condition in Indonesia, i.e.: in 2004, 2006, 2008, and 2010. There is increasing number of cities involved in the survey. Initially, there were 21 cities with 1.305 respondents in 2004's survey, 32 with 1.760 respondents in 2006, 50 with 3.842 respondents in 2008, and 50 with approximately 10.000 respondents in 2010. For data consistency, this research will only analyze 14 cities as listed in table 2.

Economic Pattern among 14 Cities

Cities with high per capita income is not merely has higher Indonesia Corruption Perception Index (CPI). Regional typology is used by classify cities based on two indicators: income per capita and CPI. By determining the national average of income per capita and CPI, cities are grouped into four categories: high income and more corrupt, high income and less corrupt, low income and more corrupt, and low income and less corrupt.

Figure 1 shows us that in 2006 most of cities had per capita income above national average and at the same time indicated less corruption practices. On the other hand,

Table 1. Main Categories of GIS-related Activity

Procedures	Activities
Data acquisition	- Digitize maps and documents, include data coding, verification, and error correction - Obtain existing data sets - Perform primary survey
Preliminary data processing	- Interpret or classify surveyed data - Structure digital data for chosen spatial model (object-based, network, and field-based) - Transform to common coordinate system
Database construction (Data storage and retrieval)	- Conceptual data modeling - Specify database structure - Specify update procedures - Load data to database
Spatial search and analysis	- Retrieve data by location - Retrieve data by class or attribute - Find most suitable location according to criteria - Search for patterns, associations, routes, interactions - Modeling and simulation of physical and social phenomena
Graphical display (Visualization) and interaction	- Create maps - Explore data - Create 3D views - Produce reports

Source: Kuncoro (2001)

DKI Jakarta, Surabaya, Pekanbaru and Batam which had high per capita income experienced high corruption practices.

In 2010, there was higher number of cities which had high per capita income and more corrupt. Totally, there were seven cities, comparing to four in 2006. In 2010, there was no city lied in which had per capita income below national level and high level of corruption. Denpasar seemed can enhance managed themselves in corruption eradication.

Corruption Pattern in Geographical Aspect

Geographical Information System (GIS) is used to reveals corruption pattern in cities in Indonesia, as seen in Figure 3.

Figure 3 shows geographical pattern of corruption in Indonesia in period of 2004-2010. Bigger the circle, worse the corruption incidence is in those city. Java and Sumatera Islands dominated Indonesian economy. Kuncoro (2001) indicated that Java contributes to approximately 80% of the Indonesian manufacturing and value added. Meanwhile Sumatera constitutes to approximately 10%. The last, other regions only enjoyed the rest 10%.

Those economic inequality leads to economic concentration only in big cities. Jakarta and Surabaya constitute bipolar economic growth pole in Java Island. Those cities has approximately 45% and 15% of value added respectively. On the other hand, Medan and Palembang are the economic triggers for Sumatera. Batam with its special status run faster to optimize its absolute advantage which near to Singapore. Makassar is the biggest city in the southern part if Sulawesi Island. On the other hand, Manado drives economic activity in the northern part of that island. Those cities have a tendency to have high corruption practices.

Interestingly, worst corruption

Table 2. List of Surveyed Cities

City	CPI Score				Rank			
	2004	2006	2008	2010	2004	2006	2008	2010
Banjarmasin	5,39	4,93	5,11	5,20	2	14	8	16
Makassar	5,31	5,25	4,70	3,97	3	11	18	47
Manado	5,12	4,87	3,98	5,35	6	15	37	14
Padang	4,83	5,39	4,64	5,07	8	8	19	20
Palembang	4,67	4,60	3,87	4,70	10	18	39	32
Balikpapan	4,59	5,10	4,86	5,58	12	12	16	8
Yogyakarta	4,51	5,59	6,43	5,81	14	5	1	4
Denpasar	4,44	3,67	4,25	6,71	15	29	32	1
Pekanbaru	4,37	4,43	3,55	3,61	16	21	45	50
Batam	4,32	4,51	4,44	4,73	17	20	26	30
Semarang	4,17	5,28	4,58	5,00	18	9	21	25
Medan	4,09	4,67	3,84	4,17	19	17	40	44
Surabaya	3,93	4,40	4,26	3,94	20	22	31	48
DKI Jakarta	3,87	4,00	4,06	4,43	21	26	36	38

Source: TII, several years of publication

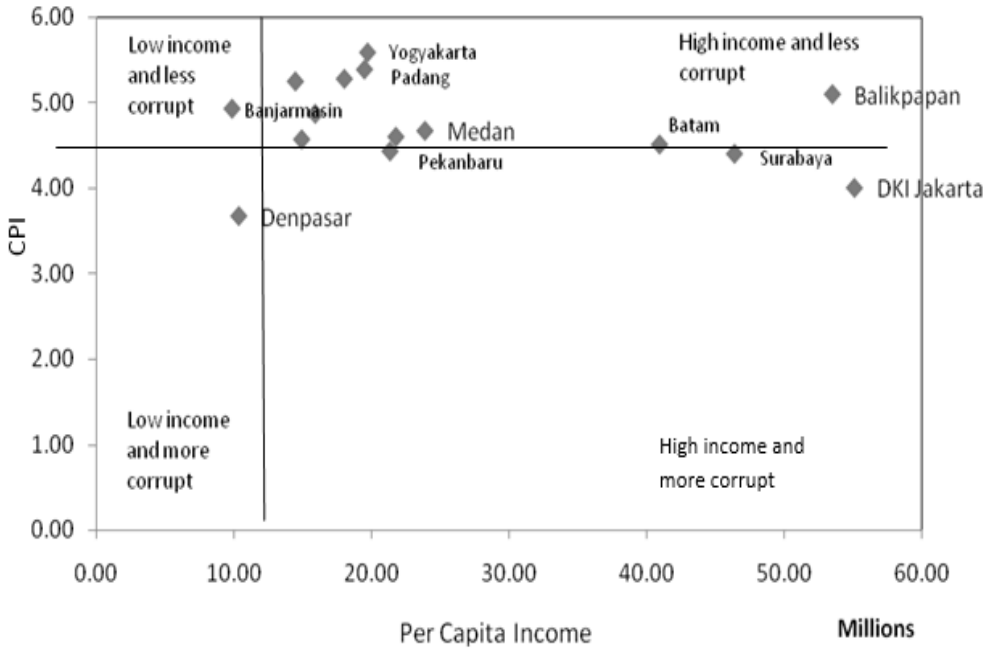

Figure 1. Regional Typology, 2006
Source: Calculated from BPS

practices existed in Pekanbaru. Since 2004, Pekanbaru is consistently positioned in lowest quintile among Indonesian cities surveyed by TII. The implementation of regional autonomy in Indonesia since 2001 brings new opportunity to this city to enhance its welfare.This condition is supported by its strategic location as one of major gateway to Singapore and Malaysia. By attracting investors and businessmen, that city can obtain prominent economic growth. This condition drives to higher corruption practices.

Yogyakarta, together with Balikpapan and Banjarmasin are the cleanest cities from corruption among 14 cities included in this research. Recall Hamid (2002), Yogyakarta's citizen have a unique consumption pattern as showed bygiving serious concern to education sector, marked with 12 percent of their income spent to that sector. This is the highest proportion among Indonesian cities.

Economic Growth Centre

Those findings lead us to several questions: what is the significance of economic concentration? Why higher

corruption incidence existed in economic centres?

To answer those questions, we must reconsider economic concentration theories. Cochrane (1992) cit Blakely (1994) define economic concentration as a combination process by which local governments, along with local corporate firms, join forces and resources to enter into new partnership arrangements with the private sector or each other, in order to create new jobs and stimulate economic activity in a well-defined economic growth.

Furthermore, there is inadequate set of theories can explain economic concentration well. Economic concentration can be explained by several theories: Neoclassical Economic Theory, Economic Base Theory, Location Theory, Central Place Theory, and Cumulative Causation Theory, and Attraction Model (Cochrane, 1992 cit Blakely, 1994)

Neoclassical economic theory does not have a significant spatial dimension. Nonetheless, neoclassical models of large-scale economic systems can be applied to

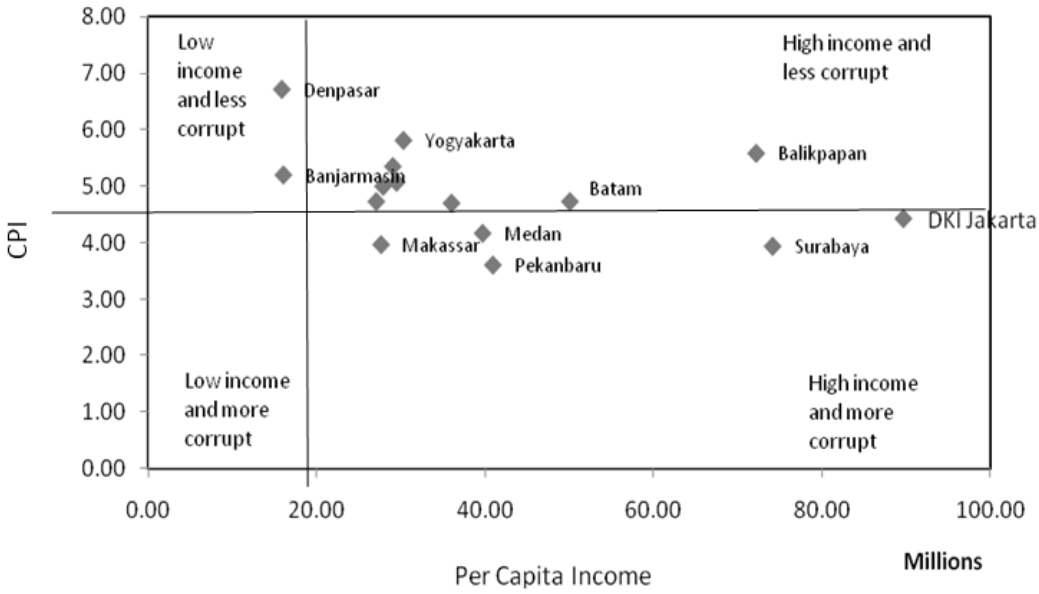

Figure 2. Regional Typology, 2010
Source: Calculated from BPS

Figure 3. Geographical Pattern of Corruption in Indonesia, 2004-2010

the competitive positioning and wealth generation of a subarea of a larger economy. Neoclassical economic theory offers two major concepts for regional and local development: equilibrium and mobility. These concepts state that all economic systems will reach a natural equilibrium if capital can flow without restriction. That is, capital will flow from high-wage/cost to low-wage/cost areas, because the latter offer a higher return on investment. Those characteristics imply that all communities in one area must ensure that they use resources in a manner that attracts capital. It means they must diminish artificial barriers, inferior governmental policy and absence of good business climate.

Economic base theory postulates that the determinants of economic growth are directly related to the demands for goods and services from other areas outside the local economic boundaries of the community. This strategy emphasizes to prioritize industries that have national or international linkage. To develop on region, government must reduce export-related barriers and at the same time enhance firms' competitiveness through tax relief, advancing transport facilities and telecommunications.

According to Croix, David and Delavallade (2009), corruption affects economic growth through many channels, one of them consisting of a modification of the structure of public expenditure in favor of specific types of spending. Corruption also leads to different kinds of budgetary distortions according to the quality of the legal and political institutions and to the level of development.

Location theory gives emphasis to location. New firms will search location which gives higher benefit for them, to minimizing transportation cost, labour cost, the cost of energy, the availability of suppliers, local government quality, communications and education. Therefore communities will enhance their resources to be the best options for firms.

The basic concept underlying central place theory is called the hierarchy of places. Each urban center is supported by a series of smaller places that provide resources like raw materials, labour, and energy. Local communities will assist resources to develop specific functions as region-serving, industrial area, or residential area.

Cumulative causation theories propose that development will leads to inequality between areas. Firms by nature will pull resources, capital, skilled labour, and experts to certain areas. These will accumulate large-scale cumulative advantage over the rest of the systems. As a result, there will be a backwash effect that sweeps all advancement in other regions.

Attraction models based its assumption on that a community can attract new firms by offering incentives and subsidies. The consideration is new industries will generate taxes and at the end will increase economic wealth. This model also assumes that community will attract industries as well as workers to their area. New workers will serve both buying power and capability to attract new industries. Those ideas will trigger communities to initiate programs to make their area more attractive to investors, firms, new migrants, and others.

All of growth theories give emphasis to competitiveness of one region. This competitiveness leads to better performance in economic sector. As a result, people will enjoy higher welfare. In contrast, the competitiveness is interrupted with corruption. Thus, corruption that persisted hardly in major economic growth in Indonesia is irrelevant with all of growth theories.

CONCLUSIONS

Corruption incidence existed in every region in Indonesia. TII surveys reveal that higher per capita income drives to higher corruption level. Using SIG, this paper identified that most corrupt cities are located in areas that have the same characteristics, i.e. economic growth poles. Those cities, for instance, located in the Northern Coast of Java and Eastern Coast of Sumatera. This phenomenon is not pertinent with all

economic growth theories that stated that economic growth centres XxXxare areas that have competitiveness to attract investors and communities.

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