The Application of Artificial Intelligent in Analysing Ruling of Court for Corruption Case

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Abstract

A ruling of courts contains a full transcript of the defendant's examination in chief and its cross-examination, as well as the transcript of the witnesses' testimony under oath, and the concomitant cross-examination of the witnesses, a list of documentary evidence, and applied sentences. By applying Artificial Intelligent, the researcher is able to open all possible connections and interrelation of all actors and evidence which are almost impossible to be done manually. From six of the ruling of the Supreme Courts regarding corruption, we identified and mapped the process, forms, sociograms, crosstab of corruptions, and interconnections of all the persons and institutions involved. The huge and various documents can be easily categorized and be more homogeneity. This study, therefore, demonstrates that Artificial Intelligent is increasingly playing a role in qualitative as well as quantitative corruption research.

Keywords: courts, corruption cases, sociogram, crosstab, nvivo

1. Introduction

Indonesia has been enduring corruption, and this situation is deemed to continue if the state fails to implement an effective solution to eradicate it. Various studies concerning corruption have been conducted, and many causes of corruption have been identified, resulting in the realization that eradicating corruption is not an easy game. Collusion between politicians and business people is a broad field and this research focused on identifying the factors that influence politicians and local business people to conspire in committing the crime of corruption within a government institution, from an institutionalized perspective. To broaden the knowledge on the factors influencing conspiracy between politicians and local business people to commit corruption, a collection of cases that have been ruled already by the highest court are analyzed using relevant theories. It was then discovered a conspiracy, which is an agreement between two parties under negative bureaucratic behavior. Materials used in this research are court transcripts on the pronouncements of the offenders and witnesses, pieces of evidence, and final rulings of the Supreme Court involving the crime of corruption.

This research is important because a tool to sort, make calculations, and analyze a court rule document is needed. Without such tools, court rules which consist of abundant information and very wide variation as well as complex interconnection have to be done manually and will take a very long time. Artificial Intelligence provides opportunities and possibilities to play an important role in this analytical work. Furthermore, accuracy in the analysis of court rule documents is expected to help prevent corruption.

2. Literature Review

The definition of corruption, which is the abuse of public interest for personal gain, is the most widely used by researchers to define corruption. The misuse of authority has three overlapping classifications, (1) abuse of public needs for personal interests, (2) malversation of public funds to influence or gain power, and (3) abuse of power to injure public interest or norms of behavior for personal interests [2]. Hence, the causes of corruption are patronage-clients. Moreover, this study focused on corruption with conspiracy processes between party public officials and business people before the consumption of the crime. Discovered corruption causes by the Commission Against Corruption (2016) were mostly related to bribery, other cases were linked to the proposal to commit an overt act, nepotism, fraud, malversation of public funds, and threats. Hence, corruption is an overt act...
committed by both public officials and government officials [11]. Accordingly, a report written by [12] revealed that 32% of corruption carried out by agents of political parties.

Several studies on the issue of corruption in Indonesia have been carried out by various researchers, revealed that political opponents exposed most of the corruption cases and not by the anti-corruption institutions or authorities [13]. Meanwhile, [3], who researched the massive corruption during the Soeharto era, found out that corruption has become part of political practice that was inherited from preceding public servants. [3] further wrote that ideological rationalization is taking place, including the denial of responsibility and loyalty to superiors, which also leads to corruption. To eradicate corruption, it suggested a religious approach to dealing with corruption in Indonesia and proposed implementing good governance to prevent corruption, he contended that good governance is in line with Islamic teachings, which forbids excessive wealth that encourages unlawful assets (not tayyib). On the other hand, [5] argued that when Timor Timur became part of Indonesia, ununiformed civil servants, military officers, and leaders of Timor were involved in corruption.

Regional Autonomy Law (Law 32/2014) was created in hope of eradicating negative bureaucratic behaviors and address the needs of the people efficiently; however, the implementation of this law worsened corruption and even favored local public officials in committing the crime of corruption. The power emanated from this law helped local public officials in covering election costs [6]. With the use of NIES theory, law enforcement of Indonesia was analyzed and found three weaknesses (1) the overlapping task of handling corruption, (2) weak coordination and supervision, and (3) the existence of shameless officers [9].

The New Institutionalism in Economic and Sociology (NIES) theory

An institution is a social structure that has achieved an established form and is tested by the dynamics of change in cognitive culture, normative, and regulative. NIES theory divides institutions into three levels, which are the macro-level, the meso-level, and the micro-level. The macro-level involves rules, norms, and ethics, the meso-level is related to the organizational structure, while the micro-level is related to individuals within that same organization [7]. This implies that all institutional levels can influence decision-making. From a government perspective, this means accommodation of political interest and legitimacy, hence, power resides in the people.

By the assumption that the economy is not the only aspect that influences institutional, hence, social science disciplines have been playing a vital role in an institution. With this, [8] included sociological considerations in a new institutional theory, which was later known as The New Institutionalism in Economic and Sociology (NIES) theory. By this new theory, many social events could be analyzed from a broader perspective [1]. Since then, this theory has been widely used to analyze modern economic phenomena, which has been elusive in the previous. Furthermore, social events with an economic background, criminal acts can occur in informal interactions [10]. In Hong Kong, the success of eradicating corruption drive was due to the existence of informal institutions, which was influenced by the macro level that complemented by Anti-Corruption institutions

This research is in consideration of the corruption with conspiracy cases involving public officials and local business people at the expense of public interest. This means that both involved parties agreed to commit an overt act to satisfy their respective personal interest through an intentional dishonest act by not fulfilling legal obligations. Campaigning for Local Leaders Election (Pilkada) requires large funds. For the business people, on the other hand, winning public procurement (bidding to win a public project contract) is hard. Conspiration may be proposed by either party as they can satisfy each other’s needs, and fully consummate the crime corruption once the politician assumed his desire. The flexibility of NIES theory in covering the emergence of actions from both formal and informal elements of an institution [8] infers that the concept of the informal economy can be used to complement this theory. The informal economy represents marginalized individuals as a result of government interference, which may lead to the emergence of a paradox, the smaller the involvement of the government is less likely the emergence of the Informal Economy [10].
The role of Artificial Intelligence in processing big data

Artificial Intelligence (AI) is a field of science that studies how to make computer systems think, act, and produce decisions like natural intelligence possessed by humans. AI is intended to automate human work into technology, so that human work becomes more efficient and effective. On the other hand, Artificial intelligence (AI) enables machines to learn from experience, adapt to new inputs, and perform human-like tasks. Using this AI, software packages can be programmed for specific tasks by processing large amounts of data and recognizing patterns in the data. AI achieves amazing accuracy as it makes the most of data.

3. Research Method

A qualitative method was used in this research, which allowed the researcher a widen analysis of the complex social problem introduced herein [4]. However, this method made it difficult for the researcher to identify the sufficiency of the data and the number of theories that must be discussed in the framework. Research on corruption in the government organization with conspiracy faces major challenges as it a concealed agreement that shall only be known by involved parties (Smith et al., 2003). To address this dilemma, this research focused on corruption with conspiracy cases that have been ruled with final judgment by the highest court of Indonesia. The sources of information were taken from the 2016 KPK report were taken with the following conditions: (a) the crime involves a public official, (b) the corruptions were conducted within the government organizations, (c) the case has been decided and ruled. Among 151 cases involving the crime corruption with conspiracy, only six cases satisfied the three conditions, as follow, (1) Natural Gas Selling at Bangkalan Madura, committed by Head of Regency (2) Land Swapping at Tegal, committed by Mayor (3) Regional Budget at Banten, committed by regional representatives members (4) Parliament Aspiration Budget at Maluku and North Maluku committed by Houses members (5) Infrastructure Construction at Papua committed by Houses member (6) Misused of Forrest function at Riau committed by Governor. All officials or politicians of all cases have conspired with business people.

To have further knowledge on why corruption was committed, the offenders were background checked. Furthermore, each of the cases has abundant information and consists of very wide variations. With the support of computer technology such as the Nivo software package, the researcher was able to categorize all data and uncover connections of all actors that aren’t possible manually. The researcher used Nvivo’s features of crosstab and network sociogram maps to explore the character of each case. Data taken from the official website of the Supreme Court includes court transcripts, course of the violations, pieces of evidence, and final rulings. After analyzing the gathered data, the researcher was able to identify corruption with conspiracy took place, the course of corruption, who took the initiative to do bribery, the number of bribes, other personalities involved in the crime, and additional information.

4. Finding

Gratification at Bangkalan

PT. Kodeco Energy Co. Ltd., A Korean Company, in cooperation with BP Migas (Indonesia Oil and Gas Regulator)/PT. Pertamina EP (Exploration and Production of State own Company) was permitted to exploit the Natural Gas in the Poleng Block off the coast of Sepulu District and Tanjung Bumi Bangkalan District. Exploited gas shall be used for supplying electricity in Bangkalan and Gresik areas. The Power Plant in Gresik and East Gili Madura, which is operated by PT. Pembangkit Jawa Bali (PJB), a subsidiary of the National Electric Company (PLN), needs a gas resource to be able to supply its area electricity, which will be harvested from its source to its plantation through a pipeline connecting the two. Power plants (PLTG) in East Gili are given priority rights for the allocation of this natural gas. The distribution of gas allocation is under Regional State Own Company (BUMD), PD Sumber Daya. A Private Company, PT. Media Karya Santosa (MKS), was also interested in buying natural gas
allocation as it aims to build a gas pipeline in Gresik and East Gili and sell its product to PJB. To manifest this, PT. MKS coordinated with Bangkalan Head of Regency FA. After which, FA managed to consort PT. MKS and PD Sumber Daya in handling all operations. Whereas, PD SD will be awarded a 6% allocation of the total harvested gas. With these services, a total of Rp18.85 billion was given to FA by PT. MKS from 2004 to 2009 as a form of gratification.

**Land-swapping at Tegal City**

To establish a permanent TPA (Final Disposal Site) plan in the Bokong Semar area a budget of around Rp3.53 billion was provided for the cost of land acquisition. To manage this, business people or land brokers were prevented from utilizing the planned land. No transfer of land ownership in the area without the Mayor’s permission. Upon this status, IJ as the new Mayor saw this area as a business opportunity that could generate profit. He asked his mother to become a broker and amended the current policy in favor of his interests. With this, his mother, Rky, was able to buy lands in the Bokong Semar area. To avoid possible technical issues, lands were bought under the name of some other individual not connected to IJ by affinity and consanguinity and falsified documents by forging the date back to the time IJ has yet to assume his public office. After which, a business-man Rdt conspired with Rky, bribe all concerned officials, and bought the properties of the latter situated in Bokong Semar. The real price of the TPA location is Rp3.1 billion and the current value of the state-owned lands is Rp9 billion.

**Regional Budget at Banten**

In 2012, the Banten Provincial Government and the Banten Regional House of Common (DPRD) ratified Regional Regulation which creates an establishment of Regional Development Banks (Bank Banten). The establishment will be carried out by PT. Banten Global Development (BDG); for this reason, and capital participation amounting to Rp950 billion shall be awarded to BDG. The realization of this capital participation was already carried out in two stages, first in 2013 budget with Rp314.6 billion, second in 2015 budget with Rp250 billion. The rest of Rp384.4 billion was planned to be released in the 2016 budget, but during the 2016 Regional Parliament (DPRD) session, it was rumored that the said project will be postponed. To prevent this, FTS as Chairman of the Banten DPRD Budget Board conspired with RT, Managing Director of PT. BDG, in agreement to give Rp116 million and SGD1000 bribe distributed to 40 DPRD members.

**Parliament Aspiration Budget at Maluku and North Maluku**

Aspiration Fund commonly known as the Electoral Development Program Funds to address the needs of the public voters. Five members of DPR, DWP, MT, ATT, MZ, and BS, received an allocation of the budget as much as Rp570 billion (approx., US$44 million) for the construction of new roads and to upgrade the existing road in Maluku and Maluku Utara Provinces. For these projects, a group of local contractors offered bribes up to 7-8% of the total project budget. As a result, the aforementioned DPR member received bribes amounting to Rp45 billion (approx., US$ 3.5 million).

**Infrastructure Construction at Papua**

IA, Head of the Department of Energy and Mineral Resources of Deiyai District of Papua, met DYL, a House member office, in a plan to use Aspiration Fund for construction of a power plant in Papua’s District of Deiyai. Hence, Rp50 billion was available in the Aspiration Fund. Realizing this, SJ a Contractor, and DYL met at a restaurant in South Jakarta. At that meeting, DYL agreed to receive an amount equivalent to 7% of the proposed fund and promised to release 50% of the budget allocated for the project soon.

**Misused of Forrest function at Riau**

GMEM, a business person who assisted AM during the campaign session for Riau Governor approached AM, the Governor, and requested reallocation for his oil palm plantations, which is also part of the Nature Conservation Area (KPA) to become plantation areas. AM agreed and assisted the mal-process to the Forest Ministry.
5. **Discussions**

Thanks to the Nvivo12 Software program that analyzes the cases through its capacities of network sociography approach, resulting the corruptions to be shown through another perspective. The program easily provides three degrees of complicity network connectivity a) high complicity, Maluku dan Tegal, b) medium complicity, Bangkalan dan Riau, and c) Low complicity, Papua dan Banten. Complicities were appeared because of larger of the number of actors involved. As mentioned in Figure 1 regarding the corruption networking.

![Diagram](image)

**Figure 1. Case Patterns**

*Source: primary data*

Furthermore, the concept of the relationship between Dewie Yasin Limpo and the network of the Ministry of Energy and Mineral Resources and the Budget Body of the People's Representative Council of the Republic of Indonesia on the one hand, with Irenius and Setyadi Jusuf, on the other hand, is called Exchange, centrally versus power. The characteristic of this relationship is indicated by the function of Dewie Yasin Limpo who lobbied the Ministry of Energy and Mineral Resources, the DPR Budget Agency, and PLN, however the function of Irenius which has a network of entrepreneurs who are willing to provide escort funds as bribes (Smith-Doerr and Powell, 2005), as shown in Figure 1. The center point of the relationship is Dewi Yasin Limpo, on the left, it describes a direct relationship with Setyadi or other businessmen, while the right side of Dewi's relationship to several functional groups, such as the Ministry of Energy and Mineral Resources and the Budget Committee of the People's Representative Council of the Republic of Indonesia, the expansion of relations will be on the right side with the next small network addition.

About the New Institutionalism in Economic and Sociology [8] theory, it can be explained that due to the macro environment in the form of clean and transparent governance and intense competition for awarding projects, public officials and business people at the micro-level try to find institutional ways. A conspiracy to commit a crime of corruption can be used by an aspiring public official to lure business people into supporting and financing his candidacy. With the influence of the former and money of the latter, this proposal has a high probability of success. Hence, those involvements have been confirmed by the public officials interviewed by the researcher. In reference to the NIES theory, this is an institutionalized team up at the meso-level, which links macro-level and micro-level. The researcher found that one of the causes of corruption involving public officials of Indonesia is the greed for the enrichment and the high election costs. This study found that there is a written agreement between those involved in corruption with conspiracy in Indonesia. Election costs for an aspiring Regional Heads are around Rp20 billion, and this is confirmed by all public officials who were interviewed for this research.

The impact of corruption on State finances is huge; the cost of development becomes higher than normal as there is no price competition in the selection of project implementers. The users of the projects also do not get the best quality of work due to the selection of project implementers that are based solely on the fee offered and not on the quality of the work. This will also disrupt the selection of priorities.
based on the interests of the wider community. Furthermore, inadequate procurement processes trigger inflation due to high costs due to improper procurement processes, which further cause misdirection and poor development results. Countries that experience severe corruption tend to have poor infrastructure (Corruption: Cost and Mitigating Strategies, IMF, 2016). To reduce the impact of corruption in state-funded development, it is recommended to expand the application of electronic bidding.

Nvivo analyzed the cases and found the degree of occurrence of corruption of each party as follows, (1) Head of Local Government or House members were the highest degree at all cases (from 18.42 up to 33.33). (2) The main business person (from 10 up to 16.67), and (3) Trustee or subordinate (from 4.83 up to 19.3) except at Banten case subordinate occurrence was higher than main business person.

6. Conclusion

Based on six cases of local elite corruption, we can conclude that networking and social capital are the sources for bad politicians in making bad local policies. The government institutions might be a good platform for corruption. The informal relationship between the politician and business people creates an informal economy. Within the government institution, conspiracy grows up to at the meso-level where all involved parties were agreed to conspire, and each has clear benefits and obligations. Mayor, governor, and regent in their organization have created self-interest local policies to get an economic benefit. This mechanism develops continuously, on the interaction from the micro-level between politicians who try to cover the political costs with the business person that is poured in a conspiracy bond. This association was brought to the meso-level to produce policies that were only beneficial to certain businesses at the expense of the public interest.

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