



Political Budget Cycles and the Indonesian Simultaneous Regional Direct Elections in 2015

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List of Acronym

APBN	: Central Government Budget
APBD	: Regional Government Budget
BPS	: Statistics Indonesia
DAU	: General Allocation Subsidiary
DAK	: Specific Allocation Funds
DBH	: Revenue Sharing (includes tax, customs, and natural resources share)
DJP	: Directorate General of Fiscal Balance, MoF
KPU	: General Election Commission
MoHA	: Ministry of Home Affairs
MoF	: Ministry of Finance
PAD	: Local Government Owned Revenues
PBC	: Political Budget Cycles
Pemilukada	: Regional Direct Election
Perludem	: the Association for Elections and Democracy
Seknas FITRA	: National Secretariat - Indonesian Forum for Budget Transparency
Susenas	: National Socio-Economic Survey

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Abstract

There is an assumption that incumbent candidates often try maximizing their influence as the heads of regional government to increase their probability of being re-elected in the second period. Related to this assumption, this study examines the existence of local budget utilization behaviour by incumbents who have politically interested policies. This study also aims to analyse the probability of these incumbents of being re-elected.

This study focuses on 254 provincial and districts/cities in Indonesia which held simultaneous regional head direct election in 2015 and examines regional heads' fiscal policy and how it is induced by political motivation. It analyses certain expenditures such as budget deficits, total spending, and investment spending. The "other" budget category namely discretionary funds, with which regional officials have discretionary power to allocate and distribute, will also be observed. The funds consist of grants aid, social assistance expenditures, and financial aid. All these local government spending are examined, in particular related to the election year in 2015.

According to the results obtained, there is no indication of politically driven fiscal policy by incumbent candidates in almost all spending categories. However, there is a positive and significant relationship between the regions that have incumbents and grant expenditure subcategory behaviour. This finding indicates that this subcategory expenditure is still popular among incumbents to stimulate citizens and gain sufficient vote-share later on. Surprisingly, the opposite effect of the cyclical behaviour appears in terms of the possibility of winning the election. The total expenditure disbursement policy around election year will be affect negative and significantly decrease the incumbents' winning re-election.

Keywords: *Political Budget Cycles, Fiscal Spending Policy, Simultaneous Regional Direct Elections, Regional Elections in Indonesia*

Chapter 1 Introduction

1.1 Background of the Study

There is an assumption that politicians who run government tend to reduce revenues or increase spending particularly if they are running for elections for the second time. This phenomenon is called the political budget cycle. One of the reasons for political budget cycles is the incumbents' desire to be re-elected by attracting voters (Nordhaus 1976; and Baskaran et al. 2016). Budget cycles usually appear in earlier elections of the democratic electoral transition system, and there is much more evidence for developing countries than in developed countries (Shi and Svensson 2006; Brender and Drazen 2005; and Drazen 2008).

Political budget cycle appears because of lack of information so that the political leaders can utilize the budget aligned with their vested interests. Rogoff (1990) argues that asymmetric information is one of the factors why political budget cycles may occur since the electorates have difficulties to monitor the incumbents' performance. Apparently, this circumstance leads the current government to maximize its influence to describe its positive side by using fiscal policy in particular prior to election period. Therefore, political budget cycles reflect a cyclical fluctuation behaviour in economic policies induced by the timing of elections in emerging democratic countries that feature asymmetric information among voters.

There is a series of empirical studies showing the importance of budget spending when re-election is possible. Galli and Rossi (2002) and Klein and Sakurai (2014) show that government expenditure increases around election time, in particular, if the incumbents run for the second term. Incumbents will attempt to increase their popularity with voters by employing the budget strategically. Moreover, other empirical support studies on political budget cycles confirm on a link between the effort to enhance budget spending with people and voting preferences behaviour (Brender and Drazen 2005; Balaguer-Coll 2015; and Chortareas et al. 2016). These studies found the influence of the elections to the budget utilization in a variety of government levels from across countries level to sub-national level. In election years, budget spending tends to increase, especially some type of expenditures such as donation, social assistance, education, health, roads, and so on (Kein 2010; Benitto et

al. 2012; and Sjahrir et al. 2013). In other words, incumbent politicians may try to increase their re-election probability through budget spending in certain budget lines.

Specifically, in Indonesia, the local leaders who run re-election are thought to increase budget spending. Several studies find that the political budget cyclical behaviour is present in direct elections and relate to expenditure discretion categories such as donations and social assistance that need mayors or regents' discretionary control (Ritonga and Alam 2010; Sjahrir et al. 2013). These studies also noticed it has relation with the regions that has incumbent and run re-election for the second term. Therefore, the political budget cycle studies are relevant due to the regional political system that has changed from a formerly strong centralized government structure to become a decentralized since 2001.

This research will focus on the regional public expenditure policy instead of revenue side, that indicated has a relationship with election time. The decentralization process in Indonesia has had many political and economic consequences, for instance, power was transferred from the central government to regional governments including fiscal powers. The local government has however remained reliant on the central government as evidenced by substantial intergovernmental transfer funds. In 2015, the intergovernmental transfer budget was 700,4 trillion rupiah, seeing a significant increase from 322,4 trillion rupiahs in 2010¹. According to the Law 23 of 2014 regarding Regional Government, there are three types of the fiscal transfer budget in Indonesia, which are revenue sharing (DBH), general allocation subsidiary (DAU), and specific allocation funds (DAK).

Brodjonegoro (2001) and Blondal (2009) also argue that the fiscal decentralization process in Indonesia focuses on expenditure decentralization rather than the revenue side. Blondal (2009) also mentioned that local governments still have a substantial dependency on transfers from the central government, which approximately 90 percent of their total budget. Therefore, this research will give more emphasizes on spending behaviour of the local government in election years.

One of the motivations for decentralization is the belief that it will promote good governance by enabling citizen participation and democratic elections. However, there was a lack of checks and balances in the local government process, initially because legislature

¹Ministry of Finance, Republic Indonesia (2015) *Informasi APBN 2016* (Central Budget of 2016 Information). Accessed on 25th August 2017 <<https://www.kemenkeu.go.id/sites/default/files/bibfinal.pdf>>.

members elected the local executives. The election process will lead to an allegation that a candidate tends to buy votes from local parliament to win election (Choi 2007). The elected local leader also will feel inferiority instead of have equal authority in front parliament members. As a result, they tend to have more responsibility to the legislature that voted them instead of serves their citizens (Surbakti 2014). Therefore, by 2005 the election system was changed and the first direct elections held in all municipalities. The incumbents are allowed to complete their terms which ended at different time and years. After conducting and evaluating direct elections process for ten years, in 2015 Indonesian government and the House of Representatives agreed to promote regional elections simultaneously.²

Unfortunately, money politics, patronages, and political dynasties are still widespread in local politics and fuel corruption. Many scholars suggest that the regional elections were still stained by transactional politics, ranging from the selection process of candidates to party until the voting period (Aspinall 2014; and Henderson and Kuncoro 2011). Data from the Ministry of Home Affairs until December 2015 revealed that there are 343 of the head of municipalities that involved a legal case whether General Attorney, Police Office, or KPK (www.kompas.com 04/02/2015).³ Moreover, many incumbents' family members such as brothers, sisters, children, relatives, and even wives are running in elections that allegedly to extend family control (www.news.detik.com 22/01/2017).⁴

After conducting direct elections for ten years since 2005, Indonesian agreed to promote regional elections simultaneously in 2015 which involved 269 regions. It was 278 incumbent or public officials regional head who is re-nominating in simultaneous elections 2015. There are 150 of 278 incumbent candidates are as regional head, meanwhile, 128 of them are regional vice head (Sadikin 2016). According to Indonesian regional elections result in 2015, from 140 provincial and regions/municipalities that incumbents involved elections, showed that 68.6 percent of incumbents won, whether this phenomenon is a political budget

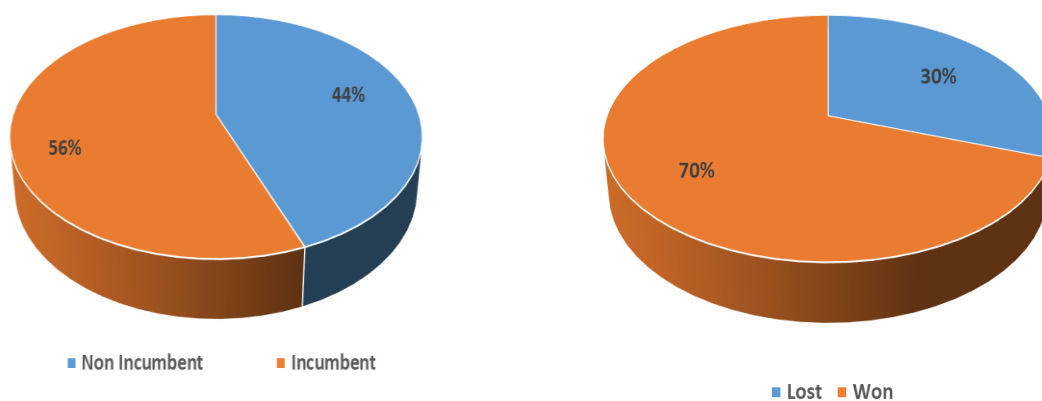
² Brief story of the Indonesia election transition history from the independence era until after reformation can be viewed on Pratama and Maharddhika (2016) *Prospek Pemerintahan Hasil Pemilukada 2015* (Prospect of Government Result of Pemilukada 2015). Jakarta: Yayasan Perludem.

³ Arsil, Sabrina (2015) *Mendagri: 343 Kepala Daerah Tersangkut Kasus Hukum* (Minister of Home Affairs: 343 Heads of District Cases of Legal Cases). Accessed 4 June 2017
<<http://nasional.kompas.com/read/2015/02/04/21114211/Mendagri.343.Kepala.Daerah.Tersangkut.Kasus.Hukum>>.

⁴ Ul Haq, M.F. (2017) *ICW Ungkap Keterkaitan Dinasti Politik, Pilkada, dan Korupsi* (ICW Discloses the Linkage of Political Election, and Corruption Dynasties) Accessed 4 June 2017
<<https://news.detik.com/berita/d-3395110/icw-ungkap-keterkaitan-dinasti-politik-pilkada-dan-korupsi>>.

cycles presence or not still need further exploration. Moreover, the evidence of the possibility of the incumbent leaders' re-election due to the political budget cycles effect in Indonesia has not been discussed yet. In a related study, Sjahrir et al. (2013) only focus on the existence of political budget cycles in Indonesia through the local government behaviour due to their budget expenditure policies at the district level.

Figure 1. Simultaneous Regional Head-Direct Election 2015 Result



Source: Analysis Result

It is important to analyse the sub-national levels of political budget cycles in Indonesia since regional governments particularly districts and cities are the closest administration to citizens who directly get the impact of their policies. However, although some beneficial effect of Indonesian fiscal decentralization on public services delivery (Simatupang 2009 as cited in Muttaqin 2017), another recent literature found that regional head direct election of local government decreased local government responsiveness in terms of public service provision (Kis-Katos and Sjahrir 2014).

Another assumption is a politically driven of local budget utilization. It means, local budget misuse spending in some categories by the local head government often occurs approaching election year (Sjahrir, et al. 2013). They tend to use the budget in particular in “discretionary budget subcategory” without regard to performance background and reliable benchmarks but depends on their vested interests (Ritonga and Alam 2010). According to Ministry of Home Affairs, the regional elections must be funded by regional budget themselves whether from grants expenditure subcategory or ‘other’ post of the budget

(www.tempo.co 17/04/2015).⁵ This circumstance can give beneficial effect for the candidates that will compete for the second period of tenure.

This study observes the occurrence of the cyclical economic behaviour in local government budget in a simultaneous direct election in 2015 and the possibility of the incumbents to win the election. The study focuses on 254 provinces, districts and municipalities in Indonesia which held simultaneous direct local elections in 2015. Other 108 regions are added to examine whether the political-economical cyclical also occurs in these regions regardless there is no simultaneous regional head direct election was held in 2015. The variety of local elections time implementation in each subnational level (provincial, districts and municipalities) expected to enhance interaction and identification of politically driven fiscal policies (Sjahrir et al. 2013). Meanwhile, in the simultaneous local election, the politically induces cycles might overlap with other time effects.

1.2 Research Objectives and Questions

1.2.1 Research Objectives

This study will examine the existence of the political budget cycle in 2015 during the simultaneous regional head election. Besides that, this study also analyses the possibility of political budget cycles induced by incumbent candidates on the likelihood of being re-elected for a second term.

1.2.2 Research Questions

The two main research questions are as follows:

- 1) How does the opportunity for incumbent candidate affect political budget cycle especially in the election year?
- 2) If Political Budget Cycle exists in 2015 simultaneous regional head election, how will the political budget cycle behaviour affect the probability of the incumbents to be re-elected?

1.3 Limitations of Study

⁵ Adityowati, P. (2015) *Kemendagri: Daerah Wajib Anggaran Dana Pilkada* (MoHA: Local Governments have to finance the regional elections). Accessed 14 September 2017.
<<https://m.tempo.co/read/news/2015/04/17/078658512/kemendagri-daerah-wajib-anggaran-dana-pilkada>>

1. This study excludes the results of previous regional elections because of limited data availability (2010-2011 regional election result depends on the region). The previous result would have been beneficial to have to study its impact on the simultaneous regional elections in 2015.
2. This study also uses other municipalities which did not conduct the simultaneous elections in 2015 (as a control case) to analyse the relationship between election year and certain regional budget spending. However, there is no data regarding the incumbents in those regions.
3. This study does not have data on the relatives of regional heads. The Supreme Constitutional Court number 100/PUU-XIII/2015 mentioned the prohibition of incumbent's relatives is against the constitution and human right. It means, by regulation, the families of the current head regions (who already had two tenure periods) allows to run in the local elections, which may lead to political dynasty regimes. Allegedly, incumbents who will not run anymore but who have family members up for election may act similarly as incumbents who run re-election. As a result, the cyclical budget behaviour between incumbent regions and non-incumbent regions will be similar and cause the insignificant result of the PBC analyses.
4. This study does not present the political affiliation of candidates whether nominated by political parties or as an independent. Furthermore, this study also regardless the coalition fragmentation of the candidate that nominated by the political party. This is important to measure whether electoral budget cycles in concurrent regional direct election 2015 also influenced by political interaction factor.

1.4 Contribution to the Literature

In spite of the growing literatures in developing countries on fiscal budget policy that is induced by political purposes, there are still limited studies related to political budget cycle in Indonesia. There are several studies on political budget cycles on Indonesia. First of all, Rahman and Alam (2010) focused on grant, social assistance, and financial assistance expenditure between 2009-2010 and found that there was a higher spending on these budget lines during the election time compared to the year before regional election. Sjahrir et al. (2013) focused on the existence of political budget cycles in Indonesia during indirect or direct elections at the district level. Their studies found that the behaviour exists on direct local election compared to representative local election. In contrast, Winoto and Falikhatun

(2015) who focused on the political budget cycles precedence prior to local head direct election in 2015 confirm there is no indication of grant expenditure, social assistance spending fund for the sake of their political interest.

This study will emphasise the incumbents' behaviour comparison on local government budget spending before and in election year in 2015, and also the winning election possibility of the incumbent. This study also will strengthen the recent studies on political budget cycles presences by analysing the possibility of the incumbent leaders to be re-elected due to the political budget cycles effect.

1.5 Organization of Research Paper

In order to determine whether political budget cycles behaviour exists or not during the Indonesian simultaneous regional direct election in 2015, the research paper will be divided into six chapters.

Chapter 1. Introduction

The first section will discuss the importance of political budget cycles studies and some brief fundamental arguments on underlying mechanisms. Some economic indicators are also presented to give a basic justification of the proposed research. Eventually, this chapter will present the objectives of the study and the main research questions.

Chapter 2. Theoretical Framework and Literature Review

This chapter will discuss the conceptual framework of political budget cycles and its link with re-election probability. The presented theories are also supported by some empirical findings to build the model and its hypothesis used in this thesis.

Chapter 3. Overview

In this chapter, we will provide a brief explanation on regional elections in Indonesia, the fiscal decentralisation process in Indonesia, and the implementation of the simultaneous direct regional head election in Indonesia in 2015. This chapter will provide more information regarding the nature of regional elections and its relationship with fiscal utilisation by the heads of regional governments.

Chapter 4. Data and Methodology

This chapter will detail variables used in the study including sources of the data. The author will also present the model used to answer research questions.

Chapter 5. Analysis of Empirical Results

Chapter 5 presents the main empirical results and how they relate to the theoretical background exposed in the earlier chapter.

Chapter 6. Conclusion

The final chapter will summarize the findings and also try to give some suggestion for improving work in the future.

Chapter 2 Theoretical Framework and Literature Review

2.1 Political Budget Cycles Theory

Political Budget Cycles (henceforth PBC) has referred with different terms. There are several terminologies that have close definition due to budget cycles topics, such as political business cycles, political budget cycles, and electoral budget cycles. Political budget cycles are cycles in some component of the government budget coinciding with elections. Other terms include electoral budget cycles and political business cycles (Drazen 2008; and Klein 2010). These terms refer to increases in government spending or decreases in revenue in an election year. Those terms capture the political incumbent's desire to be re-elected.

However, there is a different focus discussion between political business cycles, political budget cycles, and electoral budget cycles. Political business cycles give more attention to macroeconomic variables such as output or growth, unemployment, and inflation, while the electoral budget cycles and the political budget cycles focus only on government budget activity (Nordhaus 1974; and Drazen 2008). In the former case, the cyclical behaviour is influenced by the finding that good macroeconomic conditions prior to the elections could increase the possibility of an incumbent when he run for re-election. In the latter case, and similar to political budget cycles, the electoral budget cycles focus upon the question of electoral cycles in government budget discretion policies due to electoral cycles (Blais and Nadeau 1993).

Nordhaus (1975) initially introduced a theory of political business cycles by proposing a model in which incumbents would utilize the macroeconomic policy (balance deficits policy, unemployment policy, and inflation policy) in order to gain electoral advantages. This early model emphasizes that the incumbent intentionally would secure re-election by optimizing the vote share expectation. The model also assumes that the voters will record and evaluate the incumbent's past performance. Therefore, the incumbents attempt to create the most desirable economic conditions before elections by applying expansionary fiscal policies to stimulate economy growth and create "constructive" circumstances (Nordhaus 1975). The literature on Political Business Cycles (such as Lindbeck (1976) and Allesina (1987) also discussed the extraordinary economic cycles in western countries as a function of political dynamics.

Another terminology was introduced by Rogoff and Sibart (1988) and Rogoff (1990): ‘the political budget cycle’ is used instead of ‘political business cycle’ when narrowing the scope of discussion from macroeconomic perspective to only fiscal policy. This strand of the literature assumes that political budget cycles can be shown by given an equilibrium signalling interpretation from the electorate to describe unobserved current government performance. This literature assumes that voters have rational expectations, but have difficulties to monitor the incumbent’s competency level due to asymmetric information (Rogoff and Sibart 1988). In other words, in these models, signalling is the driving force behind political budget cycles. Incumbents use government spending to increase fiscal policy performance prior to election time to signal competence to the electorate.

Shi and Svensson (2006) also argue that candidates may act opportunistically regardless of the fact that most electorates know the government’s policy, since some electorates are uninformed. The larger the number of electorates that fail to distinguish between election-induced fiscal policy manipulations and the incumbent’s competence, the more incumbents may profit from boosting expenditures prior to an election. In equilibrium, expenditures targeted to particular electorates are higher in an election period than in a non-election period. Swing voters will rationally vote for incumbents who provide more targeted expenditures even when they know that such expenditures may be electorally motivated. Numerous empirical studies have been done to support the notion that political budget cycles indeed occur, even though, opinions still differ as to whether political budget cycles are more likely to happen in less developed economies compared to developing ones (Persson and Tabellini 2002; Brender and Drazen 2005; Shi and Svensson 2006).

A recent literature mentioned that PBC occurrence is conditional instead of universal. Dubois (2016) studies on various of literatures after Nordhaus’ studies on Political Business Cycles argued in terms of institutional context, there are three variables that influenced PBC existences: election time period system; the state system, regime, and rule; and the economic policy limitation. The first feature related on the political economic cycle behaviour appearances closely related to the length of electoral term. In matter of term period many scholars study found that time constraint as well as alleviate the term period of election of the survey will decreased a possibility of PBC behaviour result (Klein 2010; Benito et al. 2013; and Sjahrir et al. 2013). Meanwhile, other study result showed the opposite such as Shi and Svensson (2006) neglected the time effect of election with the expansionary fiscal policy implementation by the government.

The next element of PBC constraint discussed on PBC appearances in “authoritarian versus democratic system”, and newly-transitional democratic countries, well-established democratic countries, presidential and parliament countries, and regarding electoral regulation (Dubois 2016). In recent years, political budget cycles existence in terms of different political and institutional contexts have been explored to know whether it has contribution to pre-electoral deficits behaviour or not. Brender and Drazen (2005) work that concentrated on the level of democracy of countries, has made a very important place in the political budget cycles studies. They found evidence supporting political budget cycles, and underlined that these results are largely driven by “new democracies” instead of well-established democracy countries. Fiscal manipulation may work in “newer democracies”, because the institution is inexperienced with electoral politics and may lack of information to assess and evaluate fiscal manipulation (Brender & Drazen 2005, Klomp and de Haan 2013). In other words, democratic political institutions would provide political incentive structures able to induce better policy choices.

The length of time of a country live under democracy system also will affect the public spending policy that conducted before the elections. Another argument also mentioned that eventually, an increasing level of democracy is likely to increase the country’s level of transparency (Efthyvoulou 2012, and Akhmedov and Zhuravskaya 2004). This condition may reduce the incumbent’s incentive to commit to do cyclical behaviour in pre-electoral periods.

The latest variable concerned on the central bank independency, financial institution includes monetary instruments, and fiscal policies spending behaviour by the government that allegedly has the electoral motivation (Dubois 2016). This argument in line with many existing kinds of literature that mentioned some particular components of the state budget are influenced by the electoral cycle. As a consequence, there is an increase in government spending or decrease in revenues in an election year, leading to the larger fiscal deficit is called political budget cycles theory. This incumbent’s rational behaviour of fiscal manipulation is a tool that governments keep to increase their chance for re-election (Drazen 2008; Efthyvoulou 2010; Baskaran 2016).

In sum up, PBC reflect a cyclical fluctuation behaviour in fiscal policies induced by the timing of elections, in order to attract citizen’s vote preferences. This behaviour particularly occurs in emerging democratized countries that still have asymmetric of information.

2.2 Fiscal Decentralisation

Theoretically, decentralisation is the power transfer process from the central government to the lower level government. The territory that has given the authority transfer called autonomous regions. According to Cheema and Rondinelli (2007), the definition of decentralization also has changed not only about political matters but also related to resources authority, including the fiscal matters. The power of financial distribution includes the transfer of public revenue, fiscal delegation both in revenue side increasing in amount and expenditure allocation, as well as fiscal autonomy to all regional government level.⁶

Fiscal power decentralisation crucial in order to ensure that it process can be done continuously. By implementing fiscal decentralisation, regional government not only able to learn how to make a good decision-making to raise and manage their budget to improve their citizen prosperity (Cheema 2007). However, Smoke (2007) emphasized that considering on the nature of fiscal decentralization implementation is one of vital effectiveness factors. The structural characteristics of the country can be both opportunity and weaknesses of the decentralisation process.

Another spirit of the fiscal decentralization implementation is to reduce the fiscal gap between central and local government (vertical imbalance), reducing the fiscal gap between one region and others (horizontal imbalance). Stoke (2001) argues the appliance of fiscal transfer authority to regional government in developing countries will reduce horizontal imbalance, improving the quality of public services in the region and reducing the inter-regional public service gap at the same time, and improving the efficiency of national resource utilization.

Specifically, to Indonesia, after Authoritarian era has implemented decentralisation under Law number 22/1999 has reduced 'hierarchical relationship' between local government to the central government and revised by 32/2004 that strengthen provincial government as a

⁶ Political decentralization focused on organization and procedures, while financial decentralization includes the sharing mechanism and autonomy budget allocation. Look at Cheema, G.S. and D.A., Rondinelli (2007) 'From government decentralization to decentralizing governance', in Cheema, G.S. & Rondinelli, D.A. (eds) *Decentralising governance: emerging concepts and practices*, pp. 1-20. Washington: The Brookings Institution Press. Page 7.

representative of the central government to supervise the districts level, including regarding fiscal decentralisation policy implementation (Cheema 2007).⁷

A decentralized government will not implement properly without the contribution of the transfer funds from the central government to local governments. This component become one of other important factors regarding fiscal decentralization in decentralised government system as the central government attention. According to Broadway and Shah (2007), there are there are two categories of inter-government transfer funds, which are transfers for general purposes and transfers for specific purposes. Transfer for public purposes is provided as a statute of local autonomy protection and may increase inter-jurisdictional equity. The latter transfer purpose is intended to provide intensive for the government in implementing the program or certain activities implementation of fiscal transfers. The specific intergovernmental transfer funds in Indonesia is better known as fund balance. These funds become a critical component for local governments in carrying out its responsibilities for the provision of public services. Components of balance funds include general allocation fund (DAU), Special allocation fund (DAK) and revenue sharing allocation and natural resources (DBH).⁸

According to the Law No. 33/2004 on Fiscal Decentralisation, the criterion of central to regional allocation should be to meet the needs of the region as measured by the regional expenditure chapter. At the meantime, the function of the given authority (fiscal needs) should be able to safeguard efforts to explore local revenue (regional income) in the region, and it also should be fair in applying its weighting formulation and should be transparent or open and stable (Government of Indonesia 2004).

Recent studies on fiscal decentralization funds in Indonesia have mixed of the result. Eckardt (2008) studies confirm the implementation of fiscal decentralization in Indonesia has improved public services delivery educational facilities, as well decision making process. Another studies by Simanjuntak (2009) as cited in Muttaqin (2017) also mentioned that quality of public services has raised particularly in educational outcomes. However, other

⁷ Smoke, P. (2007) 'Fiscal Decentralisation and Intergovernmental Fiscal Relations: Navigating a Viable Path to Reform', in Cheema, G.S. & Rondinelli, D.A. (eds) *Decentralising governance: emerging concepts and practices*, pp. 1-20. Washington: The Brookings Institution Press. Page 141-142.

⁸ World Bank Indonesia (2010) *Laporan Penelitian Dana Transfer Pusat ke Daerah: Penyempurnaan Grand Design Desentralisasi Fiskal 2010*. Decentralisation Support Facility. Jakarta: Indonesia. <http://documents.worldbank.org/curated/en/640961468038947914/pdf/687640ESW0P1190sfer0Pusat0ke0Daerah.pdf> Accessed on 27th September 2017.

literatures showed on the contrary result, as Kes-Katos and Sjahrir (2014) studies found an initial improvement on local public financing not directly affect to the regional leaders accountability particularly related to public service delivery. Finally, recent empirical studies in Indonesia showed that fiscal decentralisation process does not always align positively with local government performance. Nasution (2016) studies indicated that fiscal authority transfer has not increased local government capability to enhance their economic productivity. This failure potentially will cause fiscal imbalances later on.

2.3 Political Budget Cycles in Local Government

While recent studies identify several PBC determinants at the national level; there are also growing academic documentations that observed political budget cycles at the sub-national level where greater similarity in government structure, policy instruments availability, and uniformity in electoral rules and dates are present (Chortareas et al. 2016). Furthermore, local governments study in the same country also allows to hold constant series of cultural and institutional characteristics that can potentially affect the causal effects identification that occurs in a cross-country analysis (Alesina and Paradisi 2014). The studies to examine the political budget cycles behaviour existence on local election has generated mixed results (Klomp and Haan 2013; Balaguer-Coll et.al 2015). Brender (2003) does not find a significant result using data for Israel, while Drazen and Eslava (2010) find evidence in Columbian municipalities that a pre-electoral increase in targeted expenditures affects electorates behaviour. Another study in several transitions democratized country such as Rusia after the fall of communism and Germany after unification find the similar evidence with Columbian municipalities (Akhmedov and Zhuravskaya 2004; and Foremny and Riedel 2014). The evidence is there is an exceed transfer fund to the citizens was consistently upwards while the revenue reduced approaching the election year.

Most political budget cycles studies in particular subnational level, the dependent variable is a measure of fiscal policies, whether local government spending or revenues. Klein (2010) stated that the variable Y of political budget cycles study is fiscal policy (total government spending or expenditures on development projects), and the explanatory variable is a dummy reflecting an election period. Likewise, Chortareas et al. (2016) and Benito, et al. (2012) who have used fiscal variables (capital and current spending, and revenues) as their dependent variables to examine the political budget cycles existences in Greece and Spain municipalities respectively. The voters have preferences for high level of spending in

particular the public goods or related to their welfare such roads, transport systems, schools, and hospitals (Klein 2010). In addition, Sjahrir et al. (2013) models showed that donation and social assistance budget spending would increase the incumbent leader's popularity among the voters. Moreover, it also will enhance their probability when the political budget cycles presence (Klomp and Haan 2013; and Ballaguer-Coll et al. 2015).

Chortareas et al. (2016) approach model that adapted from many scholars to examine political budget cycles existence through fiscal variables that include total expenditures and revenues, and other vector variables such as a number economic (government subsidies), demographic (population) and political (party's ideology) explanatory variables. Similarly, Klein (2010) offers model to examine the existence of political budget cycle through the real government spending per capita. He also accounting other control variables for other political determinants of public expenditure, such as the former election result of the local head's political party vote-share, the party dummies indicators whether the incumbent's party is the same as the former leaders not only local but also national, and the log population. He also proposes the probability of the local incumbent leaders being re-elected through the variation in real government spending per capita, and other control variables such as the variation of per capita revenues, and the fiscal deficit measurement (Klein 2010).

Specifically to the local governments in Indonesia, Ritonga and Alam (2010) find that the allocation of grant and society support expenditure in incumbent regions during the election year is higher than prior the elections. Sjahrir et al. (2013) analyze the political budget cycles effect for indirect and direct elections in Indonesia and find that significant political budget cycles exist in Indonesian districts only for direct election, and that the political budget cycles are significantly stronger when incumbents run for re-election. Winoto and Falikhatun (2015) investigate the possibility of misuse of discretionary funds in local governments' budget, but found no indication of misuse of grant and social aid before the local election in 2015.

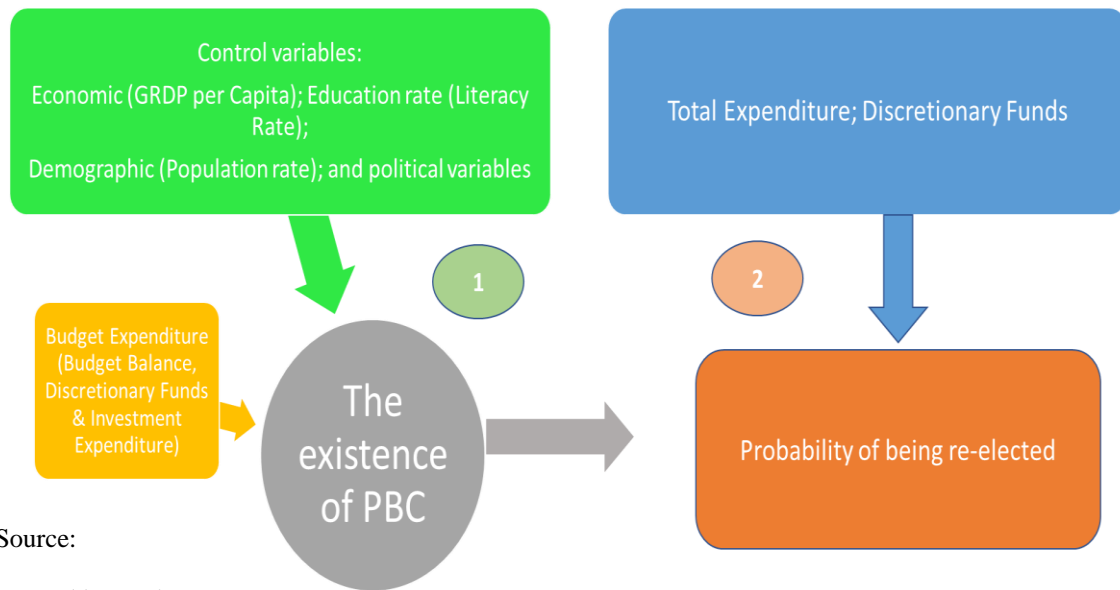
In sum up discussions above, Political Budget Cycles theory exists prior to some conditional followed instead of as a universal phenomenon. These conditional variables have been offered in order to explain the differences between one country to others, such as developing and developed countries; emerging and established democracies; constitutional rules (legal); and cultural, geographical (include demographic circumstance), and other societal characteristics of the country (education rate, information access).

Theoretically, this study was built from the Sjahrir et al. (2013) and Chortareas (2016) study perspective. The first study captured political budget cycles behaviour in direct local elections in Indonesia compared to indirect local election, and by examining model dummies for two years around the election and election time. They also captured an incumbent's region behaviour in budget spending when running re-election. The latter study observed politically motivated fiscal policy in Greek municipalities and their probability to be re-elected.

In their study, Sjahrir et al. (2013) try to disaggregate the administrative expenditure to separate the discretionary and non-discretionary components, and hypothesize that incumbents raise their discretionary funds in election years (donation and social assistance sub category budget) in order to improve their popularity and has beneficial effect to be re-elected. Total expenditure, investment expenditure also put into model since in previous studies it goes upwards around the election years (Klein 2010; Vergas 2009; Chortareas 2016). Meanwhile, budget balance also important whether the exceed fiscal spending affect positively the deficit in particular at the late period of incumbent's duty time (Klein 2010; and Chortareas 2016).

The control variables in this study are population size, the log of real GDP per capita, and the literacy rate as the proxy of education rate of the voters. The population is to ensure that the size of citizen affects the political induced behaviour or not. Education variable is necessary to capture election behaviour of the voters, which has consistently been found to increase political participation and affect the voting preferences (Burden 2009). Another study by Milligan et al. (2004) finds that the people education rate has positive effect related to political participation in the US and UK, and it also will affect people awareness as well their rationality to vote. The study also found that the higher of education level among citizen will affect the ability to gain more information whether related to candidates or their programs (Milligan et al. 2004).

Figure 2. Conceptual Framework



Source:

Constructed by Author

Chapter 3 Overview

3.1 Regional Elections in Indonesia

3.1.1 A Brief History of Regional Elections in Indonesia

Theoretically, there are three main goals of the election, which are to get legitimate government, to reach social and political integration, and to get an effective government. The first aim comes from political representatives from political party that elected from election, social and political cohesion as a result of public participation during election, and the latter is a result of a trusted election (Webb et al. 2015).⁹

Indonesian is a decentralized country, which has transferred not only political but also fiscal into local government since 2001. According to Ministry of Home Affairs, it has 542 autonomous regions consist of 34 Provinces and 508 municipalities (regencies/cities).¹⁰ Regional elections in Indonesia has been implemented since the colonial period Dutch with different mechanisms with some pattern appointment followed. Each pattern is heavily dependent on the holder power at that time. The replacement of power holders, as well as the entry of new regimes within a power has an influence over the elections implementation during these respective rulers or regimes take those policies (King, D.Y. 2003).¹¹ In new order era, the head of regions are appointed by central government, but after post-Soeharto era (after 1998), they are elected through the local parliament's process mechanism. Finally, direct election mechanism in 2005 was implemented as an evaluation result of the former representative system implementation that allegedly neglected people needs (Vidi 2017; BTI 2016; Choi 2017; and Harahap 2017).¹²

⁹ Webb et.al (2015), Election, <https://www.britannica.com/topic/election-political-science/Functions-of-elections>, accessed on 15th July 2017, Encyclopædia Britannica, inc.

¹⁰ Directorate General of Regional Autonomy, MoHA (2014). *The Formation of Autonomous Regions until 2014*. Accessed on 22th July 2017. < <http://otda.kemendagri.go.id/CMS/Images/SubMenu/totalDOB.pdf>>.

¹¹ The history of Indonesian political reformation including elections process on the early of post-authoritarian era can be found at King, Y.D. (2003) *Half-Hearted Reform: electoral Institutions and the Struggle for Democracy in Indonesia*. Wesport: Praeger Publishing.

¹² Batlolone, Vidi (2014), *Lika liku Sejarah Pilkada*. Accessed on 1st August 2017. <<http://www.sinarharapan.co/news/read/141007082/liku-liku-sejarah-pilkada->>>.

The local direct election is an alternative solution to tackle both conflict and ineffectiveness implementation of the regional election indirectly result based on a legislative member under Law Number 22/1999 regarding Regional Government. Local election immediately becomes an urgent need to correct as soon as possible any flaws in the representative local election which implemented through the local legislatures. The election will directly be beneficial to people as the uphold sovereignty which have been lost since the election through the parliament member. The new system that was introduced in 2005 claimed will create a good state of democracy in the government management (governance) as well as in the social environment (civil society) because the people's sovereignty has been fully restored (Surbakti 2005).

All formal elections whether national or sub-national direct elections, are organized by the Indonesian election commission. Previously, regional head elections were done separately with vary of tenures depends on its region, and occurs during the year. However, in 5 special status regions in provincial level (Aceh, Capital Region of Jakarta, Special Region of Yogyakarta, Papua, and West Papua) there are special autonomous regions, which have specific, unique, and exceptional requirements. For instance, in Aceh Province, there is a local political party (namely as Aceh Party) which has involved into the elections and currently becomes the strongest political party. For Jakarta, as a special capital region, the autonomy is only for the provincial level while in the district level are not being elected. Another special region is Yogyakarta, which has regulation that Yogyakarta's king also appointed as the governor. Lastly, Papua and West Papua province has special autonomy (www.mediaindonesia.com 24/06/2016).¹³

All regional elections are held throughout the year, and mostly there are postponed election in some regions. These regions election occur infrequent among areas rely on the period time, it can be held on the same day but mostly in the different day along years (rumahpemilu.org). As mentioned previously, most of the candidates as a pair are elected for a five-year period and can be re-elected on the second term with votes number no less than 30 percent. Exceptionally, for Jakarta there is a special requirement, the winner should gain

¹³ Micom (2016) *Pilkada Serentak dengan Aturan Berbeda* (Simultaneous Pilkada with different regulations). Accessed on 30th July 2017 <<http://mediaindonesia.com/news/read/52907/pilkada-serentak-dengan-aturan-berbeda-hanya-jakarta-50-plus-satu/2016-06-24>>.

minimum 50 percent of votes number. As if such a sufficient number is not achieved, there will be a second-round election among the top two candidate pairs.¹⁴

3.1.2 *Simultaneous Regional Direct Election in Indonesia*

The idea of a simultaneous regional election is to reduce the risk of disruption and disturbance from areas that do not hold elections on that day. Moreover, simultaneous regional elections are more efficient economically, more focused to capture what local people needs, and easier to be assessed compared to separate elections elections (www.idea.int 14/02/2017); www.globalindonesianvoices.com 26/11/2015; www.netralnews.com 09/01/2017).¹⁵ During ten years of direct regional head election implementation since 2005, around 1,500 regional elections conducted in Indonesia with various completion tenure periods of head of regions leading to high cost and inefficiency (<http://www.thejakartapost.com> 09/09/2014).¹⁶

Law No. 8 of 2015 mandates that from 2015 to 2018, local elections have to be implemented every 5 (five) years simultaneously on the same date throughout the territory of the Republic of Indonesia (Republic of Indonesia 2015). The election on 9 December 2015 was only one of the three rounds of simultaneous regional elections in Indonesia covering 269 regions in Indonesia. Based on data from the Directorate General of Regional Autonomy, MoHA, regional head elections will be implemented simultaneously in 269 regions which consist of 170 districts, 26 cities and eight provinces in Indonesia on 9 December 2015 (Ministry of Home Affairs 2014). Following the first event in 2015, there have been other two rounds after regional direct elections in 2015, which was held on February 2017 in 101 regions, and followed by the third round which will be held in June 2018 in 171 regions (General Elections Commission 2015).

¹⁴ Specifically, regarding Special Region of Jakarta's election is ruled by The Law No. 29/2007 article 11 on Capital Region of Jakarta that stated 'the pair of governor candidate who votes more than 50% (fifty percent) is designated as elected governor and vice governor.

¹⁵ Tamang, L.R. (2017), Five things you may not know about Indonesia's Regional Elections. Accessed on 15 July 2017 <<http://www.idea.int/news-media/news/five-things-you-may-not-know-about-indonesia%E2%80%99s-regional-elections>>.

Arham, M. (2015) Simultaneous Regional Elections for a Better Democracy. Accessed 15 July 2017 <<http://www.globalindonesianvoices.com/23701/simultaneous-regional-elections-for-a-better-democracy/>>.

Wiseno (2017), Simultaneous Regional Elections Expected to Boost Economic Growth. Accessed 15th July <<http://www.en.netralnews.com/news/business/read/108/simultaneous.regional.elections.expected.to.boost.economic.growth>>

¹⁶ Wardhani, D.A. (2014), Ahok defends direct elections, slams coalition. Accessed 20 August 2017. <<http://www.thejakartapost.com/news/2014/09/09/ahok-defends-direct-elections-slams-coalition.html>>

Table 1. The Implementation of Simultaneous Local Direct Head Election Phases

The End of Tenures	Simultaneous Local Direct Head Election Phases Implementation		
	First Transition	Second Transition	Third Transition
The year of 2015 and between January-June 2016	December 2015	2020	2027
Between June-December 2016 and the year of 2017	February 2017	2022	
The year of 2018 and 2019	June 2018	2023	

Source: Ministry of Home Affairs 2015

The current local leaders, whether the governor, the mayor, and the regent can be re-elected for the second period, and called as incumbent. However, there is an unclear definition regarding incumbent in Act on Regional Elections in Indonesia.¹⁷ Formally, the only explanation of incumbent terminology comes from the KPU Regulation No. 9 of 2015 on Governor, Regent, and Mayor Nomination. Article 1 section (19) states: “The Incumbent is the Governor or Vice Governor, Regent or Vice Regent, and Mayor or Deputy Mayor who is currently serving.” However, The Supreme Constitutional Court has canceled the Law by Decision of The Supreme Constitutional Court number 100/PUU-XIII/2015 mentioning the prohibition of incumbent’s relatives is against the constitution and human right.


Moreover, there is a further explanation on Formal Letter of KPU No. 302/VI/KPU/2015 stating that the current regional heads who have terminated tenure period, have resigned, or could not serve before the end of tenure and before the election registration time, cannot be called as an incumbent. These regulations have been criticized by political practitioners and experts since it will allow the relatives of the incumbents to enrol into the election that is forbidden by law and will allegedly form political dynasties. Regarding the incumbent terminology, this research will use the KPU regulation No. 1 section (19) definition instead of the further explanation from the KPU formal letter, to analyse the relations between incumbencies to local budget expenditure behaviour particularly in an election year.

¹⁷ The only article that mention on “Incumbent” is on article 7 section (f) that stated “The nominee has no conflict of interest with the incumbents at least for 1 (one) period of election.” Republic of Indonesia (2015). The Law No. 8 of 2015 on Amendment to Law No. 1 of 2015 on Stipulation of Government Regulation No. 1 of 2014 on the Election of the Governor, Regent, and Mayor be Liable.

3.2 Fiscal Decentralisation and Regional Public Expenditure in Indonesia

Decentralization process in Indonesia has changed over time reflected by regulation amendment on regional government. In contrast with a regional government regulation that has been revised for the third time, the last regulation related to fiscal decentralisation is Law No. 33 of 2004.¹⁸ The revision of the regulations does not have big differences with its forerunner, in term of fiscal autonomy. The change of the rules decentralization in Indonesia can be seen as the figure below.

Figure 3. The Evolution of Decentralization Regulation in Indonesia



Regulation Aspect	Implemented in 2001	Implemented in 2004	Implemented in 2014
•Regional Government Decentralisation	•Law No. 22/1999	•Law No. 32/2004	•Law 23/2014
•Fiscal Decentralization	•Law No. 25/1999	•Law No. 33/2004	

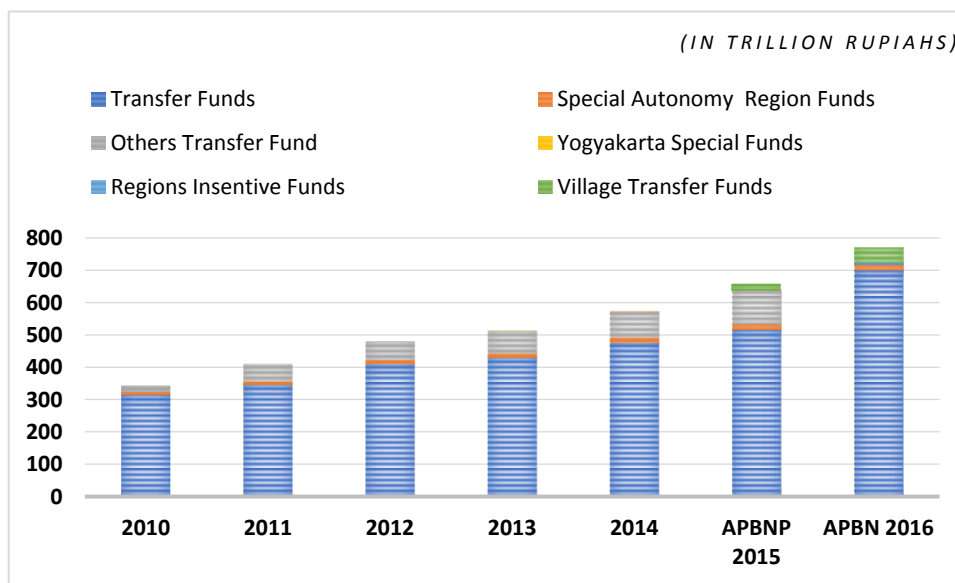
Source: Author Analysis based on Ministry of Home Affairs.

The decentralisation implementation in Indonesia, particularly fiscal decentralisation program, has not been free of flaws. There are some obstacles, not only budget efficiency management and usage, but also fiscal resources. Many regions have rich natural resources, and this has affected their revenue. On the other hand, there are also regions with less natural resources, and it affects their revenue as well. According to Blöndal, et al. (2009), the local government rely on central government subsidiary through transfer fund around 90 percent to fulfill their budget needs. They argue that one of the reasons is due the tax authority in Indonesia which remains centrally weighted instead of collected locally by local governments. There are three key elements of the fiscal transfer budget in Indonesia: revenue sharing, general allocation subsidiary, and specific allocation funds (Blondal 2009).

¹⁸ The Law of regional government are The Act number 22 of 1999, that was revised by The Act number 33 of 2004, and finally was replaced by The Act number 23 of 2014 on regional government. However, the regulation related fiscal decentralization are The Act number 23 of 1999, and replaced by The Act number 33 of 2004 on fiscal decentralization or already has been implementing for almost 14 years.

Figure 4. shows that the trend of intergovernmental and village transfer funds in Indonesia is increasing annually. In 2010, the transfer funds were only less than Rp. 350.0 trillion but in 2016 raised double to around Rp. 770.0 trillion. This trend is aligning with the central government fiscal decentralization policy, that weighs fiscal decentralization to the regional government through transferring the central ministries budget spending to special allocation funds followed by significant improvement transfer to local government and also village funds (Ministry of Finance 2016).

Figure 4. Intergovernmental and Village Transfer Funds 2010-2016



Source: MoF 2016

There are implementing regulations related to fiscal decentralization. The most closely related to this research topic is the Decree of Minister for Home affairs on Regional Fiscal Management. The regulation has been changed several times. In 2011 it was revised for the second time from Decree No. 13 of 2006. According to Decree No. 21 of 2011, there are ‘discretionary funds’ whose allocation relies on the regional head’s goodwill. These discretionary funds include grants, social assistance expenditures, and financial expenses that have been chosen as this research’s variables. These grants and social assistance expenditures come into the category of indirect spending. Their allocation allegedly often based on the subjectivity of the regional leaders instead of certain performance indicators. As a result, the funds can be allocated aligned with the leader political of interest, and in terms of regional election, for the incumbent candidates, can be used to attract voters (Ritonga and Alam 2010; Sjahrir et al. 2013).

In order to prevent the local budget spending misallocation, the government stipulates MoHA Decree No. 32 of 2011 on Guidelines for Grant and Social Assistance sourced from APBD, which is amended to Decree No. 39 of 2012. After the issuance of the MoHA Decree No. 39 of 2012, there is an improved method. The grant expenditure, social assistance, and financial assistance expenditure are no longer using a lump sum system package, but it must be provided with recipient's name, recipient's address and the amount of aid (whether grants, social assistance, and financial assistance). This new regulation is mentioned in Annex III Regional Head Regulation on Translation of Regional Revenue and Expenditure Budget (APBD).

According to the Decree of Minister for Home Affairs No. 32 of 2011, as amended by Decree No. 39 of 2012, the grant is a gift money, goods or services from local government to the government or local government or others local companies, communities and community organizations, which are explicitly as a non-mandatory and non-binding donation (accidental/ or not routine), as well as not continuously. This kind of expenditures aims to support the administration and office affairs of local government.

Another subcategory expenditure is social assistance, which is another type of donation aid whether financial or other things from the government to individuals, families, groups, or communities that are not in a manner continuously and with the selective purpose to prevent any possible social risks occurrence (BPS 2017). Social risk is defined as an event or many events that can potentially generate social vulnerability borne occurrence, whether by individuals, families, groups and / or society as the impact of any social crisis, economic crisis, political crisis, natural phenomenon, and natural disasters. This crisis, if not tackled by social assistance spending will be worse off, or even cannot live under normal conditions (BPS 2017).

The Decree of Minister for Home Affairs No. 32 of 2011 that has been changed to the Decree No. 39 of 2012 on article (4) and article (22) mentions that local governments can provide grants, social assistance, and financial aid. The facility support related to the ability of regional finances after prioritizing fulfilment of obligatory budget expenses after considering the principles of justice, propriety, rationality, and the benefits of the aid for the society itself. In general, stages and mechanisms of the formulation process between grants, social assistance, and financial aid there is no fundamental difference among them (Winoto and Falikhatun 2015).

The previous literatures in Indonesia conclude that there are significant indication of the grant, social, and financial assistance funds utilization to approaching election (Ritonga and Alam 2010; Sjahrir et al. 2013). In contrast, Winoto and Falikhatun (2015) studies found that there is no significant relationship between allocation in discretionary fund subcategory (donation and social assistance spending) with the political interest approaching the simultaneous regional election in 2015. However, in this study, there is an indication of fiscal capacity and political issues influenced to the amount of discretionary subcategory allocation.

Chapter 4 Data and Methodology

4.1 Data

This research uses a panel data set of public spending and deficits of districts and municipalities in Indonesia which held simultaneous direct head local elections over the period 2010-2015. The unit of observation is the municipality level in Indonesia. This study used secondary data that includes three types of data: economic (GRDP and local government budget), demographic (population and adult literacy rate), and political matters (election years, incumbency, and win the election). Fiscal data include budget balance, total expenditures, investment expenditures, donation expenditures, social assistance expenditures, and financial assistance expenditure of 254 Indonesia's regions (regencies/cities, and provinces) that involve simultaneous regional election in 2015 between the period of 2011-2015.¹⁹ We also add 107 regions which had no election in 2015 in order to analyse whether the local budget spending behaviour motivated by election period.

Data related to local government expenditures was obtained from Directorate General of Fiscal Balance, Ministry of Finance report and Government Financial Statistics Regency/City from Statistics Indonesia (Central Statistics Agency/ BPS). The demographic data for control variables includes population and adult literacy rate, also obtained from 2010 Indonesia Population Census and its projection, and National Socioeconomy Survey (Susenas) respectively. Both data are gathered from BPS. Finally, political data consisting of timing and results of each local elections, the incumbents running for re-election, were obtained from various sources, including KPU, MoHA, and Perludem.

4.2 Hypothesis

¹⁹ The proliferation regions whether districts or provinces, which result from regional expansion between the year of 2010-2014 are excluded. Initially, there are 269 regions held the simultaneous election in 2015. The assumption is it considered that the newly-formed regions have no motive regarding opportunistic fiscal policy manipulation in terms of vested interest of the candidates.

This study's hypothesis is constructed based on several previous studies as follow. First of all, Chortareas et al. (2016) studied that use the fiscal policy variables including budget balance, borrowing revenues, total expenditures, and investment expenditures to examine the presence of political budget cycles in Greece Municipalities. Ballaguer-Coll et al. (2015) also reviewed the re-election determinant factors of Spanish municipalities by analysing fiscal variables (total and current expenditures; and tax, grants, and debt revenues) and political variables as control.

Another research observed Indonesia at district level, where Sjahrir et al. (2013) used overall district expenditures, administrative expenditures, and subcategory "other" of administrative expenditures. This "other" administrative spending included unspecified spending, unpredictable spending, interest payment, financial assistance to lower regions (sub-districts or villages), social assistance spending, and also donations (grants) expenditure. Hence, in this study, the presence of pre-electoral manipulation can be assessed through an increase of government spending by reviewing budget balance, total expenditures, investment expenditures, and discretionary expenditures in sum and its each subcategory including grants, social assistance, and financial assistance expenditure during an election year.

4.2.1. Budget Balance

The fundamental assumptions on the politically-motivated budget cycle theoretical framework is that an incumbent's re-election chances can be increased by expansionary fiscal policy in general, and in election years in particular (Brender and Drazen 2008; and Chortareas et al. 2016). A good economic performance has a beneficial effect to boost incumbent's re-election extension prospects. They can use expansionary fiscal policy to manipulate macroeconomic outcomes and provide sufficient growth, to pronounce signal competence and sequentially, to maximize vote share for the candidates. Rogoff (1990) argued that expansionary fiscal policy around election years could lead electorates to vote for incumbents who produce them because it signals that the current official leaders have high competence and have high performance as well.

An empirical study by Veiga and Veiga (2007) in Portuguese municipalities also found that elections have adverse effect on the budget balance through the decrease of local tax collection and the increase of municipal expenditures. Moreover, they showed that before elections, opportunistic incumbents changed the composition expenditures toward observable

investment items, such as construction of overpasses and street works (Chortareas et al. 2016).

Based on above explanation, in this study, an election year with the incumbent candidate is expected to be negatively related to the budget balance.

- H1: Election year in region with incumbent has negative impacts on budget balance

4.2.2. Total Expenditures

The theoretical model developed by Rogoff and Sibert (1988) explains the existence of political budget cycles with rational electorates who suffer from asymmetric information regarding the competencies of elected officials. In this context, incumbents would engage in electoral cycles by manipulating economic policy variables, such as taxes and government expenditures, to produce a given level of public services with a lesser amount of revenue as a way to signal competence to electorates.

Vergne (2009), which uses a panel of developing countries from 1975-2001, finds evidence that election-year public spending shifts toward more visible current expenditures, in particular wages and subsidies. Meanwhile, other studies focusing on the analysis of sub-national level identified a decrease in budget balance and an increase in total expenditures and various spending categories such as healthcare, educational, and road construction in election years (Veiga and Veiga, 2007; Drazen and Eslava 2010; Chortareas 2016).

Therefore, in this study, an election year with the incumbent candidate is expected to have a positive relation to total expenditures.

- H2: Election year in a region that has incumbent has positive impacts on total expenditures.

4.2.3. Investment Expenditures

On the study of the political budget cycle in municipal level, Veiga and Veiga (2007) and Chortareas et al. (2016) identified increases in government expenditures in election years in Portugueses and Brazil municipalities respectively, especially investment expenditures. Another study evidence in Columbia municipalities also found that investment spending particularly infrastructure construction (school building, highway, electricity plants, and so on) also intensively raised around election time (Drazen and Eslava 2010).

In this study, an election year with the incumbent candidate is expected to be positively related to investment expenditures.

- H3: Election in year region with incumbent has positive impacts on investment expenditures.

4.2.4. Discretionary Expenditures

Donation expenditures, along with social assistance and financial assistance expenditures belong to discretionary expenditures category. This expenditures category can be spent relatively freely in contrast to other items and have displayed a strongly cyclical behaviour in direct elections, especially if the incumbent running for re-election (Sjahrir et al. 2013). In terms of the political budget cycles study in Indonesian municipalities, few studies have been conducted regarding the possible misuse of discretionary expenditures by incumbent government. Ritonga and Alam (2010) investigated the allocation of donation and social assistance expenditures between incumbent and non-incumbent candidates and found that the distribution of donation and social assistance expenditure in incumbent regions during the election year was higher compared to approaching the election time.

Therefore, in this study, an election year with incumbent candidates is expected to be positively related to donation expenditures, social assistance expenditures, and financial assistance expenditures.

- H4: Election year in year region with incumbent has positive impacts on discretionary funds.
- H5: Election year in year region with incumbent has positive impacts on grants expenditures.
- H6: Election year in year region with incumbent has positive impacts on social assistance expenditures.

4.2.5. Probability being re-elected

There is a link between political budget cycles behaviour to an increase of the likelihood of being re-elected. However, the incumbent behaviour to maximize their influence to use local budget expenditure not solely induced by opportunistic reason for being re-elected, but also concerns on their welfare later on. Drazen and Eslava (2010) studies on Columbian local government election finds that an increase in certain expenditures will affect the voter to respond positively. Breder and Drazen (2012) also found that the more periods time of the current officials will influence the opportunistic behaviour of spending

allocation. Balerias (1997) by using numerical experiments concluded that the re-election results would be expected to have a positive effect on their own welfare after being re-elected. Thus, by adapting Sjahrir (2013) and Chortareas et al. (2016), in this study, the higher of total expenditure as well as discretionary is expected to be positively related to their probability to be re-elected.

- H8: Total expenditure has positive impacts on the probability for being re-elected.
- H9: Discretionary funds has positive impacts on the probability for being re-elected.
- H10: Grants expenditure sub-category has positive impacts on the probability for being re-elected.

4.3 Variables and Specification

In this research, I will propose two main models, the first model is to analyse the existence of cyclical political behaviour and the probability the politicians who eligible to run re-election this study will adapt framework and model from previous studies. The typical model of Political Budget Cycles adapted from Chortareas et al. (2016) and Sjahrir et al. (2013) to examine whether the cycles exist or not in the Indonesian simultaneous regional direct elections in 2015:

$$y_{jit} = \alpha + \beta_j y_{ijt-1} + \gamma ElectionTotal_{it} + \gamma Elections_{it} * Incumbent_{it} + \delta X_{ikt} + \eta_i + \theta_t + u_{ijt} \dots (1)$$

Where:

$y_{j,it}$	= one of the fiscal j variables in sub national levels (provincial, municipality and district) i at time t ;
$y_{j,it-1}$	= the lag of the dependent variable used to capture persistence in the fiscal variables;
$Elections_{it}$	= a dummy variable capturing the electoral effect in total (election in 2015 and election before 2015). The dummy variable takes a value of one in election years and has incumbent candidate and zero otherwise;
$Election_{it} * Incumbent_{it}$	= a dummy variable capturing the electoral effect (election2015*incumbent2015). The dummy variable takes a value of one in election years and has incumbent candidate and zero otherwise;
X_{kit}	= a vector of k control variables (which include a number of economic, education, demographic, and political

explanatory variables);

η_i	=	the unobserved municipality specific effects;
θ_t	=	the time effect at time t ; and
u_{it}	=	error term

The fiscal policy variables include the total expenditures, budget deficits, and the highly visible to the electorate are discretionary expenditures (include grants, financial assistance, and social aid spending) fluctuation. All variables are expressed in logarithms.

The vector X_{kit} (control variables) are the economic variables include revenues from central government or direct transfers funds which also reflect on the amount of revenues from municipalities (Total Income); education rate of the people which is proxy by literacy rate; and population size (Pop Size), by constructing a variable in logarithms as well.

The log population is added since the adoption of the political budget cycle strategy should become less effective as the size of the district's increase (Chortareas et al. 2016). In other words, the smaller districts reduce the distance between voters and its representatives and will which facilitate the flow of information and improve accountability. Regarding literacy rate, we exclude a demographic variable that represents the percentage of the population under 15 years old (% Pop < 15), which is not eligible to vote in any elections. In other words, it represents adult literacy rate.

In addition, in order to testing whether incumbents who adopt political budget cycles have a beneficial effect regarding the possibility of being re-elected or not, we use model adapted from Chortareas et al. (2016) as follows:

$$Z_{it} = \alpha + \beta X_{it} + \eta_{it} + u_{ijt} \dots (2)$$

Where:

Z_t	=	the dichotomuous dependent variable (Won) taking a value of one if the mayor is re-elected and zero otherwise;
X_{kit}	=	a vector of k control variables (which include a number of economic, education, and demographic);
η_{it}	=	the fixed municipality specific effects
u_{it}	=	error term

The set of independent variables includes the fiscal variables under the control of the demographic variables such as population size and literacy rate. In this study, we focus on the effects of three budget expenditure variables, which are total budget spending, discretionary

budget funds, and grant expenditure sub-category over the full term as well as the effect of opportunistic increases that occur during election years.

In order to examine the model (1), Chortareas et al. (2016) all steps estimation procedures are adapted. The equation is a standard dynamic panel data specification. However, the presence of a lagged dependent variable and regional specific effects reduces the OLS estimator biased and inconsistent. On the other hand, to examine the model (2) about the re-election probability, we use linear square dummy variable (LSDV) estimation procedures.

Furthermore, the steps of data analysis in this study as follows.

a) Descriptive Statistics

Descriptive statistics analysis is a tool that aims to describe the data including sum, mean, median, maximum, minimum, standard deviation, and variance. Descriptive statistics analysis can form the data that make them more convenient to be interpreted by rearranging and ordering data to generate descriptive information.

b) Panel Data Regression

Panel data is define as a data that contain cross section and time series data combined together to be observed over time. To estimate the panel data regression models, there are several methods that can be used: Common Effect Model, Fixed Effect Model, and Random Effect Model. Common Effect Model is the simplest model. This model assume that the behaviour of each individuals would be the same for every period. This model simply combines the time-series and cross-section data in the form of a pooled data, and estimate the data using least square approximation (pooled least square) (Nachrowi and Usman 2006).

4.3.1. Dependent Variables

4.3.1.1. Fiscal Policy Variables

The fiscal policy variables used in this study follow the variables used by Chortareas et al. (2016) and Klein (2010) which include the Budget Balance, Total Expenditures, and Investment Expenditures, with add another discretionary expenditure category from Sjahrir et al. (2013) namely as Grants, Social Assistance Expenditure, and Financial Assistance Expenditures.

1) Budget Balance

Budget balance is the differences between total revenue and expenditure that describe whether regional budget has sufficient fiscal policy and/or the healthiness of local budget indicator. An exceed policy in expenditures to revenue is called deficit budget, meanwhile a higher proportion of revenue expenditures policy is can be called as a surplus circumstance. On the other word, the local government identify has a budget deficit circumstance when the current expenses exceed higher compared to the amount of income being received through standard operations. In terms of variable Budget Balance in this study, will express in percentage of regional Gross Domestic Product (Brender and Drazen 2008; and Chortareas et al. 2016).

2) Total Expenditures

Pass and Davies (2005) defined government expenditure as the act of spending by the government includes current, investment, and transfer of payment in terms of public goods and services fulfilment (health, education, health, roads, soon), private sector oriented goods and services (mining, mailing services, etc.) and transfer of payments (personnel payment, retirement fund, etc.).

In this study, regional government expenditure expressed as Total Expenditure. Total Expenditures include all indirect (part of employees expenditure, interest expenditure, subsidies, grants, social assistanc, sharing fund, financial assistance, and unforeseen expenditure and direct expenditure) which not related straight to the government program and activities implementation; and direct (part of personnel expenditure, goods and services expenditure, and capital expenditures) that has close relationship with government daily activities (Blondal 2009 and Statistics Indonesia 2017). Total Expenditures are expressed in natural logarithm.

3) Investment Expenditures

This type of expenditure refers to the purchasing whether goods or services for existing utilisation, to fulfill the community needs directly, is classified as government final consumption expenditure. The act of government purchasing is to have fixed asset (long-term acquisition) and still have beneficial in the future. For example, infrastructure investment or machinery spending can be classified as Investment Expenditure. These two types of government spending together constitute one of the major components of gross domestic product expenses used for purchasing or procurement of a tangible fixed asset (durable

goods) that worth more than a year (Statistics Indonesia 2017). Investment Expenditures are also stated in natural logarithm.

4) Discretionary Expenditures

Discretionary expenditures are the type of government's spending that has no essential direct influence to daily government activities, allocated after obligatory spending are paid, and the distribution relatively closed to the government officials themselves. Curto-Grau and Zudenkova (2016) defined this kind of expenditure as flexible donations that closely has relationship with "a partisan bias" and has purposive beneficiaries target.²⁰ These items of budget category closed to local head decision matters in provision of financial assistance, program assistance that has beneficial to the citizens. These spending categories consist of grants, social assistance, and financial assistance expenditure. Grant expenditures are donation in the form of money, goods or services from the local government to government or other regional governments, regional government's companies, communities, and community organizations, which have specific use allocation, is not mandatory and not binding, and not continuously given, that aim to support the implementation of local government affairs (Statistics Indonesia 2017).

The second sub category is social assistance expenditures are social assistance in the form of money or goods from the local government to individual, family, groups and/or communities that are non-continuous and selectively given that aim to protect from the possibility of social risk. The last of discretionary funds sub category is financial assistance expenditures defined as financial/goods or services from the local government to other local governments (from provincial government to district government) or villages that aim to address the fiscal gap or assist in the implementation of government affairs (Statistics Indonesia 2017).²¹

These discretionary budget categories are regulated on The Decree of Minister for Home Affairs No. 14/2016 on Second Amendment to regulation of the Minister of The Republic of Indonesia No. 32/2011 regarding Guidelines for Granting and Social Assistance

²⁰ They also switch frequently "the discretionary spending" and "pork-barrel spending" terminology, since they observed the legislature members behaviour in the U.S.

²¹ All definition of discretionary funds sub category adapted from BPS (2017). Financial Statistics of Regency/ Municipality Government 2015-2016.

that Funded from Regional Budget. All the discretionary expenditures are articulated in natural logarithm.

4.3.2. Independent Variables

4.3.2.1. Political Variables

1) Election Year

To examine the existence of opportunistic election cycles, this study follows Sjahrir et al. (2013) and Chortareas et al. (2016) where the election variables takes the timing of an election year. It takes the value of one in election years and zero otherwise.

2) Incumbent

To capture the effect of prolonged incumbency, we also use variable incumbent. Chartareas et al. (2016) suggests that a prolonged incumbency may be expected to affect the magnitude of political budget cycle. An incumbent who has served for a prolonged period may have greater ability to manipulate local finances, as he become familiar with the relevant budgetary process or incentives for pre-electoral manipulation. However, their study in Greece municipalities did not found any effect of years as office-holder to the magnitude of the political budget cycles. In this study, we prefer to use incumbent instead of tenure (years as mayors) since we only capture the current ruling government officials in one period of tenure or between period 2011-2015. The incumbents tend to attract the electorates by using any specific category expenditure to enhance their popularity among them (Sjahrir et al. 2013; Ballaguer-Coll et al. 2015; Chortareas et al. 2016).

3) Win

In order to know the probability of the political budget cycle existence, we also capture it by using variable “won”, whether the incumbents lost and won the election. Trounstein (2011) studies indicated that the current holder government seems to have a higher possibility to re-run and win the election stem from the advantageous of their incumbency. In this study, we focus on the effects of fiscal variables, mainly adapted from Chortareas et al. (2016) and Sjahrir et al. (2013). We will analyse the prospect over the full term as well as the effect of opportunistic increases that occur during election years.

4.3.2.2. Control Variables

This study use other control variables adapted from Sjahrir et al. (2013), Klomp and Haan (2013), and Chortareas et al. (2016). The number of population needed to reflect regions characteristics of economy scale that affect the government program and activities as a whole system (Chortareas et al. 2016; Sjahrir 2013). Furthermore, since a higher of education rate will enhance people participation as well as knowledge to be more rational when they vote the candidates during election, this study also use literacy rate for people above 15 years (Sjahrir et al. 2013). The assumption is the minimum election age is 17 years old, and people who already married at least 15 years old above can vote as well.

Table 2. Variables and Definition Operational

Variables		Variable Name	Definition	Sources
Economic	Growth	Regional GDP per Capita	Regional GDP is used to reflect the economic performance in sub national level. Regional GDP per Capita is expressed in natural logarithm	BPS
	Expenditure	Total Expenditure	Total expenditure per capita is direct and indirect expenditure. Total Expenditures are expressed in natural logarithm	DGFB, MoF BPS
		Investment Expenditure	The expenses variable used for purchasing/procurement of a tangible fixed asset that worth more than a year (durable goods/assets): transportation, road, land, furniture, etc. Investment Expenditures are expressed in natural logarithm	DGFB, MoF BPS
		Grants Expenditure	The support aid can be as money, properties, or services other local governments, village government, regional corporate/state/enterprises. Grant Expenditures are expressed in natural logarithm	DGFB, MoF BPS
		Social Assistance	Social assistance are given to civil society organizations, political parties and others with the aim to improve the welfare of the community. Social Assistance Expenditures are expressed in natural logarithm	DGFB, MoF BPS
		Financial Assistance	Financial assistance is a general or specific assistance from the provincial to the regency/municipality government, village government, or other local governments to equalize and balance financial capacity. Financial Assistance Expenditures are expressed in natural logarithm	DGFB, MoF BPS
		Discretionary Funds	Sum up of Grants, Social Assistance, and Financial Assistance Expenditures	DGFB, MoF BPS
Economic	Revenue	Total Income	Local government owned revenues (local taxes, retribution, income of regional government corporate, etc); Balanced budget from central	DGFB, MoF BPS

Variables		Variable Name	Definition	Sources
			government (tax share/non-tax share, general allocation fund, special allocation fund); and Other legal revenue	
		Budget Balance	Differences between total income and total expenditure, in order to show whether deficit or exceed budget policy	DGFB, MoF BPS
Demographic		Population	Forecasting from population census 2010	BPS
	Education	Adult Literacy Rate	Adult literacy rate, +15 years population	DGFB, MoF BPS
Political		Election Year	Dummy variable one if the election year and 0 otherwise	KPU
		Incumbent	The current regional head. Dummy variable one if there is an incumbent re-run the election, and 0 otherwise	KPU, Perludem, Other relevant sources
		Won	Dummy variable one if the incumbent candidates won the elections and 0 otherwise	KPU, Perludem, Other relevant sources

Note: All variable operational definition are adapted from Statistics Indonesia or BPS (2017) excluded Political Variables taken from various sources

Chapter 5 Result and Analysis

5.1 Descriptive Analysis

Descriptive analysis provides an overview of the basic features of the data that used in the research. This analysis also describes the modest synopses related to the observation (population or sample) as well as its measures. The descriptive statistics of this study is presented in Table 3.

Table 3. Descriptive Statistics

Variable		Mean	Std. Dev.	Min	Max	Obs.
GRDP Per Cap	overall	33.265	41.965	2.540	378.530	N= 1810
	between		41.847	2.602	369.844	n= 362
	within		3.707	2.135	93.277	T= 5
GRDP Per Cap*	overall	3.159	0.743	0.932	5.936	N = 1810
	between		0.739	0.956	5.913	n = 362
	within		0.082	2.723	4.118	T = 5
Budget Balance*	overall	10.517	1.306	3.714	15.611	N = 1330
	between		0.995	7.285	14.640	n = 360
	within		0.890	6.393	13.945	T- bar = 3.694
Total Income*	overall	13.774	0.608	11.915	17.604	N = 1810
	between		0.573	12.763	17.446	n = 362
	within		0.205	11.735	15.245	T = 5
Total Expenditure*	overall	13.742	0.607	12.208	17.577	N = 1810
	between		0.568	12.725	17.369	n = 362
	within		0.216	12.941	15.255	T = 5
Grant Expenditure*	overall	12.264	0.667	10.726	16.185	N = 1809
	between		0.581	11.234	16.056	n = 362
	within		0.328	10.730	14.107	T-bar = 4.997
Investment Expenditure*	overall	9.879	1.342	4.605	14.547	N = 1771
	between		1.092	7.625	14.232	n = 362
	within		0.780	6.274	12.571	bar = 4.892
Social Assistance Expenditure*	overall	8.599	1.623	1.609	14.551	N = 1718
	between		1.271	5.000	12.817	n = 362
	within		1.029	3.776	12.239	T- bar = 4.745
Financial Expenditure*	overall	9.715	1.786	3.912	14.258	N = 1544
	between		1.516	5.245	14.007	n = 362
	within		1.071	4.297	14.526	T-bar = 4.265

Variable		Mean	Std. Dev.	Min	Max	Obs.
Discretionary Funds*	overall	10.937	1.101	5.533	15.245	N = 1809
	between		0.924	8.722	14.588	n = 362
	within		0.602	6.678	13.216	T- bar = 4.997
Population Size*	overall	12.591	1.097	9.485	16.297	N = 1810
	between		1.098	9.501	16.253	n = 362
	within		0.029	12.140	12.746	T = 5
Adult Literacy Rate	overall	92.918	10.960	10.930	100.000	N = 1810
	between		9.987	21.280	99.836	n = 362
	within		4.540	43.792	157.869	T = 5
Won Election*	overall	0.694	0.461	0.000	1.000	N = 720
	between		0.462	0.000	1.000	n = 144
	within		0.000	0.694	0.694	T = 5
Incumbent*	overall	0.571	0.495	0.000	1.000	N = 1270
	between		0.496	0.000	1.000	n = 254
	within		0.000	0.571	0.571	T = 5

Source: Dataset constructed by the author

Note: * in natural logarithm

The table shows a summary of all variables descriptive statistics that used in this study in panel data form. According to STATA estimation of this study uses unbalanced panel data, the number of each observation will be varying in samples and variables. Total observations are 1,810 observations that include 254 regions (provinces, districts, and cities) over the years 2011-2015 held a simultaneous direct head election in 2015, and 108 regions which no held the simultaneous direct election in 2015.

First of all, statistical descriptive above shows that the mean value of incumbent is 0.57, which means the regions held a simultaneous direct election that has incumbent run re-election is 57.1 percent or around 145 regions. Another fact is the incumbent that have eligibility to run re-election majority won the first simultaneous regional head direct election in 2015. The percentage of the incumbents winning the election is around 69.4 percent or about 100 candidates.

In terms of Regional GDP Per Capita, the mean value of GRDP per capita is 33.265 (in million rupiahs) and the standard deviation is 41.965 (in million rupiahs). However, the minimum value is 2.540 (in million rupiahs) in Nunukan in 2011, and the maximum value is 378.53 (in million rupiahs) for Teluk Bintuni in 2015. It means, by average per person who lives in this observation regions have income almost 33.3 million rupiahs. According to the table, Nunukan district is the poorest region with every individual only gain 2.5 million

rupiahs. Meanwhile, Teluk Bintuni people have the highest income with approximately 378.5 million rupiah.

The mean value of budget balance is 10.51, and the standard deviation is 1.38. However, the maximum amount of budget balance is or 15.61 or 6,024,636 (in million rupiahs) for DKI Jakarta in 2014, and the minimum value is 3.71 or -1,861,615 (in million rupiahs) for Bengkalis in 2015. It means, in 2015 Capital Region of Jakarta Government budget cannot disburse around 6,02 trillion rupiahs, while Bengkalis district has deficit for almost 2,0 billion rupiahs. In terms of total revenue, the mean value is 13,77, and the standard deviation is 0,61. The minimum amount of total revenue is 11.92 or 149,499 (in million rupiahs) for Tangerang Selatan in 2014; whereas Capital Region of Jakarta has the highest number of total revenue with 17.6 or 44,209,238 (in million rupiahs) in 2015. It means, the Central Region of Jakarta has gained the highest income in 2015 around 44,2 trillion rupiahs, and Tangerang Selatan has the lowest revenue in 2014 for almost 150,0 billion rupiahs.

According to the table for total expenditures, the mean value is 13.74 with standard deviation of 1.34. The minimum value was 12.21 or 200,431 (in million rupiahs) for Sabu Raijua in 2014, and the maximum value is 17.58 or 43,031,323 (in million rupiahs) in Capital Region of Jakarta in 2015. It means that Sabu Raijua district had spent 200,3 billion rupiahs in 2015, while consistent with their highest income also spent around 43,0 trillion rupiahs in 2015.

Regarding the investment, expenditure has a mean value of 9.9 and the standard deviation is 1.3. The maximum value of investment expenditure is 14.6 or 10,696,012 (in million rupiahs) for Special Region of Jakarta in 2013, and the minimum value was 4.6 or 0,00 (in million rupiahs) for Aceh Singkil in 2011. It means Capital Region of Jakarta spent their capital budget around 10,7 trillion rupiahs, while Aceh Singkil district in 2011 did not allocate any amount in capital expenditure category.

The summary of discretionary funds category for regions held a simultaneous direct election in 2015 are as follows. The discretionary funds per se have the mean value 10.94, and the standard deviation is 1.10. It also has the minimum amount of 5.53 or 0.00 (in million rupiahs) for Tebing Tinggi in 2013 and has the highest value of 15.24 or 4,175,705 (in million rupiahs) in Capital Region of Jakarta in 2015. It means, Jakarta Government allocated more than 4,0 trillion rupiahs in “flexible” category budget, in opposite way, Tebing Tinggi district did not have a budget allocation in this sector budget.

Specifically, in each discretionary fund subcategory, the mean value of grant expenditures is 12.26, and the standard deviation is 0.67. It has the minimum value of 10.73 or 0.00 (in million rupiahs) in many regions in various years and the maximum value of 16.19 or 2,078,164 for Aceh Province in 2015. Although did hold the election in 2015, Aceh Province allocated almost 2,1 trillion rupiahs, while many regions did not have any allocation in donation expenditure subcategory. On the other hand, for social assistance expenditure subcategory has a mean value of 8.60 and standard deviation of 1.62. It also has minimum value 1.61 or 0,00 (in million rupiahs) in many regions and the maximum value of 14.55 or 2,087,123 (in million rupiahs) for Capital Region of Jakarta in 2015. Finally, for financial assistance expenditures have a mean value of 9.72 and standard variation of 1.79, while minimum value is 3.91 or 0.00 (in million rupiahs) in many regions, and the maximum value was 14.26 or 1,556,057 (in million rupiahs) for Papua Barat in 2015.

Other variables description is about borrowing revenue, population and adult literacy rate. Firstly, the mean value of borrowing revenue is 7.35, and the standard deviation is 2.75. It has a minimum value of 0.00 or 0.00 (in million rupiahs) in some regions and the maximum value of 11.61 or 109,699 (in million rupiahs) in Keerom in 2015. Regarding population variable, it has a mean value of 12.59 and standard deviation of 1.10. It also has minimum value 9.49 or 13,163 people in Tambrau in 2011 and has a maximum value of 16.30 or 11,955,243 for citizens in Banten Province in 2015. Lastly, for literacy rate feature, it has a mean value of 92.40 and standard variation of 12.94. The minimum value is 10.93 percent in Nduga and Kaimana in 2013 (all districts in Papua Provinces), and the maximum value reaches almost 100 percent in Maluku Tenggara and Kabupaten Tasikmalaya in 2014. It means, in average, regarding education rate observation regions has sufficient high rate of more than 90 percent.

5.2 Panel Data Model Selection

This study will use panel data, which is a multi-dimensional data that combines cross-section and time series data. Three models are broadly used to analyse panel data set, Common Effect Model which uses Ordinary Least Square, Fixed Effect Model which uses least square dummy variable (LSDV) regression, and Random Effect Model which uses generalized least squares (GLS). However, since this study will choose only two models, whether Fixed Effect Model or Random Effect Model, Hausman Test can be used to estimate

the appropriate method for data in this study. The table below the result of Hausman Test for dependent variables used in this study

Table 4. Hausman Test for Dependent Variables

Dependent Variables	Chi-Sq. Statistic	P-value.
Total Expenditure	163.07	0.0000
Budget Balance	46.680	0.0000
Investment Expenditure	979.810	0.0000
Discretionary Funds	102.91	0.0000
Grant Expenditure	36.59	0.0000
Social Assistance Expenditure	76.60	0.0000
Financial Assistance Expenditure	99.76	0.0000

Source: Data Analysis

The Table 4. above describes the result of Hausman test for the dependent variable Financial Assistance Expenditure. Hypothesis used for Hausman Test is H0: Random Effect Model; and H1: Fixed Effect Model. For H0 to be accepted, the p-value should be $>0,05$. The result of Hausman Test for all dependent variables shows that the p-value is 0,0000 or significant in 1% which is $<0,05$. Therefore, H0 (Random Effect Model) is rejected, and H1 (Fixed Effect Model) cannot be rejected.

The Hausman test result for those variables in line with Borenstein, et al. (2009), which stated there are two circumstances should happen so that Fixed Effect Model can be used. The first condition is if it is believed that all the studies included in the analysis are identical. Another requirement is if the goal of the study is to examine the effect of the identified population over time, regardless we generalizing to other population.²²

This study utilizes panel data, in which each object (provinces and districts/cities) has one annual budget analysed each year. The unit of analysis is all regions that held a simultaneous direct election in 2015, excluding 15 newly-formed regions. The studies are also identical because every variable can have an impact on the outcome are the same across the five years analysis. Furthermore, the analysis is conducted using the same method each year which makes the studies share the same effect. Previous studies that focused on political budget cycles such as Sjahrir (2013), Ballaguel-Coll (2015) and Chortareas et al. (2016) also

²² For further explanation look at Borenstein, Michael et al. (2009). Introduction to Meta-Analysis. John London: Willay and Sons. Page 83 discuss on Fixed Effect Model versus Random Effect Model.

used Fixed Effect Model. Therefore, Fixed Effect Model is seen appropriate to use in this study.

5.3 Regression Result

5.3.1 The Political Budget Cycle Behaviour Existence

The first regression result will discuss the occurrence of the political budget cycles in Simultaneous Regional Direct Election in 2015. In general, most of the expenditure variables are an insignificant relationship between Election in 2015 and incumbent who run re-election, only grant expenditure has a positive and significant effect on the election in 2015 and incumbency. Table 5. is the regression result of the occurrence of the PBC.

Table 5. Regression Result of The Existence of PBC Behaviour

Variables	Total Expend.	Budget Balance	Invest. Expend.	Discretionary Funds	Grant Expend.	Social Assist. Expend.	Financial Assist. Expend.
	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Lagged Dependent Variables*	0.041 (0.099)	-0.307*** (0.072)	0.049 (0.042)	-0.061 (0.053)	-0.129*** (0.045)	-0.056 (0.057)	-0.056 (0.079)
Election Total	-0.044*** (0.013)	-0.254 (0.199)	-0.161*** (0.032)	0.218*** (0.067)	0.706*** (0.087)	-0.177 (0.149)	-0.211 (0.141)
Incumbent 2015 * Election 2015	0.004 (0.026)	0.383 (0.351)	0.017 (0.047)	0.004 (0.100)	0.278** (0.139)	-0.083 (0.210)	0.203 (0.260)
GRDP Per Capita*	0.223** (0.101)	0.235 (0.756)	0.195 (0.163)	0.336 (0.304)	-0.349 (0.596)	-0.341 (0.657)	2.062** (0.856)
Adult Literacy Rate	0.001 (0.001)	0.014 (0.016)	0.001 (0.002)	-0.002 (0.003)	-0.001 (0.006)	0.002 (0.005)	-0.002 (0.012)
Population Size*	-0.046 (0.484)	-11.372* (5.986)	-0.729 (0.893)	-1.728 (1.655)	-1.904 (2.493)	1.000 (3.880)	0.834 (3.654)
2012.year	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
2013.year	0.110*** (0.016)	0.074 (0.175)	0.164*** (0.027)	0.187*** (0.051)	0.290*** (0.074)	0.225* (0.124)	0.043 (0.116)
2014.year	0.212*** (0.030)	0.600** (0.241)	0.294*** (0.041)	0.445*** (0.072)	0.644*** (0.123)	0.202 (0.168)	-0.039 (0.185)
2015.year	0.379*** (0.045)	0.325 (0.366)	0.521*** (0.060)	0.953*** (0.112)	0.566*** (0.180)	-0.122 (0.238)	1.006*** (0.265)
Constant	12.897** (6.159)	156.418** (76.522)	20.041* (11.221)	32.064 (20.897)	35.792 (31.769)	-2.798 (48.935)	-6.753 (46.157)

Variables	Total Expend.	Budget Balance	Invest. Expend.	Discretionary Funds	Grant Expend.	Social Assist. Expend.	Financial Assist. Expend.
	b/se	b/se	b/se	b/se	b/se	b/se	b/se
N	1448.000	844.000	1447.000	1446.000	1390.000	1331.000	1123.000

Source: Data Analysis

*) In nature logarithm

Denote significance at the ***1% ; **5; *10% levels.

As stated by the table above, shows the regression result of panel data. Firstly, we will explain hypothesis test result based on the data analysis as the table above.

- H1: Election year with incumbent candidate has negative and significant impacts on Budget Balance.

Hypothesis testing from the result in Table 4 shows that election in total has no effect on budget balance related to incumbent and election in 2015 at any significance level. Therefore, the first hypothesis is not supported.

- H2: Election year with incumbent candidate has positive impacts on Total Expenditures.

Table above shows that that election in total has a negative and significant effect on the Total Expenditure at the 5% significance level. The evidence suggests that in election years (2015 and before 2015) the total expenditure decreases by 4.4 percent. On the other hand, there is no effect between the incumbent and an election year in 2015. The result of the analysis suggested that total expenditure and GRDP has positive and significant relationship. One unit of total expenditure change increases GRDP by 22%. It is significant at 5% level. However, refers to the result hypothesis is rejected.

- H3: Election year with incumbent has positive impacts on Investment Expenditures.

Regression result shows that that election in total has a negative and significant effect on the Investment Expenditure at the 5% significance level. The evidence suggests that in an election year (2015 and before 2015) the investment expenditure decreases by 16.1 per cent. On the other hand, there is no effect between the incumbent and election year in 2015. Therefore, as a result hypothesis is rejected.

- H4: Election year and the incumbent has positive impacts on Discretionary Funds.

Based on hypothesis testing result shows that the discretionary funds have positive and significant effect at 10% significance level, which allocation of the discretionary fund increases 22 percent approaching the total election. However, there is no effect on incumbency in election 2015. Thus, the fourth hypothesis is rejected.

- H5: Election year and incumbency have positive impacts on Grant Expenditures Funds.

Hypothesis testing result shows that in election total year the grant expenditure sub-category spending has positive and significant at 10% significance level which increases by 71 percent. The evidence also confirms that it also has positive and significant effect at 5 percent and rose 28 percent approaching election 2015 in incumbents' regions. Thus, the fifth hypothesis is supported.

- H6: Election year and incumbency has positive impacts on Social Assistance Expenditures.

The result reported that social assistance expenditure spending has no effect both in an election year in total and related incumbency and election in 2015. Thus, the sixth hypothesis is rejected.

- H7: Election year and incumbency has positive impacts on Financial Assistance Expenditures.

The result reported that social assistance expenditure spending has no effect both in election year in total and related incumbency and election in 2015. Thus, the seventh hypothesis is not supported.

5.3.2 *The Probability of Being Re-elected*

Results analysis for the second model in order to know how the probability of spending behaviour induced by political purposes to win election are presented in Table 6. below.

Table 6. Winning the Election Probability

Dependent Variable: Won	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Total Expenditure*	-0.190*						
	(0.113)						
Budget Balance		-0.003					

Dependent Variable: Won	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		(0.039)					
Investment Expenditure*			-0.023 (0.079)				
Discretionary Expenditure*				-0.033 (0.054)			
Grant Expenditure*					-0.006 (0.061)		
Social Expenditure*						0.019 (0.025)	
Financial Expenditure*							-0.001 (0.019)
GRDP Per Cap*	0.067 (0.060)	0.152 (0.106)	0.025 (0.060)	0.021 (0.053)	0.027 (0.056)	0.047 (0.058)	0.031 (0.054)
Population Size*	0.176*** (0.060)	0.040 (0.048)	0.100** (0.042)	0.107** (0.041)	0.098** (0.047)	0.081** (0.039)	0.082** (0.036)
Adult Literacy Rate	-0.000 (0.005)	-0.006 (0.006)	0.002 (0.005)	0.001 (0.005)	0.002 (0.006)	0.001 (0.006)	0.002 (0.005)
Constant	0.945 (1.158)	0.414 (0.769)	-0.518 (0.936)	-0.473 (0.737)	-0.751 (0.703)	-0.749 (0.653)	-0.612 (0.669)
N	144.000	69.000	144.000	144.000	140.000	128.000	136.000

Source: Data Analysis

Denote significance at the ***1%; **5; *10% levels.

The result indicates that total spending in the election year 2015 has a negative and significant at 10% level, which -19%. It means the evidence find that the increment in local government's total expenditure negatively affect the incumbent candidate's winning election probability.

On the other hand, the rest of expenditure budget spending does not affect on the election winning prospects. Interestingly, the result also capturing population control variable, which affect positively the re-election prospects of incumbents in all expenditure variables. The corresponding coefficient is positive at various significant level, indicating that incumbents winning re-election closely related to the number of people at observation regions.

5.4 Discussion Result

5.4.2 The PBC existences in 2015 Concurrence Regional Direct Election

Table 5. reports the result of PBC behaviour appearances in the Indonesian simultaneous regional direct election by examining certain budget expenditures. According to the table, in total spending budget shows a negative and statistically significant at 10% level related to the election year in total, but does not have effect with the interaction between incumbent 2015 and election year 2015. This indicates approaching election time (before 2015 and 2015); the local government tends to decrease their aggregate expenditure allocation. However, this finding does not mean the low number of total spending stem from election time activity. According to MoF data (2017), there is a raised trend of the ‘idle’ local government budget from Rp78.5 trillion in 2011 to Rp101.6 trillion in 2015 yet was allocated as a deposit in commercial banks.²³ Allegedly, this trend also occurs in regional governments sample of this study, which they tend to accumulate their budget as saving than allocate it as public spending.

Similar cyclical behaviour also appears in investment expenditure category has negative and statistically significant at 10% level approaching election year in total, and falls in an amount by 0.16 rupiah (in per capita terms, 2010 constant price). However, this cyclical has no regards to incumbent regions that held a simultaneous election in 2015. This result suggests that all regions government, whether they have incumbents or not, to reduce their investment spending allocation. This result aligns with Klein and Sakurai (2015) studies in Brazil municipalities. They state that the current holder officials adopt “shifting in terms of the expenditure proportion approach”. In this study, it means that the local government might change the investment budget allocation to other more “visible” and attractable to the voters’ budget category, such as discretionary funds category including donation, social assistance, and financial assistance expenditures subcategory. However, the politically induced behaviour was not appeared in budget spending category in both election year in total and interaction between incumbency and election 2015.

If we differentiate discretionary funds, it would reveal that the positive and significant effect at 10% level also occurs only on election year in total. The discretionary funds increased almost 22.0 percent approaching election time. The rational reason why discretionary in election total time has positive and significant stem from grant expenditure

²³ The comprehensive analysis of the idle regional budget can be seen on Kementerian Keuangan (2017). Fiscal Policy Report. Accessed 4 September 2017. < <http://www.fiskal.kemenkeu.go.id/data/document/2017/kajian/Kajian%20SiLPA.pdf>.>

subcategory in election time has very large positive and significant effect on election, which is 71 percent at 10% significant level. On the other hand, in the incumbent regions who are running election in 2015, grant expenditure sub category increases almost 28 percent at 5% significant level. This evidence is in line with Ritonga and Alam (2010) and Sjahrir (2013) study that incumbent who run election for second term period tend to utilize “other” category budget that needs discretionary power approaching election time. Oppositely, two latter discretionary sub-group both does not affect both election year in total and related to incumbency and election 2015

The grant expenditure regression result indicates that grant subcategory budget is still a favorite source to attract the electorate approaching the voting year. Another possibility reason why grant subcategory increases in the election time in 2015, is because the local governments have to finance the local election. The budget spending category for financing election is from donations or grants expenditure subcategory. In this way, an increase of amount in the grant expenditure in election year is inevitable. The regulation that mentions management of election activities fund sourced from APBD is the Decree of MoHA No. 44 of 2015 on Fund Management of Governor and Vice Governor, Regent and Vice Regent, and Mayor and Vice Mayor as amended by the Decree the Minister of Home Affairs No. 51/2015. This regulation regulates budgeting, implementation and administration, reporting and the accountability of budget utilisation.²⁴

However, the central government through Ministry of Home Affairs has revised the regulation by stipulating MoHA Decree 39 of 2012 to prevent the misuse the discretionary budget spending particularly donation and social assistant. For instance, initially, the beneficiaries’ identity difficult to be traced, but now the recipients must be stated by name by address. Regarding to election 2015 result, although the effect of grant allocation is still positive and significant, the level has decreased.

Regarding time effect, it is confirmed that almost all expenditures category have positive and significant effect, particularly in the year when election held. For instance, in Total Expenditure category the budget expenditure has increased from 11 percent to 40 percent in 2015. Similar behaviour also occurs in investment expenditures, discretionary

²⁴ This regulation is the implementation of Article 166 paragraph (3) of Law Number 8 of 2015 on Amendment to Law Number 1 of 2015 regarding Stipulation of Perpu Number 1 Year 2014.

expenditure and grant expenditure. Meanwhile, budget balance category, social assistance expenditure category and financial assistance expenditure have positively increased but insignificant.

5.4.2 The Probability of Winning the Election

We present the regression results related to the greater winning election possibility in Table 6. The evidence shows that the total expenditure has a negative and significant effect on winning the election possibility. The amount of total expenditure allocation during an election year (2015) are subject to diminishing the possibility of the incumbents to win the election in 2015 by 19.0 percent. This finding is interesting since it is against several existing literatures that found the pre-electoral expanding expenditure behaviour by the incumbent candidates will secure their vote-share. Chortareas et al. (2016) argued that higher expenditure around election year and “election year opportunistic deviations” has positive effect in terms of winning election. Similar argument also stated by several scholars that studied in municipalities, such as Akhmedove and Zhuravskaya (2004) who observed Russian municipalities, and Veiga and Veiga (2007) who investigated Portuguese municipalities.

Lucardi and Rosas (2016) studies in developing countries found there are four factors that called as “incumbents’ curse” that affect re-election prospect. First, the challengers are able to explore the weaknesses of the incumbents during their tenure, especially those related to cases of corruption, collusion and nepotism. Secondly, the society behaviour preferences tend to choose median (not left wings or right wing) candidates. Thirdly, swing voters has delayed the preferences until the day of voting time. Finally, the intervention from the higher level of officer leads to decreased of level of trust from the people to vote them. They feel the incumbents’ only the “puppet” of the higher politicians.

Specifically, in Indonesia local election, the openness of information that align with Vicente et al. (2015) can prevent the incumbents to do the bad things. At the same time, it also can lead the people, mostly the wing voters to “wait and see” to give their vote until the day of election. The frailty of the incumbents not only about corruption that happened with

Bengkalis incumbent's (www.okezone.com 16/12/2015),²⁵ but also their “hidden” issue such as their religions or ethnicity background. The case of Kalimantan Tengah can be an example how the governor always maintains the ethnicity to maximize the vote-share (Hatriani and Wardani 2014).

Furthermore, the result also explaining the effect of population control variable on incumbent re-election prospect. The regression result shows that population has a positive and significant effect to the winning the election with various percentage around 10-80 percent at various significant level in all expenditure variables. The positive coefficient and significant at various significant levels, indicating that incumbents winning re-election closely related to the number of people at observation regions. In other words, the incumbent regions who has more population (city) can gain more change to be re-elected compared to the less population area.

The evidence regarding population confirms the factual data of the Pemilukada 2015 result. According to www.kompas.com (07/01/2006) the incumbent candidate who can reclaim their position as head of the region more prevalent in the city area than the district. In the city, the mayor who managed to maintain his position reached 47.1 percent, while in the district only 28.1 percent regents who regained the position as regional head.²⁶

²⁵ Tanjung, B.H. (2015) *Petahana Kalah Telak di Pilkada Bengkalis* (The Incumbents Heavily Lost in Bengkalis. Accessed 19 September 2017. <<https://news.okezone.com/read/2015/12/16/340/1269004/petahana-kalah-telak-di-pilkada-bengkalis>>

²⁶ Setiawan, Bambang (2006) *Petahana Tetap Kuat di Pilkada 2015* (The Incumbents Have Won in the Regional Election in 2015). Accessed 18 September 2017. <<http://nasional.kompas.com/read/2016/01/07/02205431/Petahana.Tetap.Kuat.di.Pilkada.2015>>

Chapter 6 Conclusion

This study aims to prove empirically whether there is an existence of the politically induced budget spending behaviour in the Indonesian simultaneous regional direct election in 2015. Another question is how this spending cyclical behaviour affects the incumbents' winning the election probability. The regression results present the incumbent's region approaching election year in 2015 has positive and significant effect on grants expenditure, which 28.0 percent. Meanwhile, in almost all expenditures there are vary of positive and significant relationship regarding time effect.

However, interestingly, the evidence shows opposite result regarding fiscal manipulation and re-election prospect of the incumbents. The regression result shows that the amount of total expenditure spending in 2015 are subject to diminishing the probability of the incumbents to win the re-election in 2015 by 19.0 percent. These findings, however, can partly describes the occurrence of budget cycles in particular in Indonesian local government.

The rational explanations are: 1) There are improvement of the discretionary fund allocation and distribution regulation by the central government. It has increased accountability and has possibly reduced the current local government's ability to manipulate budget spending later on. It can be seen in the result of election 2015; although the effect of grant allocation is still positive and significant, the level has decreased compared to an election year in total; 2) The grant expenditure allocation in election time 2015, also related to the fact that regional government has to fund the local election; 3) The negative effect on total expenditure and a decrease re-election probability confirms that people tends to "punish" the incumbent who has less competency, wasteful or even "corrupt", for budget utilization. Other possibility reasons such as religion and political ethnicity matters could be as a trigger people to divert their votes; and 4) According to the election result, the incumbent candidate from the city area can have more chance to win and regain the election compare to those who live in regents. This finding aligns with the population control variables in model 2 result, that the incumbents' region which are more populated can enhance the possibility of incumbent being re-elected.

The future research is also necessary to pay attention to the previous election result to know the effect on the incumbents' vote-share; the relatives of the incumbents' that involve the election; and political affiliation when it comes to PBCs and re-election probability, since the behaviour might be affect the result. A further qualitative research is also needed, to do a more in-depth investigation on the rational reason why the opportunistic fiscal policy by the incumbents are not associated with enhancement of the probability of being re-elected. Another study related to Indonesian concurrence regional direct election in 2017 is also strongly suggested to examine the sequence of the PBC behaviour.

Hence, this study results may encourage some policy recommendation. Firstly, the fact shows that a high level of budget transparency at municipality will reduce PBC occurrence in some certain expenditure. Thus, in order to minimize ineffectiveness of budget utilization, we should improve transparency of budget management in all levels. At the meantime, restricted and improved the regulation is needed, not only related to the executive local government, but also donations allocation for political organisation including political party. Another policy initiative is the election regulation should be revised. The election financing should be facilitated by central government instead of local government to prevent conflict of interest. The existing condition can lead abuse of power, since the local head possibly can also as candidates who re-run election.

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Appendices

1. Simultaneous Reginal Head Election in 2015



The Regions Map of The Indonesian Concurrence Regional Head Election in 2015

Source: KPU 2017

2. Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max	Observations	
region~p overall	2.17e+07	8.97e+07	94100	1.92e+09	N =	1810
between		8.87e+07	106424	1.56e+09	n =	362
within		1.41e+07	-3.19e+08	3.79e+08	T =	5
ln_re~ap overall	3.159236	.7428413	.9321641	5.936296	N =	1810
between		.7391249	.955997	5.912918	n =	362
within		.0819481	2.722738	4.117907	T =	5
ln_bud~e overall	10.51722	1.305643	3.713572	15.61137	N =	1330
between		.9948948	7.284821	14.64022	n =	360
within		.8898623	6.393041	13.94541	T-bar =	3.69444
ln_tot~e overall	13.77375	.6082384	11.91504	17.60444	N =	1810
between		.5733442	12.76303	17.44646	n =	362
within		.2048348	11.73475	15.24542	T =	5
ln_tot~p overall	13.7416	.6072079	12.20823	17.57744	N =	1810
between		.5682182	12.72456	17.36868	n =	362
within		.2157391	12.94118	15.25453	T =	5
ln_inv~p overall	12.26448	.6667138	10.72567	16.18538	N =	1809
between		.5810588	11.23412	16.05601	n =	362
within		.3278914	10.72988	14.10685	T-bar =	4.99724
ln_gra~p overall	9.879219	1.341617	4.60517	14.547	N =	1771
between		1.092437	7.625477	14.23176	n =	362
within		.7796149	6.273742	12.57058	T-bar =	4.89227
ln_soc~p overall	8.599424	1.622985	1.609438	14.5513	N =	1718
between		1.270727	4.999605	12.81673	n =	362
within		1.028554	3.775931	12.23929	T-bar =	4.74586
ln_fin~p overall	9.715049	1.78636	3.912023	14.25767	N =	1544
between		1.515575	5.244838	14.00746	n =	362
within		1.071024	4.296899	14.52628	T-bar =	4.26519
popsize overall	569761.4	1015603	13163	1.20e+07	N =	1810
between		1016307	13370	1.15e+07	n =	362
within		29220.87	62545.58	1074007	T =	5
litera~e overall	92.91848	10.96014	10.93	100	N =	1810
between		9.986856	21.28	99.836	n =	362
within		4.53959	43.79248	157.8685	T =	5
incumb~t overall	.5708661	.4951475	0	1	N =	1270
between		.4959297	0	1	n =	254
within		0	.5708661	.5708661	T =	5
won overall	.6944444	.4609626	0	1	N =	720
between		.4622502	0	1	n =	144
within		0	.6944444	.6944444	T =	5

3. Hausman Test

- Total Expenditure

	—— Coefficients ——		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) Fixed	(B) Random		
electtotal	21504.73	112416.2	-90911.45	4736.362
ln_popsiz	3852185	886180.9	2966004	445337.5
literacyrate	1289.702	4601.87	-3312.168	519.1895
ln_reggdpcap	1789342	1283468	505874.1	125167.5

b = consistent under Ho and Ha; obtained from xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
 = 163.07
 Prob>chi2 = 0.0000
 (V_b-V_B is not positive definite)

- Discretionary Funds

	—— Coefficients ——		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) Fixed	(B) Random		
electtotal	24370.33	44708.88	-20338.55	1541.984
ln_popsiz	440016	92555.98	347460	93017.91
literacyrate	-69.77213	161.2007	-230.9728	232.179
ln_reggdpcap	312292.1	111685.6	200606.5	30377.62

b = consistent under Ho and Ha; obtained from xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
 = 102.91
 Prob>chi2 = 0.0000
 (V_b-V_B is not positive definite)

- Budget Balance

	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) Fixed	(B) Random		
electtotal	-45215.77	-58085.55	12869.78	3981.43
ln_popsiz	-1221039	45274.1	-1266313	185460.2
literacyrate	751.3256	-742.3478	1493.673	819.7829
ln_reggdpcap	197092.6	29402.3	167690.3	64411.52

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

```
chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
        = 46.68
Prob>chi2 = 0.0000
(V_b-V_B is not positive definite)
```

- Investment Expenditure

	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) Fixed	(B) Random		
electtotal	-.0663662	.0775176	-.1438839	.
ln_popsiz	4.741348	.2573047	4.484043	.2707594
literacyrate	.0018415	.0028005	-.000959	.0004323
ln_reggdpcap	1.323371	.522118	.8012531	.0893448

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

```
chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
        = 979.81
Prob>chi2 = 0.0000
(V_b-V_B is not positive definite)
```

- Grants Expenditure

	—— Coefficients ——		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) Fixed	(B) Random		
electtotal	.6710892	.7566857	-.0855965	.0165167
ln_popsiz	2.274147	.6241274	1.650019	.7432967
literacyrate	.0018561	-.0067019	.008558	.0030222
ln_reggdpcap	1.227087	.5593372	.6677497	.2572407

b = consistent under Ho and Ha; obtained from xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

```
chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
        = 36.59
Prob>chi2 = 0.0000
(V_b-V_B is not positive definite)
```

- Social Assistance Expenditure

	—— Coefficients ——		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) Fixed	(B) Random		
electtotal	-.4688461	-.6146449	.1457989	.0189431
ln_popsiz	-4.675834	.2000965	-4.875931	1.071781
literacyrate	.0082771	-.0168771	.0251542	.0040135
ln_reggdpcap	-1.344307	.1931616	-1.537469	.3786274

b = consistent under Ho and Ha; obtained from xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

```
chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
        = 76.60
Prob>chi2 = 0.0000
(V_b-V_B is not positive definite)
```

- Financial Assistance Expenditure

	—— Coefficients ——		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) Fixed	(B) Random		
electtotal	.3752166	.6103903	-.2351738	.0213185
ln_popsiz	6.234831	.3328361	5.901995	1.160072
literacyrate	.0036676	.0071012	-.0034336	.0044591
ln_reggdpcap	2.556709	.1255528	2.431156	.3910346

b = consistent under Ho and Ha; obtained from xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
 = 99.76
 Prob>chi2 = 0.0000
 (V_b-V_B is not positive definite)

4. Regression Result

a. Model 1: The PBC Bheaviour in 2015's Concurrence Regional Election

Linear regression, absorbing indicators

Number of obs = 1,448
 F(9, 361) = 151.90
 Prob > F = 0.0000
 R-squared = 0.9675
 Adj R-squared = 0.9563
 Root MSE = 0.1261

- Total
 Expenditure

(Std. Err. adjusted for 362 clusters in municipalities)

ln_totalexp	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
ln_totalexp L1.	.0412501	.098705	0.42	0.676	-.1528591	.2353592
electtotal	-.0439187	.0126563	-3.47	0.001	-.0688081	-.0190293
incumbent~2015	.004113	.025537	0.16	0.872	-.046107	.054333
ln_reggdpcap	.2232887	.1013278	2.20	0.028	.0240218	.4225556
literacyrate	.0005839	.0007031	0.83	0.407	-.0007988	.0019666
ln_popsiz	-.0463627	.4838517	-0.10	0.924	-.9978847	.9051593
year						
2013	.110073	.0164596	6.69	0.000	.0777042	.1424418
2014	.2122228	.0298824	7.10	0.000	.1534573	.2709882
2015	.3788905	.0446883	8.48	0.000	.2910084	.4667726
_cons	12.89718	6.159238	2.09	0.037	.7846909	25.00968
municipalities	absorbed (362 categories)					

Linear regression, absorbing indicators

Number of obs = 844
 F(9, 335) = 6.19
 Prob > F = 0.0000
 R-squared = 0.6691
 Adj R-squared = 0.4409
 Root MSE = 0.9941

(Std. Err. adjusted for 336 clusters in municipalities)

ln_budgetbal~e	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
ln_budgetbal~e L1.	-.3073165	.0723979	-4.24	0.000	-.4497282	-.1649048
electtotal	-.2542133	.1989757	-1.28	0.202	-.6456125	.1371859
incumbent~2015	.3830571	.350878	1.09	0.276	-.3071447	1.073259
ln_reggdpcap	.2349901	.7557989	0.31	0.756	-1.25172	1.7217
literacyrate	.0141103	.0160662	0.88	0.380	-.0174931	.0457136
ln_popsize	-11.37235	5.985627	-1.90	0.058	-23.1465	.4017981
year						
2013	.0741306	.174717	0.42	0.672	-.26955	.4178113
2014	.5995353	.2413604	2.48	0.013	.1247624	1.074308
2015	.3248569	.3661601	0.89	0.376	-.3954059	1.04512
_cons	156.4178	76.52167	2.04	0.042	5.894263	306.9413
municipalities	absorbed		(336 categories)			

- Budget Balance

- Invesment Expenditure

Linear regression, absorbing indicators				Number of obs = 1,447		
				F(9, 361) = 46.50		
				Prob > F = 0.0000		
				R-squared = 0.8914		
				Adj R-squared = 0.8541		
Linear regression, absorbing indicators				Number of obs = 1,446		
				F(9, 361) = 44.47		
				Prob > F = 0.0000		
				R-squared = 0.8914		
				Adj R-squared = 0.7737		
				Root MSE = 0.5406		
(Std. Err. adjusted for 362 clusters in municipalities)						
ln_investmen~p		Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]
		(Std. Err. adjusted for 362 clusters in municipalities)				
ln_investmen~p L1.		.0487931	.0423957	1.15	0.251	-.0345805 .1321667
ln_discretio~s						
electtotal		-.1613442	.0320069	-5.04	0.000	-.2242877 -.0984008
incumbent~2015		-.0617998	.0520467	-1.16	0.245	-.1648748 .0410906
ln_reggdpcap		.1945861	.1633167	1.19	0.234	-.1265856 .5157578
electtotal		.2180097	.0670045	3.20	0.001	.0850238 .3509957
incumbent~2015		.0044535	.0998518	0.04	0.964	-.190997 .2009063
ln_reggdpcap		.3361948	.3043699	1.10	0.270	-.262366 .9347556
literacyrate		.0016429	.0031749	-0.52	0.605	-.0078865 .0046008
ln_popsize		-1.728181	1.655098	-1.04	0.297	-4.983026 1.526664
year						
2013		.1640887	.0267149	6.14	0.000	.1115524 .2166251
2014		.2943887	.0406322	7.25	0.000	.2144831 .3742943
2015		.1865232	.0509963	3.68	0.000	.0840436 .2866029
2013		.4452703	.0721062	6.18	0.000	.3034693 .5870712
2014		.9520204	.1113221	8.51	0.000	.7209382 1.1831023
2015		.2021082	.0509963	3.68	0.000	.0840436 .2866029
_cons		32.06402	20.89683	1.53	0.126	-9.030786 73.15893
municipalities		absorbed		(362 categories)		
municipalities		absorbed		(362 categories)		

nds

- Grants Expenditure

Linear regression, absorbing indicators				Number of obs	=	1,390
				F(9, 361)	=	26.82
				Prob > F	=	0.0000
				R-squared	=	0.7949
				Adj R-squared	=	0.7205
				Root MSE	=	0.7392
(Std. Err. adjusted for 362 clusters in municipalities)						
ln_grantexp	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
ln_grantexp L1.	-.1287163	.0449185	-2.87	0.004	-.2170512	-.0403815
electtotal	.7057357	.0869737	8.11	0.000	.534697	.8767744
incumbent~2015	.2783755	.1388118	2.01	0.046	.0053942	.5513567
ln_reggdpcap	-.349161	.5963414	-0.59	0.559	-1.5219	.8235784
literacyrate	-.0005141	.0057361	-0.09	0.929	-.0117945	.0107663
ln_popsize	-1.903801	2.492541	-0.76	0.445	-6.805525	2.997923
year						
2013	.2897675	.0740341	3.91	0.000	.1441752	.4353598
2014	.6437545	.1228332	5.24	0.000	.4021961	.885313
2015	.5655669	.1800629	3.14	0.002	.2114628	.9196709
_cons	35.79163	31.76928	1.13	0.261	-26.68446	98.26773
municipalities	absorbed		(362 categories)			

Linear regression, absorbing indicators	Number of obs	=	1,331
	F(9, 357)	=	5.22
	Prob > F	=	0.0000
	R-squared	=	0.7161
	Adj R-squared	=	0.6083
	Root MSE	=	1.0412

(Std. Err. adjusted for 358 clusters in municipalities)

ln_socialass~p	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
ln_socialass~p L1.	-.0557954	.0566999	-0.98	0.326	-.1673032	.0557124
electtotal	-.1770562	.1489274	-1.19	0.235	-.4699414	.115829
incumbent~2015	-.0825377	.2096608	-0.39	0.694	-.4948632	.3297877
ln_reggdpcap	-.3411276	.6574451	-0.52	0.604	-1.63408	.9518244
literacyrate	.0019773	.0049815	0.40	0.692	-.0078194	.011774
ln_popsize	.9997699	3.880258	0.26	0.797	-6.631266	8.630806
year						
2013	.2245001	.1243221	1.81	0.072	-.0199956	.4689958
2014	.2018076	.1679651	1.20	0.230	-.1285178	.5321331
2015	-.1224727	.2383	-0.51	0.608	-.5911209	.3461754
_cons	-2.797636	48.93537	-0.06	0.954	-99.03547	93.44019

municipalities	absorbed	(358 categories)
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- Social Assistance Expenditure

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- Financial Assistance Expenditure

Linear regression, absorbing indicators	Number of obs	=	1,123
	F(9, 333)	=	16.05
	Prob > F	=	0.0000
	R-squared	=	0.7391
	Adj R-squared	=	0.6246
	Root MSE	=	1.0870

(Std. Err. adjusted for 334 clusters in municipalities)

ln_financial~p	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
ln_financial~p L1.	-.0561694	.0788225	-0.71	0.477	-.2112222	.0988833
electtotal	-.2112619	.141494	-1.49	0.136	-.4895965	.0670728
incumbent~2015	.2030135	.2598941	0.78	0.435	-.3082277	.7142546
ln_reggdpcap	2.061842	.8557144	2.41	0.017	.3785544	3.745129
literacyrate	-.0018179	.012	-0.15	0.880	-.0254233	.0217875
ln_popsize	.8342518	3.654058	0.23	0.820	-6.353695	8.022198
year						
2013	.0425497	.1162499	0.37	0.715	-.186127	.2712264
2014	-.0387284	.1848003	-0.21	0.834	-.4022516	.3247949
2015	1.006126	.2650457	3.80	0.000	.4847506	1.5275
_cons	-6.753361	46.15654	-0.15	0.884	-97.5485	84.04176

municipalities	absorbed	(334 categories)
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b. The Winning Election Prospects

- Total Expenditure

Source	SS	df	MS	Number of obs	=	144
Model	2.29294164	4	.573235411	F(4, 139)	=	2.82
Residual	28.2626139	139	.203328158	Prob > F	=	0.0275
				R-squared	=	0.0750
				Adj R-squared	=	0.0484
Total	30.5555556	143	.213675214	Root MSE	=	.45092

won	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ln_totalexp	-.1900024	.1125351	-1.69	0.094	-.4125044	.0324996
ln_reggdpcap	.0666542	.0601642	1.11	0.270	-.0523011	.1856096
ln_popsiz	.1758629	.0597027	2.95	0.004	.05782	.2939057
literacyrate	-.0003282	.0054662	-0.06	0.952	-.0111359	.0104796
_cons	.9447675	1.158327	0.82	0.416	-1.345452	3.234987

- Budget Balance

Source	SS	df	MS	Number of obs	=	69
Model	.618200264	4	.154550066	F(4, 64)	=	0.85
Residual	11.6716548	64	.182369606	Prob > F	=	0.5004
				R-squared	=	0.0503
				Adj R-squared	=	-0.0091
Total	12.2898551	68	.180733163	Root MSE	=	.42705

won	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ln_budgetbal~e	-.0034177	.0394865	-0.09	0.931	-.082301	.0754657
ln_reggdpcap	.1521681	.1056054	1.44	0.154	-.0588029	.363139
ln_popsiz	.0398684	.0477681	0.83	0.407	-.0555594	.1352962
literacyrate	-.0062905	.0061623	-1.02	0.311	-.018601	.0060201
_cons	.4138827	.768826	0.54	0.592	-1.122024	1.949789

Source	SS	df	MS	Number of obs	=	144
Model	1.73145578	4	.432863945	F(4, 139)	=	2.09
Residual	28.8240998	139	.207367624	Prob > F	=	0.0857
				R-squared	=	0.0567
				Adj R-squared	=	0.0295
Total	30.5555556	143	.213675214	Root MSE	=	.45538

won	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ln_investmen~p	-.0232888	.078765	-0.30	0.768	-.1790211	.1324436
ln_reggdpcap	.024795	.0598849	0.41	0.679	-.093608	.143198
ln_popsize	.1001104	.041825	2.39	0.018	.0174148	.1828059
literacyrate	.0016541	.0054806	0.30	0.763	-.0091821	.0124903
_cons	-.5178636	.9360092	-0.55	0.581	-2.36852	1.332793

- Investment Expenditure

- Discretionary Funds

Source	SS	df	MS	Number of obs	=	144
Model	1.78966613	4	.447416532	F(4, 139)	=	2.16
Residual	28.7658894	139	.206948845	Prob > F	=	0.0764
				R-squared	=	0.0586
				Adj R-squared	=	0.0315
Total	30.5555556	143	.213675214	Root MSE	=	.45492

won	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ln_discretio~s	-.0326733	.0537962	-0.61	0.545	-.139038	.0736913
ln_reggdpcap	.021259	.0533571	0.40	0.691	-.0842375	.1267555
ln_popsize	.1071299	.0414279	2.59	0.011	.0252196	.1890403
literacyrate	.0013045	.0054619	0.24	0.812	-.0094947	.0121037
_cons	-.4725452	.7373279	-0.64	0.523	-1.930373	.9852831

- Grants Expenditure

- Social Assistance Expenditure

Source	SS	df	MS	Number of obs	=	140
Model	1.80911264	4	.45227816	F(4, 135)	=	2.15
Residual	28.3623159	135	.210091229	Prob > F	=	0.0777
				R-squared	=	0.0600
				Adj R-squared	=	0.0321
Total	30.1714286	139	.217060637	Root MSE	=	.45836

won	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ln_grantexp	-.0062213	.0611193	-0.10	0.919	-.1270965	.1146539
ln_reggdpcap	.0265118	.0560363	0.47	0.637	-.0843107	.1373344
ln_popsize	.0975521	.0466498	2.10	0.034	.0054932	.1900128
literacyrate	.0018875	.0056435	0.33	0.739	.0092736	.0130985
Models	1.6066842	.7031338	.401670205	0.287	-2.141558	.0396343
Residual	25.8933152	123	.210514758	R-squared	=	0.0584
				Adj R-squared	=	0.0278
Total	27.5	127	.216535433	Root MSE	=	.45882

won	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ln_socialass~p	.0187707	.0252179	0.74	0.458	-.0311465	.0686879
ln_reggdpcap	.0473297	.057976	0.82	0.416	-.0674302	.1620895
ln_popsize	.0812925	.0389626	2.09	0.039	.0041683	.1584167
literacyrate	.0010925	.0055701	0.20	0.845	-.0099332	.0121182
_cons	-.7490844	.6532128	-1.15	0.254	-2.042079	.5439104

- Financial Assistance Expenditure

Source	SS	df	MS	Number of obs	=	136
Model	1.37880064	4	.34470016	F(4, 131)	=	1.63
Residual	27.6506111	131	.211073367	Prob > F	=	0.1697
				R-squared	=	0.0475
				Adj R-squared	=	0.0184
Total	29.0294118	135	.21503268	Root MSE	=	.45943

won	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ln_financial~p	-.0005991	.0191435	-0.03	0.975	-.0384695	.0372713
ln_reggdpcap	.0305886	.0543407	0.56	0.574	-.0769102	.1380874
ln_popsize	.0823057	.0358366	2.30	0.023	.0114123	.153199
literacyrate	.0017639	.0054819	0.32	0.748	-.0090806	.0126084
_cons	-.6120726	.6689273	-0.92	0.362	-1.93537	.7112253

