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Assemblies**

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**Elections, Political Connections and Cash Holdings: Evidence from Local Assemblies**

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**Abstract**

We examine the relationship between elections, political connections, and cash holdings in Ghanaian local assemblies. Using a panel dataset of 179 local assemblies over a period 2012 to 2017, a panel regression and the generalized method of moments estimation techniques was employed for the analysis. We find that local assemblies hold less cash during election years, which suggests that election may be one of the potential factors to mitigate agency conflict in weak governance environment. Further, we demonstrate that local assemblies that have political connections hold less cash; however, political uncertainty makes these entities conducive to agency problems than their non-connected peers because they hold more cash. Additional analysis indicates that one year prior to elections, managerial conservatism kicks-in and leads managers to hold more cash in local assemblies that have political connections, which continues and becomes more pronounced in election years. Our results have implications for regulations on the cash management practices of local assemblies.

*Keywords:* agency problem; cash holdings; generalized method of moments; panel regression; political connections

## 1. Introduction

Political uncertainty and connections have immense consequences for corporate outcomes and decisions. In the US, for example, election years are observed to have an adverse effect on cost of corporate bonds relative to nonelection years by 34 basis point, on average (Waisman, Ye, & Zhu, 2015), while Chinese firms hold significantly less cash during political uncertainties caused by turnovers in local political leadership (Xu, Chen, Xu, & Chan, 2016). Political connections, although defined differently by different authors, is argued to be either formal or informal ties between firms and politicians. Political connections have associated costs and benefits. From the benefit perspective, available empirical evidence documents a significantly lower effective tax rates (Adhikari, Derashid, & Zhang, 2006), increased propensity of initial public offerings (IPOs) success at a reduced cost (Bao, Johan, & Kutsuna, 2016), easier access to credit (Chen, Shen, & Lin, 2014; Claessens, Feijen, & Laeven, 2008) and improved performance (Boubakri, Cosset, & Saffar, 2012; Lux, Crook, & Woehr, 2011). From the cost perspective, firms that have political connections have higher leverage, increase likelihood of losses and negative equity (Bliss & Gul, 2012) and poorer earnings quality (Chaney, Faccio, & Parsley, 2011).

However, this evidence has only been observed in profit firms broadly based in the US, and emerging markets in Asia. In the context of nonprofit firms or governmental organizations, we observe that no study has examined how elections and political connections affect cash holdings. We fill this void by focusing on the relation between elections, political connections, and cash holdings in metropolitan, municipal and district assemblies (hereafter referred to as, local assemblies) in Ghana to provide an understanding of the cash management practices in local assemblies, specifically, in sub-Saharan Africa. Unlike other nonprofit firms, local assemblies are an extension of the central government. By statutes, 70% of its membership is elected, while the remaining 30% are appointed by the central government, led by a presidentially appointed chief executive officer (CEO). These CEOs are local operatives of the incumbent party and entrenched bureaucrats whose decisions are biased toward political expediencies. This makes political decentralization and downward accountability in local assemblies' amounts to a glass half-full.

From a theoretical perspective, factors that stimulate agency problems appear to be the dominant underlying feature that characterizes cash management policies in nonprofit firms (Fisman & Hubbard, 2005; Lee & Woronkowitz, 2019). The reason being that, nonprofit firms are characterized by a weak governance environment (Core, Guay, & Verdi, 2006; Gore, 2009; Ramirez, 2011). Therefore, nonprofit firms with more cash balances exhibit greater agency problems. However, the empirical evidence of cash holdings as a function of agency problem is mixed (Calabrese & Gupta, 2019; Gore, 2009; Lee & Woronkowitz, 2019). A competing interest exist as to the role of political uncertainty in cash holdings. On the one hand, cash holding is expected to be higher in the face of political uncertainty because of the tendency to increased managerial conservatism (Feng & Rao, 2018; Phan, Nguyen, Nguyen, & Hegde, 2019). On the other hand, CEOs of local assemblies are centrally appointed and in theory, if the appointing government wins, then CEOs retain their jobs and safeguard their political career. Conversely, if the appointing government loses, then their tenure as CEOs also ends. Consequently, the need to stabilize their regime and keep them in power would enable local assemblies relieve their resources constraints to reduce cash holdings. This is so because, for the CEOs of local assemblies, the opportunity cost for investment in liquid assets is higher during election years than in nonelection years.

Existing studies on cash holdings in politically connected firms reveals inconclusive results. Empirical evidence in the US suggests that, because of the reduced benefit of cash reverse, firms that have political connections hold less cash (Hill, Fuller, Kelly, & Washam, 2014). This result is consistent in an international sub-sample of politically connected firms in eight (8) emerging markets or countries with high levels of corruption (Kusnadi, 2019). Conversely, single country studies in China and Pakistan document that agency problems lead to cash hoarding in firms that have political connections (Lin, Chang, Yu, & Kao, 2019; Saeed, Belghitar, & Clark, 2014). In the context of local assemblies, we argue that, although, cash holding is a function of agency problems (Core et al., 2006; Gore, 2009), there should be little or no conflict of interest or competing interest between the two main political actors (i.e., the CEO and member of parliament (MP)) of local assemblies that have political connections to the central government through party affiliation because of their quest to stabilize their regime and keep them in power. As such, they face reduced benefits of cash reserves, suggesting a potential lower risk of expropriation than their non-connected peers.

Using a panel dataset of 179 local assemblies over the period 2012-2017, we find that local assemblies hold less cash during election years, which suggests that election, may be one of the potential factors to mitigate agency conflict in weak governance environment. Further, we show that political connections in local assemblies leads to reduced cash holdings; however, political uncertainty makes these entities conducive to agency problems than their non-connected peers because they hold more cash during election years. Additional analysis indicates that one year prior to elections, managerial conservatism kicks-in and leads managers to hold more cash in local assemblies that have political connections, which continues and becomes more pronounced in election years.

This study makes several contributions to the literature. First, we contribute to the determinants of cash holdings in governmental organizations (Calabrese & Gupta, 2019; Core et al., 2006; Gore, 2009; Lee & Woronkowicz, 2019; Ramirez, 2011) by showing that elections and political connections significantly underscore cash holding levels. Second, we contribute to the agency conflict emanating from free cash flow (see Jensen, 1986; Stulz, 1990) by providing evidence that suggest elections may improve the practices of managers expropriating excess cash to the social interest of their locality as opposed to their own self-interested and perquisites consumption. Third, we contribute to the debate on the role of political connections (Chen, El Ghoul, Guedhami, & Nash, 2018; Chkir, Gallali, & Toukabri, 2020) by showing that local assemblies that have political connections hold less cash, however, political uncertainty makes these entities conducive to agency problems than their non-connected peers because they hold more cash during election years.

The remainder of the paper is as follows. Section 2 presents the related literature. Section 3 describes the data and methods. Section 4 presents the empirical results and discussions. Finally, section 5 concludes and discusses the implications of the study.

## **2. Related Literature**

### ***2.1. Election and cash holdings***

The first research question that this study deals with is the relationship between elections and cash holdings. This strand of literature is associated with the impact of political uncertainty on

corporate outcomes and decisions. In this section, we briefly report the main findings obtained on the impact of political uncertainty on corporate outcomes and decisions.

Election years are period of intense political uncertainty. The literature on the impact of political uncertainty demonstrates a number of consequences on corporate decisions. For example, Julio and Yook (2012) examine how national elections shape corporate investment decision in 48 countries. They find that, during election years, firms spend significantly less on investment by an average of 4.8 percentage points relative to nonelection years. In the US, Waisman et al. (2015) provide empirical evidence of the relation between political uncertainty and cost of corporate bonds and find that political uncertainty significantly increases cost of corporate bonds. In other words, election years have an adverse effect on cost of corporate bonds relative to nonelection years by 34 basis points, on average.

A number of studies have provided information on how political uncertainty influence corporate outcomes in emerging economies. An et al. (2016) examine how turnovers in local political leadership in China affect corporate investment decisions. They find a significant reduction in firms' investments in the face political uncertainties caused by turnovers in local political leaders. Li et al. (2018) examine the cost of equity capital for firms in China around political uncertainty. They find that, when facing political uncertainty, it is expensive to raise equity capital. Simply put, political uncertainty increases cost of equity capital. This adverse effect is conditional on the amount of government subsidies received by a firm or when the top management team is politically connected.

A study of Chinese listed firms by Chen et al. (2018) examines the relationship between political uncertainty, caused by turnovers of local government leaders, and the firm's information environment. They find a reduced level of idiosyncratic information about a firm in the market during periods of political uncertainty. The adverse effect is more prevalent when firms have a high level of political dependence. In a related study, Xu et al. (2016) examine whether political uncertainty affects cash holdings for Chinese firms. Using political uncertainty created by political turnover in a city government, they find that firms hold less cash. Further, they demonstrate that the reduced cash holdings are more pronounced if (1) the newly appointed official is not an indigene of the city, (2) it faces high risk of political extraction, and (3) it has strong twin agency conflicts.

This brief survey of the literature suggests that political uncertainty caused by elections or turnover in local political leadership, has immense consequences for corporate outcomes and decisions. Yet, this evidence has only been observed in profit firms broadly based in the US and China. In the context of nonprofit firms or governmental organizations, we observe that no study has examined how elections affect cash holdings. In summary, we fill this void by focusing on how elections impact cash holdings in local assemblies in Ghana to provide an understanding of the influence of political uncertainty on cash management practices in local assemblies, specifically, in a sub-Saharan African country.

## ***2.2. Political connections and cash holdings***

The second research question that this study deals with is the relationship between political connections and cash holdings. This strand of literature is associated with the impact of political connections on corporate outcomes and decisions. In this section, we briefly report the main findings obtained on the impact of political connections on corporate outcomes and decisions.

The literature investigating cash holdings as a function of political connections has been mixed. Empirical evidence in the US suggests that firms with political connections derive a reduced benefit from excessive cash holdings leading to reduced cash levels. Using lobbying expenses as a measure of political connections, Hill et al. (2014) examine the effect of political connections on corporate liquidity. The results show political connections negatively affect cash levels. In an international setting, Kusnadi (2019) examine the value of cash holdings as a function of political connections. The results demonstrate that political connections reduce the value of cash holdings and this is conditioned by the level of economic development and corruption as well as connections with large shareholders.

The few studies conducted in emerging economies suggest that agency problems lead connected firms to accumulate large amount of cash. Lin et al. (2019) investigate the impact of political connections on the cash holdings of firms listed on Chinese stock exchanges. They apply panel data regression analysis and find political connections to be positively correlated with cash holdings. They demonstrate that firms with both political connections and business group affiliations hold more cash. Saeed et al. (2014) examine the effects that political connections have on cash holdings. Using data on Pakistani firms over the period 2002-2010, they find that connected firms hold significantly larger cash reserves than their non-connected

counterparts. In a cross-country study, Boubakri, Ghoul and Saffar (2013) examine how politically connected firms that are characterized by acute corporate governance problems manage their cash levels. They find that political connections are conducive for agency problems, resulting in cash buildup.

The above brief narrative suggests that political connections have immense consequences for corporate outcomes and decisions. Yet, this evidence has only been observed in profit firms broadly based in the US and emerging markets. In the context of nonprofit firms or governmental organizations, we observe that no study has examined how political connection affects cash holdings. In summary, we fill this void by focusing on how political connections influence cash holdings in local assemblies to provide an understanding of the influence political connections on cash management practices in local assemblies, specifically, in a sub-Saharan African country.

### **3. Method and Data**

#### ***3.1. Empirical method and model specification***

In this study, we adopt the ordinary least squares (OLS) regression with region and year fixed effects as the primary estimation method. This is consistent with our dataset. The test statistics from the Hausman test between panel fixed and random effects indicated that fixed effects regression was appropriate. However, our variables of interest (i.e., elections and political connections) are binary variables taking the values of either 1 or 0. Also, we are minded of the need for policy relevance, robustness of the findings, and comparability with prior studies. Across all specifications, we report *t*-statistics which we adjust for robust standard errors clustered on assembly. In order to control for the presence of extreme data points, we winsorized at the 1% and 99% of the distribution for all continuous variables. We lagged the control variables to account for possible endogeneity from reverse causality. Following prior studies (e.g., Core et al. 2006; Gore 2009), we examine the relationship between elections, political connections and cash holdings by specifying a heteroscedastic robust OLS model with standard errors clustered at assembly level as follows:



$$Cash_{i,t} = \beta_0 + \beta_1 ElectYr_t + \beta_2 Political_i + \sum_{j=3}^7 \beta_j W_{j,i,t-1} + \mu_i + \lambda_t + \varepsilon_{i,t} \quad (1)$$

The dependent variable  $Cash_{i,t}$  is defined as the natural logarithm of cash and cash equivalent to total assets of assembly  $i$  in year  $t$ .  $ElectYr_t$  equals 1 if year  $t$  was election year (i.e., years 2012 and 2016) and 0 otherwise.  $Political_i$  denotes political connection which equals 1 if the CEO and MP are affiliated with the governing political party.  $W$  is a vector of four firm level characteristics (size, leverage, investment, income diversification index) identified in the literature to affect cash management practices (see Table 1 for complete variable definitions).  $\mu_i$  represents *Region Dummies* to remove the effect of any unobservable time-invariant cross-sectional difference across regions,  $\lambda_t$  represents *Year Dummies* to remove the effect of any year-specific common shocks and  $\varepsilon_{i,t}$  is the error term.

**Table 1.** Variables definitions

Variable	Definition
Primary measure of cash holdings	
$Ln(Cash/TA)$	Natural logarithm of cash and cash equivalent over total assets.
Alternative proxies of cash holdings	
$Cash/TA$	Cash and cash equivalent over total assets.
$CashI/TA$	1+Cash and cash equivalent over total assets.
$Cash/Rev$	Cash and cash equivalent over total revenue
$CashI/Rev$	1+Cash and cash equivalent over total revenue.
$Cash/TA100$	Cash and cash equivalent over total assets as a percentage.
$Cash/Rev100$	Cash and cash equivalent over total revenue as a percentage.
$Ln(Cash/TA100)$	Natural logarithm of cash and cash equivalent over total assets as a percentage.
$Ln(Cash/Rev100)$	Natural logarithm of cash and cash equivalent over total revenue as a percentage.
Independent variables	
$Electyr$	Equals 1 if year $t$ was election year and 0 otherwise.
$Political$	Politically connection equals 1 if at the CEO and the member of parliament (MP) are affiliated with governing political party.
$LnSize$	Natural logarithm of the total assets.
$Leverage$	The ratio of total liabilities to net assets.
$Investratio$	The ratio of total investment to total assets.
$Incdivindex$	Revenue diversification index and calculated as the product of the fraction of total revenue from each source (i.e., government support and internally generated fund).

### 3.2.Data and sample

The sample consists of 179 local assemblies across the ten (10) administrative regions in Ghana with annual financial data from 2012 to 2017. The number of sampled assemblies and periodicity are motivated by constraints in data availability. Our main data source is the report of the Auditor General on the accounts of local assemblies for the financial year ended 31<sup>st</sup>December 2012 to 31<sup>st</sup>December 2017, submitted to the Parliament of Ghana. We sourced for this report from the Ghana Audit Service website at [www.ghaudit.org](http://www.ghaudit.org).

Table 2 reports the summary statistics of all key variables for our sample. The main variable, cash holding measured as *Cash/TA*, has a mean (median) of 0.87 (0.98), which is significantly higher than that of nonprofit firms in the prior studies (see for example, Gore, 2009). This result indicates that the assets mix of local assemblies is dominated by cash, which increases their risk of political extraction. The mean of *Electyr* is 0.33, indicating that elections took place in a third of the sample period. The mean of *Political* is 0.64, which signifies that more than half of sampled local assemblies have political connections during the sample period.

**Table 2.**Summary Statistics

Variable	Obs	Mean	Std.Dev.	P25	Mdn	P75
<i>Cash/TA</i>	1023	0.87	0.31	0.85	0.98	1.00
<i>Electyr</i>	1026	0.33	0.47	0	0	1.00
<i>Political</i>	1026	0.64	0.48	0	1.00	1.00
<i>LnSize</i>	1023	12.92	1.13	12.39	13.05	13.59
<i>Leverage</i>	1026	0.62	8.47	0	0.01	0.07
<i>Investratio</i>	1023	0.12	0.22	0	0.01	0.12
<i>Incdindex</i>	1016	0.10	0.06	0.05	0.08	0.13

*Notes.* This table provides the descriptive statistics of variables. The full sample consists of 179 local assemblies from 2012 to 2017. Obs= number of observations; Std.Dev.=standard deviations; P25=25<sup>th</sup> percentile; Mdn=median value; P75=75<sup>th</sup> percentile. The variables are defined in Table 1.

The mean (median) assembly size is 12.92 (12.39) in natural logarithm terms. The mean and median values of *Leverage* are 0.62 and 0.01, respectively. The mean leverage is much higher than the median, suggesting that leverage is highly skewed. In Ghana, many local assemblies do not favor debt financing, while some take on extremely high debt finance. Additionally, the

mean investment (0.12) is much higher than the median (0.01), suggesting that many local assemblies do not invest, while some have extremely high investment. The results also indicate that investment is highly skewed. The mean and median values of income diversification index (*Incidvindex*) are 0.10 and 0.08, respectively. Given that a higher value of *Incidvindex* indicates highly limited revenue sources, the results show that local assemblies in Ghana have a low limitation on revenue sources.

Table 3 presents the Pearson correlation coefficients of the variables used in the regression analysis. We engaged in this analysis to test for the presence of a possible multicollinearity between the independent variables. The results show no concern over a possible multicollinearity problem in the independent variables as all correlation coefficients are below 0.50.

**Table 3.**Correlation coefficients

	<i>Ln(Cash/TA)</i>	<i>Electyr</i>	<i>Political</i>	<i>Lsize</i>	<i>Leverage</i>	<i>Investratio</i>	<i>Incidvindex</i>
<i>Ln(Cash/TA)</i>	1.000						
<i>Electyr</i>	-0.106	1.000					
<i>Political</i>	-0.005	0.007	1.000				
<i>LnSize</i>	0.074	-0.239	0.006	1.000			
<i>Leverage</i>	-0.003	-0.022	-0.012	-0.058	1.000		
<i>Investratio</i>	-0.631	0.197	-0.029	-0.160	-0.013	1.000	
<i>Incidvindex</i>	-0.046	-0.066	-0.182	0.175	0.012	0.065	1.000

*Notes.* This table presents the Pearson correlation coefficients of all variables for the sample assemblies. The variables are defined in Table 1.

## 4. Results and Discussion

### 4.1. Election, political connections, and cash holdings

Table 4 provides the baseline OLS estimates of the effect of elections and political connections on cash holdings in local assemblies. Model 1 in Table 4 presents results of the baseline estimates of the relationship between election, political and cash holdings in Ghanaian local assemblies. The overall impression from the results is that local assemblies hold less cash during election years. The results indicate that the coefficient of *Election year* on *Ln(Cash/TA)* is negative and significant at the 99% confidence level. This result suggests that, during election

years, local assemblies will have a decrease of 65.8% in cash holdings. This result may indicate that (1) elections help local assemblies relieve their resource constraints to reduce cash holdings and invest in developmental projects in order to maintain partisan loyalty of voters which should help to entrench their electoral coalition in the long run (Aytaç, 2014), (2) the significantly reduced cash holdings may indicate that local assemblies have a higher opportunity cost for investment in liquid assets during election years (Kim, Mauer, & Sherman, 1998), and (3) growth opportunities may not be strong in local assemblies during election years, resulting in a relatively lower cash holdings (Opler, Pinkowitz, Stulz, & Williamson, 1999; Pinkowitz & Williamson, 2001). This conclusion is supported by the role of government funding in restricting growth opportunities in nonprofit firms (Guo, 2007; Lecy & Searing, 2015).

**Table 4.** Elections, Political Connections and Cash Holdings: Baseline Estimates

<i>Dependent variables</i>	<i>Ln(Cash/TA)</i> (1)	<i>Excess Cash</i> (2)
<i>Electyr</i>	-0.658*** (-4.64)	-0.281*** (-2.80)
<i>Political</i>	-0.147*** (-2.97)	-0.034 (-0.70)
<i>Lsize(t-1)</i>	-0.087*** (-4.21)	0.149*** (7.33)
<i>Leverage(t-1)</i>	-0.094 (-1.65)	-0.053 (-0.87)
<i>Linvestratio(t-1)</i>	-0.046*** (-3.51)	0.187*** (13.75)
<i>Incdvindex(t-1)</i>	0.465 (0.75)	0.781 (1.62)
<i>Constant</i>	0.176 (0.70)	-1.802*** (-7.26)
<i>Region fixed effects</i>	Yes	Yes
<i>Year fixed effects</i>	Yes	Yes
<i>Fisher</i>	9.67***	22.98***
<i>R<sup>2</sup></i>	0.202	0.334
<i>Adjusted R<sup>2</sup></i>	0.184	0.319
<i>Observations</i>	803	798

*Notes:* This table presents the OLS regression results of elections and political connections on cash holdings. The variables are defined in Table 1. All regressions control for region and year fixed effects. *t*-statistics in parentheses are based on robust standard errors with clustering at the assembly level. \*\*\*, \*\*, and \* indicate significance at the 1%, 5% and 10% levels, respectively.

Concerning the effect of political connections on cash holdings, we find that local assemblies that are politically connected hold less cash. The results indicate that the coefficient of *Political connections* on  $\ln(\text{Cash}/\text{TA})$  is negative and significant at the 99% confidence level, suggesting that apolitically connected local assembly will have a reduction in cash holdings of 14.7%. This finding is consistent with prior studies (Chen et al., 2018) that document that politically connected firms benefit from soft-budget constraints and are less likely to suffer from liquidity constraints. This results may also indicate that political connections accentuate the weaker corporate governance structures of local assemblies, resulting in lower cash holdings (Harford, Mansi, & Maxwell, 2008). Su, Fung, Huang, and Shen (2014) also noted that one of the potential benefits of political connections is a lower risk of expropriation as politically connected firms pay higher cash dividend. From this perspective, politically connected local assemblies may hold less cash, suggesting a potential benefit of a lower risk of expropriation than their non-connected peers (Batta, Sucre Heredia, & Weidenmier, 2014).

The results also indicate that two control variables have a significant effect on cash holdings in local assemblies. From Model 1 in Table 4, the coefficient on assembly size ( $\ln\text{Size}$ ) is negative and significant at 1% levels. The significant negative effect of assembly size on cash holdings may imply that larger assemblies hold less cash because they have other resources that can substitute for cash at the assembly. Second, investment ratio has a negative and significant effect on cash holdings in local assemblies at a 1% level. The decreased cash holdings effect of investment ( $\ln\text{Investratio}$ ) may imply that investment substitute for cash holdings in local assemblies.

Model 2 in Table 4 provides further analysis on the role elections and political connections in reducing excess cash holdings. The free cash flow perspective suggests that manager's access to free cash flow provides the incentives to engage in self-interested utility maximization as well as perquisites consumption to the detriment of shareholders (Jensen, 1986; Stulz, 1990). Consequently, shareholders protect their interest by limiting manager's access to free cash flow. Our results regarding the negative effect of election on cash holdings in local assemblies may suggest that election is one of the potential factors to mitigate agency conflict. We validate this conjecture by investigating the effect of election on excess cash holdings in local assemblies. We rely on extensive prior studies and consider excess cash holdings as the difference between cash holding at time  $t$  and the optimal cash level at time  $t$ . To determine the optimal cash level, we

follow Opler et al. (1999) and estimate the model: Cash =f(assembly size, leverage, investment ratio, income diversification index, region dummies, year dummies). We replicate the primary analysis using excess cash as the dependent variable and present the results in Table 4, model 2.

The coefficient of election year on excess cash is negative and significant at the 1% confidence level. This finding supports that election may improve the practices of managers expropriating excess cash to the social interest of their locality as opposed to their own self-interest and perquisites consumption. Consistent with the literature on cash holdings and country corporate governance (Dittmar, Mahrt-smith, & Servaes, 2003; Kalcheva & Lins, 2007; Pinkowitz, Stulz, & Williamson, 2006), whenever the rights of shareholders are better protected, managers are led to hold less cash. From this perspective, we conclude that election may offer one of the potential conditions that ensure that social interests and rights are better protected in local assemblies. However, the coefficient of political connections on excess cash is negative but insignificant. This finding indicates that political connections are necessary but not sufficient condition to reduce excess cash holdings.

#### ***4.2.Effect of the complementarity between elections and political connections***

The prior section reports reduced cash holdings in local assemblies that have political connections. However, Panousi and Papanikolaou (2012) report that uncertainty increases managerial conservatism resulting in cash buildup. Given that CEOs of local assemblies are centrally appointed, election years are periods of intense political uncertainty. From this perspective, elections may condition cash buildup in politically connected local assemblies. We examine the moderating effect of elections on the relationship between political connections and cash holdings by estimating the regression:

$$Cash_{i,t} = \beta_0 + \beta_1 Electyr_i + \beta_2 Political_i + \beta_3 Political_i \times Electyr_t + \sum_{j=4}^8 \beta_j W_{j,i,t-1} + \mu_i + \lambda_t + \varepsilon_{i,t} \quad (2)$$

The dependent variable is cash holdings, measured as *Cash/TA*. We control for the association between cash holdings and firm characteristics using assembly size, leverage, investment, and income diversification index (see Table 1 for complete variable definitions). We use ordinary least squares regression with region fixed effects and year fixed effects controls. Additionally, *t*-

statistics are based on standard errors that are robust to heteroskedasticity and clustered at the assembly level.

**Table 5.** Interaction of Election and Political Connections on Cash Holdings

<i>Dependent variable</i>	<i>Ln(Cash/TA)</i>				
	(1)	(2)	(3)	(4)	(5)
<i>Electyr</i>	-0.453*** (-3.71)	-1.175*** (-4.07)	-1.194*** (-4.13)	-1.265*** (-4.36)	-1.262*** (-4.35)
<i>Political</i>	-0.282*** (-4.37)	-0.340*** (-4.65)	-0.346*** (-4.70)	-0.333*** (-4.79)	-0.326*** (-4.65)
<i>Electyr×Political</i>	0.600*** (3.87)	0.877*** (2.81)	0.890*** (2.87)	0.912*** (2.93)	0.915*** (2.93)
<i>Lsize(t-1)</i>		-0.050** (-2.26)	-0.066*** (-2.92)	-0.082*** (-3.81)	-0.088*** (-4.02)
<i>Leverage(t-1)</i>			-0.105* (-1.80)	-0.098* (-1.66)	-0.100* (-1.70)
<i>Linvestratio(t-1)</i>				-0.049*** (-3.70)	-0.050*** (-3.75)
<i>Incldivindex(t-1)</i>					0.543 (0.90)
<i>Constant</i>	-0.556*** (-6.89)	-0.011 (-0.04)	0.220 (0.78)	0.281 (1.07)	0.301 (1.13)
<i>Region fixed effects</i>	Yes	Yes	Yes	Yes	Yes
<i>Year fixed effects</i>	Yes	Yes	Yes	Yes	Yes
<i>Net effect of political</i>	-0.0850	-0.0506	-0.0523	-0.0317	-0.0241
<i>Net effect of elections</i>	-0.0690	-0.6137	-0.9440	-0.6813	-0.6764
<i>Fisher</i>	6.91***	6.23***	5.39***	9.49***	9.00***
<i>R<sup>2</sup></i>	0.179	0.218	0.227	0.240	0.240
<i>Adjusted R<sup>2</sup></i>	0.166	0.202	0.210	0.223	0.222
<i>Observations</i>	1,023	809	809	809	803

*Notes:* This table presents the OLS regression results of the moderating role elections play in the relationship between political connections and cash holdings. The variables are defined in Table 1. All regressions control for region and year fixed effects. *t*-statistics in parentheses are based on robust standard errors with clustering at the assembly level. \*\*\*, \*\*, and \* indicate significance at the 1%, 5% and 10% levels, respectively.

Table 5 reports the moderating effect of elections on the relationship between political connections and cash holdings. In interactive regressions, in order to assess the overall effect of the modulating variables, net effects are computed as in contemporary literature (Asongu, Le Roux, & Biekpe, 2017; Asongu & Nwachukwu, 2018). The net effects are computed as the sum of the unconditional and conditional or interactive effect. For example, from Model 5 in Table 5, the net effect from the interaction between elections and political connections on cash holdings is -0.0241 [(0.915×0.33)+(-0.326)]. In the computation, 0.915 is the conditional effect from the

intersection of elections and political connections, 0.33 is the mean value of sample election years, and -0.326 is the unconditional effect of political connections. Similarly, the net effect of elections on cash holdings is -0.6764  $[(0.915 \times 0.64) + (-1.262)]$  from Model 5 in Table 5. In the computation, 0.915 is the conditional effect from the intersection of elections and political connections, 0.64 is the mean value of sample political connections, and -1.262 is the unconditional effect of elections on cash holdings. These results are consistent with the established findings discussed earlier.

#### ***4.3. Political connections and evolution of cash holdings***

The prior section reports greater cash holdings in local assemblies that have political connections because of political uncertainty. However, it is not clear how cash buildup persists. We examine the evolution of cash holdings by estimating the regression:

$$Cash_{i,t} = \beta_0 + \beta_1 Political_i + \beta_2 Political_i \times Year_t + \sum_{j=3}^7 \beta_j W_{j,i,t-1} + \mu_i + \lambda_t + \varepsilon_{i,t} \quad (3)$$

The dependent variable is cash holdings, measured as *Cash/TA* and *Excess\_Cash*. We control for the association between cash holdings and firm characteristics using assembly size, leverage, investment, and income diversification index (see Table 1 for complete variable definitions). We use ordinary least squares regression with region fixed effects and year fixed effects controls. Additionally, *t*-statistics are based on standard errors that are robust to heteroskedasticity and clustered at the assembly level.



**Table 6.** Political Connections and Evolution of Cash Holdings

<i>Dependent variables</i>	<i>Ln(Cash/TA)</i> (1)	<i>Excess Cash</i> (2)
<i>Political</i>	-0.428*** (-4.14)	-0.073 (-0.82)
<i>Political</i> ×2013	0.101 (1.12)	-0.129 (-1.08)
<i>Political</i> ×2014	0.127 (1.50)	-0.173 (-1.53)
<i>Political</i> ×2015	0.176** (2.45)	-0.024 (-0.20)
<i>Political</i> ×2016	1.016*** (3.05)	0.541** (2.51)
<i>Lsize(t-1)</i>	-0.088*** (-4.02)	0.148*** (6.89)
<i>Leverage(t-1)</i>	-0.100* (-1.67)	-0.060 (-0.96)
<i>Linvestratio(t-1)</i>	-0.051*** (-3.82)	0.185*** (13.06)
<i>Incdvindex(t-1)</i>	0.526 (0.87)	0.856* (1.79)
<i>Constant</i>	0.366 (1.36)	-1.763*** (-6.48)
<i>Region fixed effects</i>	Yes	Yes
<i>Year fixed effects</i>	Yes	Yes
<i>Fisher</i>	8.12***	22.52***
<i>R2</i>	0.241	0.356
<i>Adjusted R2</i>	0.220	0.338
<i>Observations</i>	803	798

*Notes:* This table presents the OLS regression results of the evolution of cash holdings in local assemblies that have political connections. The variables are defined in Table 1. All regressions control for region and year fixed effects. *t*-statistics in parentheses are based on robust standard errors with clustering at the assembly level. \*\*\*, \*\*, and \* indicate significance at the 1%, 5% and 10% levels, respectively.

Table 6 reports the results of estimating equation (3). Model (1) shows that local assemblies that have political connections exhibit relative increase in cash holdings beginning in 2015 and continues through 2016. When we replicate the results in Model (2) using *Excess\_Cash* as dependent variable, we find that this effect is prevalent only in the year 2016. Overall, the evidence in Table 6 indicates that one year prior to elections, managerial conservatism kicks-in and leads managers to hold more cash in local assemblies that have political connections, which continues and becomes more pronounced in elections years.

#### 4.4. Robustness tests

##### 4.4.1. Controlling for endogeneity

This study follows recent literature and adopts dynamic panel system Generalized Method of Moments (GMM) to control for all potential sources of possible endogeneity problem driving the relationship between elections and cash holdings.

**Table 7.** Robustness Results from the Dynamic Panel System GMM Approach

<i>Dependent variable</i>	<i>Ln(Cash/TA)</i>				
	(1)	(2)	(3)	(4)	(5)
<i>Electyr</i>	-0.945*** (-2.65)	-0.616* (-1.83)	-0.590* (-1.78)	-0.531* (-1.66)	-0.705** (-2.25)
<i>Political</i>	0.759** (2.44)	0.527 (1.23)	0.163 (0.35)	0.114 (0.23)	-0.058 (-0.75)
<i>Electyr×Political</i>	0.783** (2.26)	0.734** (2.19)	0.536 (1.48)	0.622* (1.84)	0.697** (2.05)
<i>Lsize(t-1)</i>		-0.361** (-2.10)	-0.227 (-0.97)	-0.341 (-1.59)	-0.207** (-2.38)
<i>Leverage(t-1)</i>			-0.292* (-1.92)	-0.320** (-2.07)	-0.104 (-1.45)
<i>Linvestratio(t-1)</i>				0.024 (0.27)	-0.071 (-1.40)
<i>Incdivindex(t-1)</i>					-2.300* (-1.82)
<i>Cash(t-1)</i>	-0.147 (-1.54)	-0.168 (-1.47)	-0.207* (-1.67)	-0.194 (-1.46)	-0.108 (-1.26)
<i>Constant</i>	-0.790*** (-2.76)	3.926* (1.77)	2.550 (0.82)	4.173 (1.45)	2.415** (2.38)
<i>Year fixed effects</i>	Yes	Yes	Yes	Yes	Yes
<i>Net effect of political</i>	1.0174	n/a	n/a	n/a	n/a
<i>Net effect of elections</i>	-0.4439	-0.1462	n/a	-0.1329	-0.2589
<i>Fisher</i>	11.10***	5.47***	4.22***	5.25***	9.00***
<i>AR(1)</i>	0.000	0.000	0.000	0.000	0.000
<i>AR(2)</i>	0.436	0.648	0.174	0.104	0.909
<i>Hansen OIR</i>	0.200	0.700	0.274	0.480	0.304
<i>No. of instruments</i>	16	20	24	28	38
<i>No. of assemblies</i>	179	179	179	179	179
<i>Observations</i>	809	809	809	809	803

*Notes:* This table presents the dynamic panel system GMM regression results of elections and political connection as well as the conditioning effect of elections on cash holdings. The variables are defined in Table 1. All regressions control for year fixed effects. *t*-statistics in parentheses are based on robust standard errors with clustering at the assembly level. \*\*\*, \*\*, and \* indicate significance at the 1%, 5% and 10% levels, respectively.

The dynamic panel system GMM estimator potentially helps to deal with shortcomings of traditional OLS estimation approach by allowing the inclusion of assembly or region fixed effects to account for (fixed) unobservable heterogeneity; it allows past shocks or realizations of cash holdings to influence elections and, should the economic process be dynamic, then it may be possible to account for simultaneity using some combination of variables from the assemblies' history as valid instruments (Arellano & Bond, 1991; Arellano & Bover, 1995; Blundell & Bond, 1998). In the system GMM results, the AR(2) and Hansen OIR statistics indicate, respectively, that there is no second order serial correlation and that the instruments used are not correlated with the residuals. Additionally, the number of instruments is less than the number of local assemblies which makes the Hansen OIR statistics more reliable.

Table 7 reports the robust dynamic panel system GMM results of the relationship between elections and cash holdings as well as the effect from the complementarity between elections and political connections in influencing cash holdings at local assemblies. Given the use of interactive regressions, net effects are calculated to ascertain the overall effect from the complementarity between elections and political connections in influencing cash holdings at local assemblies. For example, from Model 1 in Table 7, the net effect from the interaction between elections and political connections on cash holdings is  $1.0174[(0.783 \times 0.33) + (0.759)]$ . In the computation, 0.783 is the conditional effect from the intersection of elections and political connections, 0.33 is the mean value of sample election years, and 0.759 is the unconditional effect of political connections. Similarly, the net effect of elections on cash holdings is consistently negative from Models 1, 2, 3, 4, and 5 in Table 7. The positive net effect of political connections on cash holdings is consistent with the results of Boubakri, Ghouil and Saffar (2013) that politically connected firms hold more cash than their non-connected peers. Our result shows that political uncertainty may increase managerial conservatism in politically connected local assemblies making these entities conducive to agency problems than their non-connected peers, consistent with the managerial risk aversion effect (Feng & Rao, 2018). In other words, the characteristics of politically connected firms such as acute agency problems and poor internal corporate governance mechanism (Chaney et al., 2011) come to play when they are faced with political uncertainty, resulting in cash buildup. Further, Faccio (2006) noted that political

connection leads to a potential lower risk of assets extraction by politicians. Consequently, politically connected local assemblies may hold more cash than their non-connected peers. From this perspective, the results suggest that elections may condition the potential benefit of a lower risk of assets extraction. On the other hand, the results show that the net effect of election on cash holdings is consistently negative. This result supports that election leads to reduced cash holdings at the local assemblies' level. In sum, these results indicate that (1) elections help local assemblies relieve its resource constraints to reduce cash holdings, and (2) political uncertainty condition the agency problems in local assemblies that have political connections because they hold more cash.

#### **4.4.2. Alternative proxies of cash holdings**

The primary analysis use  $\ln(\text{Cash}/\text{TA})$  to measure assemblies' cash holdings. Following extensive prior research, we replicate the primary analysis using eight (8) alternative proxies of cash holdings. These proxies are:  $\text{Cash}/\text{TA}$ ,  $\text{Cash1}/\text{TA}$ ,  $\text{Cash}/\text{Rev}$ ,  $\text{Cash1}/\text{Rev}$ ,  $(\text{Cash}/\text{TA}) \times 100$ ,  $(\text{Cash}/\text{Rev}) \times 100$ ,  $\ln[(\text{Cash}/\text{TA}) \times 100]$  and  $\ln[(\text{Cash}/\text{Rev}) \times 100]$ . Our results are robust to these alternative definitions of cash holdings (untabulated).

## **5. Summary, conclusions, and implications**

In this study, we examine the relationships between elections, political connections, and cash holdings. For this purpose, we use a panel dataset of local assemblies in Ghana over the period of 2012 to 2017. The empirical evidence is based on OLS regression with region and year fixed effects and dynamic panel system GMM. Additionally,  $t$ -statistics are based on standard errors that are robust to heteroskedasticity clustered at the assembly level. Several important findings emerge from our study.

First, we find that elections are negatively associated with cash holdings, indicating that local assemblies hold less cash during election years. When examining if the observed negative effect of election is related to excess cash holdings, we find a consistent negative relation between elections and excess cash holdings. Second, we find that political connection is negatively associated with cash holdings. When examining if these differences are observed in excess cash holdings, we find a negative but insignificant relation between political connections are necessary but not sufficient condition to reduce excess cash holdings. Third, we have found that

the net effect on cash holdings is negative from the complementarity between elections and political connections, indicating that local assemblies that have political connections hold less cash than their non-connected peers. Conversely, we have also established positive net effect between political connections and cash holdings. When examining how cash holdings persist in local assemblies, we find that one year prior to elections managerial conservatism kick-ins and leads managers to hold more cash, which continues and becomes more pronounced in elections years.

Elections may offer one of the potential conditions that ensure that social interest and rights are better protected in local assemblies. Second, the reduced cash holdings in local assemblies that have political connections, in the context of potential benefits of political connections of Su et al. (2014) and Batta et al. (2014), suggests a potential lower risk of expropriation than their non-connected peers. Third, our result suggests that political uncertainty may increase managerial conservatism in politically connected local assemblies making these entities conducive to agency problems than their non-connected peers. Fourth, the results, in the context of empirical evidence in Faccio (2006), suggest that elections may condition the potential benefit of a lower risk of assets extraction in local assemblies.

The results presented in this study have several implications. First, our result provides evidence that (1) elections help local assemblies relieve resource constraints to reduce cash holdings, (2) local assemblies have higher opportunity cost for investment in liquid assets during elections years, and (3) growth opportunities may not be strong in local assemblies. This finding, in the context of agency conflict emanating from free cash flow, supports that elections may improve the practices of managers expropriating excess cash to the social interest of their locality as opposed to their own self-interest and perquisites consumption. Finally, the results also have implications for regulations on the cash management practices of local assemblies. In addition to determining cash buffer target (i.e., minimum cash balances) to minimize fiscal distress, the local government minister should consider setting maximum cash balances as well as regulate the investment of idle cash to mitigate potential agency problems.

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