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Do related party transactions affect the relationship between political connections and firm value? Evidence from Egypt

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Abstract

This paper aims to (i) investigate the impact of political connections (PC) and related party transactions (RPTs) on the firm value (FV), and (ii) test the moderating effect of RPTs on such relationship, while controlling for the firms' corporate governance mechanisms. Based on 315 observations from publicly listed firms in Egypt, our results reveal that (i) there is a positive relationship between PC and the FV, (ii) there is a negative relationship between RPTs and the FV, and (iii) the existing of RPTs as a moderating variable enhances the impact of the politically connected companies on the FV. The findings suggest that the Egyptian firms are much affected by the politically connected board of directors or owners, and this significantly exists when associated with related party transactions, despite that, the corporate governance practices could mitigate such effects.

Keywords: Related party transactions, Political connections, Corporate governance, Firm value, EGX, Egypt

Introduction

Despite the gap in the literature due to the lack of a formal, comprehensive and holistic definition of what PC means, generally, it is defined as a social relation to gain power [69]. For example, Fisman [24] and Wei et al. [68] defined PC as the links between business leaders and political representatives such as senior government, party leaders, governmental officials, or elected legislators. Faccio [22] defined political connections as a distinctive connection between firm officials and legislators. According to Du and Luo [17], political connections may be created in the following ways: donating to political actions, hiring previous government officials as directors, or having firm executives serve in a political position.

If one or more of the major shareholders in the company controls 10% or more of the votes, or if CEO, vice president, president, chairman of the board of directors, or a secretary, or there is a link between a member of parliament, a minister, or a senior politician in an institution under governmental control, then, the company is politically connected [17, 22]. Furthermore, if any of the top managers, members of the board of directors, and major shareholders have social ties business ties, or family ties to decision-making bodies of the government (e.g., executive parliament and judicial bodies) or themselves are members of the government, the firm considered to be politically connected [26, 28].

The PC allows for easier access to valuable resources and strategic advantages, which can lead to improved firm performance. Prior research has found that the PC can benefit the firm in terms of better credit access, the possibility of winning a government bidding war and lower tax rates. Given the importance of PC in firm growth and corporate strategies in emerging economies, it is worthwhile to explore whether and how PC influence firm performance in emerging markets. [2, 34, 58].

There are two different arguments related to the advantages versus the adverse role of PC. The first argument is related to how PC can enhance the firm's financial performance, where some studies, such as Infante and

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Piazza [36], explain the extent to which politically connected companies benefit from low interest rates at the local level, and how these preferential transactions are strengthened when companies associated with politicians on their boards borrow from banks and when the degree of autonomy granted to local loan officers is higher. On the other hand, the second argument is related to mitigating the financial performance; for example, Pang and Wang [52] state that PC can cause multiple interagency conflicts as politicians and government attempt to impose their control as stakeholders at the expense of other stakeholders.

Pang and Wang [52], Sniderman and Theriault [59], Li et al. [42] mentioned that despite the multiplicity of studies examining the impact of the PC on the firm performance in many countries, the global effects of it are still ambiguous. The advantages versus the adverse role of the PC are two opposing arguments. Both considerations indicate that the magnifying or mitigating financial performance may have opposing consequences of PC. Resource-based and supporting manual theory suggests that the PC facilitates the company's ability to produce advantages that increase the performance. The PC is proposed to help organizations achieving their goals, protect firms' reputations and provide better financial reporting quality.

Prior studies have been carried out in different emerging economics to examine the effect of PC on the FV and the firm performance, as Ben Cheikh and Loukil [8] in Tunisia, Artunç and Salah [4] in Egypt, Ghonji Feshki et al. [25] in Tehran, Maaloul et al. [45] in Tunisia, where the empirical results reveal that the PC has a positive effect on both the firm performance and the FV. Overall, the review of the literature reveals that politically connected companies have better financial performance. In addition, other scholars stipulate that the establishment of PC helps businesses to raise sales, reduce operational and finance costs, which can favorably reflect the performance of businesses [41, 60, 67, 71]. Accordingly, the CG mechanisms may be expected to dilute the adverse effect of PC on the company in the presence of good board of directors [48, 63].

RPTs, on the other hand, are the subject of two competing viewpoints. An insider's opportunistic assessment of RPT's performance, which may be detrimental to other shareholders, is the first thing to consider [13, 27, 39]. The second point of view considers RPTs as competent and capable of providing benefits to enterprises in the form of a streamlined negotiating process, lower transaction costs [27], risk sharing, strategic cooperation, and contract facilitation [39].

It is also not always clear how RPTs would affect a company's performance, though; studies indicated that RPTs can make a company less profitable, on the one hand (for example, [49, 66]). On the other hand, other studies found that RPTs had a positive effect on people [53, 64]. There are very few studies that have looked into this relationship in Egypt. Diab et al. [14] looked at how RPTs changed the value of Egyptian publicly traded companies from 2012 to 2017 and how that changed the value of the companies. The results revealed that RPTs do not have an impact on the value of a company's stock. There is also no evidence that RPTs improve the performance of a company. In Malaysia, Liew and Devi [43] look at how long independent directors stay on the board and how that affects the link between RPTs and FV over the course of five years from 2014. The results suggested that IDT weakens the link between RPTs and the value of the company. In this case, more ownership makes that effect of IDT even more powerful.

It can be noted that some studies provide evidence that political connections are more common in countries with less protected property rights, a high level of corruption and a poor legal and institutional protection. In addition, political connection consequences may be influenced by political instability in these countries [8].

The current study extends empirical studies in developing countries and provides further in-depth investigation regarding one of those countries, Egypt, where the culture, economic policies and politics power are playing a substantial role in shaping the decision-making process, which in turn, affecting the firm performance. Hence, Egypt offers an interesting research context to test these propositions. Previous studies as Ben Cheikh and Loukil [8] addressed the interaction between RPTs, PC and firm performance in Tunisian context, but they do not control for a wide spectrum of CG mechanisms. Abdel-Fattah et al. [1] used a sample of 33 companies listed on the Egyptian stock Exchange to examine the relation between PC, RPTs and VF during the period of 2014 to 2018; hence, the current study extends the above-mentioned literature by examining the relation between the PC, RPTs and the FV with the existence of corporate governance as control variables, where CG helps in supervising the effect of the PC and RPTs on FV.

This paper has a number of contributions. *Firstly*, it investigates the effect of PC, RPTs on VF as well as the moderating effect of RPTs on the relationship between PC and FV while controlling for the BOD characteristics. *Secondly*, it covers a longer period than any previous study in Egypt has used; where a larger sample of listed companies to be used. *Thirdly*, the findings would benefit the policymakers and the Egyptian Stock Exchange Authority as it draws the attention on the role played by the PC across the firms and its impact on the firms' value, and how this role is enhanced when controlling for the CG and the RPTs.

Methods

Development of hypotheses

PC and FV

The PC is one of the topics that is subject for discussion in the academic research [12, 70]. Krueger [40] stated that, *Corporations spend a great deal of time, energy, and resources in seeking to enter government services because of large, unexpected gains*. Although building PC is considered essential, especially in developing countries, they can lead to a high level of corruption and can lead to suffering from a weak legal system [3, 68].

Generally, the PC is characterized as a social relation in order to achieve political influence [69]. However, the literature does not agree on a definition. Fisman [24] and Wei et al. [68] described PC as the linkages between corporate executives and political representatives, such as senior government, political party leaders, governmental officials, and elected legislators. There are significant ties between corporate officials and politicians, according to [22]. For example, Du and Luo [17] claim that the PC of corporations may be developed by making political donations, recruiting former government officials as directors, or having company executives participate in a political position.

Firms may need to establish relationships with politicians and government officials in order to accomplish their social aims. Efficient management must strike a balance between stockholders' interests and those of other politically connected parties. PC is defined as the social or commercial interaction between a corporation and politicians in order to achieve power.

There are two main theories to explain the controversial results of the relationship between PC and FV. The first theory states that PC is providing a "helping hand" to enhance the firm's value by enabling them to acquire scare resources and giving protection to the firm, especially in developing countries [7, 23, 67]. On the other hand, some studies suggest that PC is acting as "grabbing hand," where it can direct the company to politically connected individuals' agenda and to support their own self-interest. Where in some cases PC can force the company to be engaged in more social activities or to find specific programs that may act away from the main objective of the company and the shareholders to maximize their wealth and the value of the firm [44, 50]. The second theory emphasizes different impacts of PC on FV due to the nature, the different political and regulatory systems and the culture of the countries used in the study [20].

Prior studies showed that there is an important impact of PC on the FV; for example, most of the studies conducted in China showed that there is an important impact of PC on the FV; where the politically connected firms are having access to bank loans, obtaining tax benefits and acquisition of scare resources. That is why most of the studies agreed that China's society gives a great appreciation to relationships and connections [12].

Chekir and Diwan [11] investigated the impact of politically connected firms versus non-politically connected firms in Egypt during the period of 2007 to 2011. The study explains the benefit that firms can obtain from being politically connected using data from all the companies listed on EGX 100. The results revealed that connected companies are more able to get loans from banks, have more market access, trade protection and energy subsidies.

The current study is looking at how the PC and FV are linked with the presence of CG as a control variable. We believe that CGM helps in supervising the adverse effect of the PC which was not addressed in Egyptian previous studies. Based on the above discussion, the first hypothesis can be formulated:

H1 There is a significant positive relationship between PC and FV.

RPTs and FV

The collapse of worldwide companies as Enron (2001), WorldCom (2002), and Tyco (2002) revealed the importance of the RPTs, especially after many financial crises, where the role of RPTs has emerged in all political and economic discussions and media [55, 63]. Accordingly, many academic studies and professional organizations paid attention to the importance of these transactions and to the requirements of disclosure.

Many guidelines and standards have been released to handle this issue with the main purpose of ensuring that the person who makes the disclosure reflects the financial position of the firm without being affected by those transactions or relationships, and also by identifying related parties and their dealings with them and the requirements of disclosure. Furthermore, International Accounting Standards, IAS 24 [37], defined the RPTs as *a transfer of resources, services or obligations between related parties, regardless of whether a price is charged* (IAS 24, paragraph 9; [56]). Thus, a related party can be considered a person or an entity, where that person relates to the reporting entity or has a significant influence or control or is a member of management. RPTs involve transactions with close family members of a related person [51, 56].

Most of the previous literature illustrate that RPTs are transactions between two parties that are joined by a special relationship, such as the parent company and subsidiaries, the directors or management of the company and its subsidiaries, or their family members [6]. Bona-Sánchez et al. [9] classified RPTs according to two criteria: (1) the parties involved in the transactions and (2) the nature of transactions. The first criterion includes (a) controlling shareholders, (b) managers and officers, and (c) affiliates. The second criterion includes eight RPTs variables: financial income, financial expenses, operating income, operating expenses, possession of non-financial asset acquisitions, lending contracts, borrowing contracts and loan guarantees. Tambunan et al. [62] indicates that RPTs of transactions undertaken to overcome weak CGM and insufficient disclosure that leads to market failures and weak oversight in companies and business groups.

In Egypt, rules of registration and cancellation of securities on the stock exchange issued in 21 March 2021, Art No (4) define related party as any party has any direct or indirect relationship with the reporting entity in one of the following cases: (l) control or joint control over the reporting entity, (2) shares ownership or voting rights grants the party ability to effectively influence the decisions of the reporting entity, (3) membership of key management or the position of executive director of the entity requesting registration or in its holding company or in one of its subsidiaries or associates, (4) any person has control or joint control or the direct effect of persons have shares or voting rights that give them the ability to influence entity's decisions, and (5) the related party has an independent system for benefits or pensions of the employees of the reporting entity or any entity related to the reporting entity. Therefore, RPTs can be viewed as a group of transactions between companies in the same business group to raise the efficiency of transactions in weak markets, where RPTs can be applied to expropriate the minority shares through tunneling or managing earnings profits.

Several factors, including corporate actions, influence FV. Companies engage in a variety of activities to improve operational efficiency, including (RPTs) and tax avoidance (TA). Previous research has found inconsistencies in whether these actions have a positive or negative impact on FV. Most of the stakeholder's constituents are considering the related party transaction as a risky action by the management and that it can affect the FV negatively. The literature provides non-conclusive results on the impact of the RPTs on the firm performance in general and on FV in particular [54, 55].

El-Helaly et al. [21] investigated the effect of RPTs disclosure on FV in the Egyptian market for the year 2014. The study used two proxies for RPTs, which are type and the size of the RPTs. The results show that there is negative non-significant relationship between RPTs and FV. Kassem [38] proposed a framework for RPTs and investigated its impact on investor's decision and information asymmetry. The results reveal that the current employed disclosure framework is not sufficient for showing the risk associated with the abusive RPTs and recommended the use of a proposed disclosure framework to enhance the investor's decision and the information asymmetry, which by default will enhance the value of the firm.

The current study uses the CGM as one of the control variables to examine its effectiveness in oversight the adverse effect of the RPTs. The CGM existence and its effect on the relationship between PC and FV was not examined before in prior literature related to the Egyptian context.

Based on the above discussion, the following hypotheses can be formulated:

H2 There is a significant negative relationship between RPTs and FV.

The effect of RPTs on the relationship between the PC and FV

Egyptian listed companies are governed by the accounting standards which seeks reporting quality which in turn may lead to the disclosure of RPT. The demand and supply perspectives can explain the possible effects of RPT on the FV, where BOD characteristics may increase CG efficiency and require more audit effort to guarantee high monitoring, and that may require additional audit procedures, which increase the VF. Also, according to the resource dependence theory, the board gender increases the board efficiency in dealing with audit matters which may reduce the audit report lag and increase the FV [18]. Therefore, it is predicted that RPT may affect the relationship between PC and VF; hence, the third hypothesis is as follows:

H3 RPTs moderate the relationship between the PC and the FV.

Research variables and models

This study aims to investigate the effect of PC and RPTs on FV, as well as, to test the moderating effect of RPTs on the relationship between PC and FV. PC and RPTs were measured using a binary scale. A dummy variable equals (1) if the firm is politically connected and (0) otherwise as well as a value of (1) is assigned when the company has RPTs in financial statements and (0) otherwise [14, 69]. Additionally, some control variables were selected based on the literature related to PC and RPTs, such as CG variables (CEO gender, CEO duality, CEO expertise, board size) as well as other control variables as firm size, audit quality,

Table 1 The study variables

Variables	The type of the measure	Measurements
Dependent variable		
Firm value	Tobin's Q	Market value of equity + market value of liabilities/book value of equity + market value of liabilities
Independent variables		
Political connections	Dummy variable	Dummy variable with values 0 and 1. A value of 1 is assigned when the board of directors includes a politically connected member and 0 otherwise
Moderating variable		
Related party transactions	Dummy variable	Dummy variable with values 0 and 1. A value of 1 is assigned when the company has RPTs in financial statements and 0 otherwise
Control variables		
Board characteristics		
CEO gender	Percentage	It is measured by dividing the number of women on the board of directors by the number of members on the board
CEO duality	Dummy variable	Dummy variable with values 0 and 1. A value of 1 is assigned when the chairman and the chief executive officer are the same person and 0 otherwise
CEO expertise	Dummy variable	Dummy variable with values 0 and 1. A value of 1 is assigned when the board of directors includes members with financial expertise and 0 otherwise
Board size	Numeric value	It is measured by the number of directors on the board of directors
Other control variables		
Firm size	Numeric value	Natural logarithm of total assets
Audit quality	Dummy variable	Dummy variable with values 0 and 1. A value of 1 is assigned when the firm's auditor is a Big 4 firm and 0 otherwise
Profitability	Financial ratio	Net income/total assets
Leverage	Financial ratio	Total liabilities/total assets

profitability and leverage [15, 19, 33, 47, 57]. Table 1 summarizes the variables and measurements.

Accordingly, this paper formulated the relationship between the variables as the three models below:

Model (1): The relationship between PC and FV

Firm Value $= \alpha + \beta_1$ Political connection $+ \beta_2$ CEO gender $+ \beta_3$ Board size $+ \beta_4$ CEO Duality $+ \beta_5$CEO Expertise $+ \beta_6$ Leverage $+ \beta_{it}$ β_7 Profitability $+ \beta_8$ Firm size $+ \beta_9$ Audit quality $+$ e.

Model (2): The relationship between RPTs and FV

Firm Value $= \alpha + \beta_1$ Related parties transactions $+ \beta_2$ CEO gender $+ \beta_3$ Board size $+ \beta_4$CEO Duality $+ \beta_5$ CEO Expertise $+ \beta_6$ Leverage $+ \beta_7$ Profitability $+ \beta_8$ Firm size $+ \beta_9$ Audit quality $+$ e.

Model (3): The moderation effect of RPTs on the relationship between PC and FV

Firm Value $= \alpha + \beta_1$ Political connection $+ \beta_2$ Related parties transactions $+ \beta_3$Related party*political connection $+ \beta_4$CEO gender $+ \beta_5$ Board size $+ \beta_6$CEO Duality $+ \beta_7$ CEO Expertise $+ \beta_8$ Leverage $+ \beta_9$ Profitability $+ \beta_{10}$ Firm size $+ \beta_{11}$ Audit quality $+$ e.

Sample selection

The population of this study is the Egyptian listed companies (EGX100), who are required to comply with the Egyptian accounting standards and requested to disclose information on RPTs. Banks and financial services companies are excluded from the sample, since, their capital structures differ significantly from the other industries, and they have their own characteristics, regulations and specific disclosure requirements. Data were extracted from the financial reports for the sample firms from 2014 to 2020. Firms with missing data were excluded. The final sample consists of 45 listed Egyptian firms with total observations of 315. The data required to empirically test the hypotheses are collected using two sources as follows: (i) Thomson Reuter—Eikon Database to collect annual financial and (ii) the Egyptian Stock Exchange website to obtain annual board of director's reports. Table 2 shows details of the sample selection:

Data analysis and discussion of results

Descriptive analysis

Table 3 shows the descriptive statistics of the following variables: PC, RPTs, board of directors' characteristics (CEO gender, CEO duality, board size, and board expertise), profitability, audit quality, leverage, and FV (Tobin's Q).

Table 2 Sample selection

	No. of firms
Initial sample	100
Less: financial firms and banks	(17)
Less: firms with missing data	(38)
Final sample	45

Table 3 Descriptive statistics of the research variables

Variables	*N*	Minimum	Maximum	Mean	Std. deviation
Political_Conne	315	.00	1.00	.4540	.498
Related_Party	315	.00	1.00	.4582	.498
CEO_gender	315	.00	.400	.1482	.132
Board_size	315	2.00	21.00	15.228	4.920
CEO_duality	315	.00	1.00	.4952	.500
Board_Exper	315	.00	1.00	.5778	.494
Firm_Size	315	4.213	7.668	6.170	.607
Profitability	315	−1.120	.535	.0812	.165
Big4	315	.00	1.00	.6379	.479
Leverage	315	.00	.94	.3845	.186
TQ	315	.444	12.704	1.513	1.124
Valid *N* (listwise)	315				

The results of descriptive analysis show the high level of women in the board of directors as the percentage can reach 40% in board size above 20 members. It is expected that this would affect the disclosure RPTs; where women are more conservative in complying with the standards requirements. Additionally, the results reveal that the PC and RPTs exist in more than 40% of the sample as the mean of both variables is above 40%; and consequently this might affect the firm value. The CEO plays dual role in the majority of the sample companies. The boards in companies include members with financial expertise, and the results reveal that 63.7% of the financial reports included in the sample are audited by Big-4, the net profit represents 8% of the total assets. The negative value of profitability can be explained by the high level of leverage. The results suggest that the averages of the size of the firm and TQ are 6.17 and 1.51, respectively.

Regression results of the impact of political connections and related party transactions on firm value

The regression analysis has been conducted to examine the impact of the PC on the FV without taking RPTs into considerations. Table 4-Panel (A) indicates that regression of independent variables (PC) and control variables (board characteristics, firm size, profitability, audit quality and leverages) on the dependent variable (FV). It can be concluded that the impact of PC on FV is significant at a level less than (0.05) and the coefficient is (0.416). The adjusted R^2 is 15%, which means that the variables are explaining 15% of the variability in the dependent variable. Board size and profitability showed insignificant impact on the dependent variable (FV) at levels higher than (0.05) and (0.01). Those results are in line with previous studies that conclude that the stable and strong PC has a positive impact on the performance of the firm, especially on its market value [8, 10, 35, 69]. Based on our results, the first hypothesis is to be accepted.

Table 4-Panel (B) shows the regression analysis results of the impact of RPTs on the FV without considering the impact of the PC. It regresses the independent variable (RPTs) and control variables (board characteristics, firm size, profitability, audit quality and leverages) on the dependent variable (FV). The RPTs have a negative impact on FV that is significant at a level less than (0.01) and the coefficient is (−0.483). The adjusted R^2 is 16%, which means that the variables are explaining 16% of the variability in the dependent variable. CEO gender, board size and profitability showed insignificant impact on the dependent variable (FV) at levels higher than 0.05 and 0.01.

The results are consistent with the findings of many previous studies, where a negative relationship between RPTs and the FV exists. It can be noted that the R^2 value is small compared to its value in prior studies; this is due to the fact that the CG mechanism taken in this paper as a control variable which in turn helped in mitigating the negative effect of RPTs [8, 16, 32, 65]. Conversely, there are studies which show that an increase in the RPTs leads to greater profitability, as in the study by [56].

The results show that the gender diversity and board experience have a positive impact on the FV on the contrary to the negative impact of CEO Duality and board size. Regarding the rest of the control variables as the firm size and the audit quality, the results show a positive impact on the FV, while leverage shows a negative impact on the FV. Altogether, this means that higher firm size and profitability with good CG are boosting the value of the firm in the stock exchange market despite the negative impact of the RPTs. Based on the above results, the second hypothesis is accepted.

Regression analysis of the impact of political connections on the firm value using related party transactions as a moderating variable

Table 5 shows the regression analysis results of the effect of PC on the FV considering the moderating impact of the RPTs. It regresses the independent variable (PC) and control variables (board characteristics,

Table 4 Regression results

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
Panel (A): the impact of PC on the FV						
1	(Constant)	3.892	.668		5.822	.000
	CEO_gender	1.111	.464	.131	2.394	.017
	Board_size	−.020	.012	−.086	−1.632	.104
	CEO_duality	−.245	.120	−.109	−2.043	.042
	Board_Exper	.320	.124	.141	2.575	.011
	Firm_Size	−.398	.101	−.215	−3.957	.000
	Profitability	.669	.364	.099	1.837	.067
	Big4	.290	.130	.124	2.236	.026
	Leverage	−.721	.318	−.120	−2.269	.024
	Political_Conne	.416	.124	.184	3.352	.001
Panel (B): the impact of RPTS on the FV						
1	(Constant)	3.797	.667		5.696	.000
	CEO_gender	.860	.457	.101	1.879	.061
	Board_size	−.022	.012	−.096	−1.835	.067
	CEO_duality	−.278	.120	−.124	−2.311	.022
	Board_Exper	.305	.124	.134	2.463	.014
	Firm_Size	−.304	.103	−.164	−2.944	.003
	Profitability	.675	.362	.100	1.863	.063
	Big4	.328	.129	.140	2.549	.011
	Leverage	−.732	.316	−.121	−2.320	.021
	Related_Party	−.483	.125	−.214	−3.863	.000

Table 5 Regression results of the impact of political connections on the firm value using related party as a moderating variable

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	3.345	.680		4.920	.000
	Related_Political	−.590	.183	−.198	−3.231	.001
	CEO_gender	.916	.461	.108	1.988	.048
	Board_size	−.016	.012	−.070	−1.341	.181
	CEO_duality	−.258	.118	−.115	−2.184	.030
	Board_Exper	.260	.124	.114	2.100	.037
	Firm_Size	−.310	.103	−.167	−3.017	.003
	Profitability	.621	.359	.092	1.730	.085
	Big4	.320	.128	.137	2.500	.013
	Leverage	−.693	.313	−.115	−2.214	.028
	Political_Conne	.621	.138	.275	4.509	.000
R^2 = 17.5%						

firm size, profitability, audit quality and leverages) on the dependent variable (FV), taking into consideration the moderating role of the RPTs. The impact of RPTs on the relationship between PC and FV is significant at a level less than (0.01), and the coefficient is (−0.590). The adjusted R^2 is 17.5%, which means that the moderating role of RPTs is explaining 17.5% of the variability in the dependent variable. Board size and profitability showed insignificant impact on the dependent variable (FV) at levels higher than 0.05 and 0.01.

Table 6 Two-stage least squares (2SLS) regression analysis

		Unstandardized coefficients		Beta	t	Sig.
		B	Std. error			
Equation 1	(Constant)	−.640	1.096		−.584	.560
	Related_Political	−5.695	2.038	−1.912	−2.794	.006
	Related_Party	−2.915	1.575	1.292	1.850	.015
	Political_Conne	3.966	1.584	1.759	2.504	.013
$R^2 = 18.8\%$						

The results are consistent with the findings of many previous studies, where a negative relationship between the RPTs and the FV exists. When compared to previous research, this study's R^2 value is low, but this is because the CG mechanism was used as a control variable, which helped to mitigate the detrimental effects of RPTs [57, 61]. Hence, the third hypothesis is accepted where RPTs moderate the relationship between the PC and the FV.

Robustness test

There is a need to carry out robustness test to address the issue of endogeneity to eliminate the unobserved impact of any constant and estimate the problems of endogeneity; hence, the two-stage-least squares (2SLS) method is employed. Additionally, the structure Equation Modeling (SEM) is used to retest the relationship between PC and FV with considering the RPTs as a moderator variable as follows:

2SLS

Errors in the dependent variable are assumed to be independent of the predictor variable in standard linear regression models. OLS linear regression is no longer best when the associations between variables are bidirectional (e.g., in a linear regression model). Instrumental variables that are uncorrelated with the error terms are used to compute estimated values of the problematic predictors (the first stage) and then used to construct a linear regression model of the dependent variable (the second stage). For optimal outcomes, the two-stage model employs variables that are uncorrelated with mistakes to compute the values.

Following Maaloul et al. [45] and Habib et al. [29], we employ the two-stage-least squares (2SLS) method to account for the potential problem of endogeneity between PC, RPTs and FV. Hence, The PC and RPTs as a direct effect and the PC*RPTs (Moderating effect) are estimated in the first step of the 2SLS technique using exogenous and instrumental variables for CG (board characteristics) and other control variables (firm size, audit quality, profitability, and leverage). Secondly, the projected worth of PC and RPTs are linked to the firm value.

The results of Table 6 reveal that RPTs has a moderating effect on the relationship between PC and FV. The regression model shows that the direct and the indirect effect of the PC, RPTs and FV are valid and significant at P values less than 0.01and 0.05. This indicated the robustness of the linear regression results that PC has a significant impact on FV taking into consideration the moderating role of the RPTs.

We conclude that the RPTs the moderating effect on the relationship between PC and FV is the same regardless the employment of 2SLS or OLS. Thus, these results reveal the absence of endogeneity problem and the absence of variables that could bias the relationship between the PC and FV.

SEM

SEM is chosen to be used in this paper as it calculates the numerous and interlinked dependency among variables (endogenous and exogenous variables) and to be in line with Supatmi et al. [61] and Ika et al. [35]. We test the impact of the PC on the FV using the RPTs as a moderating variable to retest the third hypothesis. The results of the analysis are illustrated in Table 7 which indicates that the mediation role of the RPTs is significant at a level less than 0.05. On the other hand, the results showed that board size and profitability are not significant in that model.

Hypothesis 3 represents the moderating role of RPTs on the relation between PC and the FV. The results of the SEM models show that the explanatory power of the model increased when the moderating role inserted in the model. This means that the consideration of the RPTs within this relation is essential to understand the true impact of the PC on the FV in the Egyptian environment. The results are consistent with much previous research like Supatmi et al. [61] who investigated the moderating role of PC on the relation between RPTs and FV on 450 Indonesian firms, where the results showed that RPTs has a negative impact on the FV and that PC is negatively affecting the FV.

Table 7 Regression weights of SEM (political connections and firm value using the related party transactions as a moderating variable)

	Unstandardized estimate	Standardized estimate	S.E	C.R	*P*
TQ←CEO_gender	1.004	.118	.456	2.200	.***
TQ←Board_size	− .017	− .076	.012	− 1.462	.144
TQ←Board_Exper	.267	.117	.123	2.173	***
TQ←Firm_Size	− .320	− .173	.101	− 3.155	**
TQ←Profitability	.648	.096	.356	1.821	.069
TQ←Big4	.345	.147	.126	2.744	**
TQ←Leverage	− .757	− .126	.310	− 2.447	***
TQ←Related_Party	− .222	− .098	.158	− 1.410	**
TQ←Related_Political	− .366	− .120	.244	− 1.500	***
TQ←Political_Conne	.475	.210	.160	2.959	***

** significant at level less than (0.01)

*** significant at level less than (0.05)

Furthermore, according to Rahman and Nugrahanti [57], the RPTs disclosure has a significant impact on the FV and PC. That study also examined the moderating role of the CG on the relation between the PC and the RPTs. In this paper, we use the CG as a control variable to examine its ability in mitigating the unfavorable effect of the PC on the FV. The results of the current study reveal that there is a positive relationship between the PC and the FV. In addition, it shows that the RPTs moderating role is significant. Meanwhile, it shows that the board expertise and gender diversity have a significant impact on the FV, while the board size has an insignificant impact on the FV and that is consistent with the results of [5, 30].

On the other hand, Hendratama and Barokah [31] investigate the relationship between the RPTs and FV using the corporate social responsibility as a moderating variable. The results showed that there is a negative relationship between the RPTs and the FV which is consistent with the results of our paper. This suggests that the Egyptian market may view RPTs as opportunistic and less trustworthy than other transactions because of the unfairness of the RPTs. The connection between related parties and FV grows more favorable, nevertheless, in the presence of good CG. This study suggests that CG may reduce opportunism for companies and that good implementation of CG reflects the incentives for companies to be trusted and ethical.

Conclusions

The PC and its impact on the FV have been extensively studied, but the mechanism by which it presents itself remains unknown. To overcome this gap in the literature, this paper proposes the RPTs as a moderating variable for politically connected companies to tunnel the FV. Due to the fact that the PC and the RPTs are so prevalent everywhere, they are predicted to play a substantial influence in determining the management incentives and the business performance. We find that RPTs are utilized by the politically connected firm primarily to tunnel resources out of the firms.

Based on the findings of our analysis of the causal relationship between the PC, the RPTs and the firm performance, we conclude that, in general, the RPTs of the firms explain the inconsistent effects of the PC on the firm performance. Politically connected firms have a higher value until the related party has moderated the relation with negative impact on the FV. The findings support the conflict-of-interest hypothesis by indicating that these RPTs were more of a tunneling mechanism. Firms with stronger political ties have a higher value. Furthermore, the PC in these firms may have resulted in conflicts of interest (agency theory) and was not part of the firms' political strategy to mitigate external risks (resource dependence theory). In terms of practical implications, investors should consider the significance of the PC and RPTs, particularly those that are not clearly disclosed in the financial statements when making investment decisions.

This study demonstrates that the RPTs and the PC tend to cause conflict of interest and, as a result, reduce the FV. Furthermore, the PC has the potential to strengthen the causal relationship between the RPTs and the firm value. Furthermore, the findings suggest that firms should consider the PC in the composition of the board members, as well as the types and amount of the RPTs, to prevent their value from declining. The PC levels are determined and measured subjectively. We only managed to generate less detailed information on the profile of the board members, such as CEO gender, board size, CEO duality and board experience as control variables for this relation as a way of mitigating the conflict of interest. As a result, we must assume that these board members have the lowest PC scores, which may or may not correspond to their true positions. In determining and measuring the level of the PC, this study also did not account for the period or terms served by the politically connected personnel. As a result, future research should be carried out to discover better methods of tracing the true position of each board member of a politically connected firm and accommodating the position's terms. Furthermore, it should be noted that many of the explanatory variables PC, RPT and CG variables are endogenously determined, which in turn needs further investigation about the causality relationship. However, investment and the policy makers in countries where the RPTs are commonplace will benefit from our findings. Research on RPTs and related relationships is critical for investors to make informed judgments when investing in companies with political links.

The findings of this paper would benefit the policymakers and the Egyptian Stock Exchange Authority as it draws the attention on the role played by the PC across the firms and its impact on the firms' value, and how this role is enhanced when controlling for the CG and the RPTs; where it highlights the need for further regulations to protect the interests of the minority stockholders, as well as stakeholders and to provide better financial reporting quality. In this regard, the Egyptian Institute of Directors should release a more CG regulations that help in ensuring the interests of minatory of stockholders in an attempt to control the adverse actions of political connections to maximize their benefits. It is believed that gender diversity is one of the pillars that could help in this direction. Additionally, the Egyptian Accounting Standards setters might release a standard that provides guidelines on the realization and the disclosure of the RPTs, which in turn would lead to improvements in the firms' performance and value. The Egyptian Stock Exchange Authority would impose penalties on listed companies who do not comply with the regulations; especially, the disclosure requirements as well as the CG mechanisms.

Abbreviations
PC: Political connections; FV: The firm value; RPTs: Related party transactions; CGM: Corporate governance mechanisms; EGX: Egyptian stock exchange; CEO: Chief executive officer; RDT: Resource dependence theory; IAS: International accounting standards; TA: Tax avoidance; IFC: The International Finance Corporation; WOB: Women on board; SEM: Structure equation modeling.

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Author contributions
TI developing the original draft, helped in methodology and edited and reviewed the draft and made constructive changes to the draft. ME prepared the original draft as well as reviewing the literature. YH collected the data, analyzed the results, and concludes the draft. All authors have read and approved the manuscript.

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The authors declare that they have no conflict of interest.

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