Agency cost and Earnings Management: Evidence from Amman Stock Exchange

Khaled Qasim Khaled Hamdan[1]

Abstract
This study examines the impact of agency cost and earnings management by employing data from 30 Industrial Jordanian firms from 2009 to 2019. In this study, I will investigate if earnings management decreases agency expenses in Jordan, a country where businesses face agency issues. The confluence of agency cost problems and earning management was tested using a static model. The main findings of this study suggest that Earnings Management is closely associated with agency costs. There is an Agency Conflict occurrence in the ASE. On the other hand, the factors affecting corporate governance have no appreciable impact on the agency cost index.
Keywords: Agency Cost – Earining Management – Jordan.

1. Introduction

This study explores the relationship between wages of administration, agency costs, and corporate governance components based on data from Jordan's publicly traded companies. Given the growing importance of Jordanian enterprises, this research is timely and relevant as solid empirical research.

Earnings are crucial in managers', firms', and investor investment decision-making processes (Chen & Yuan, 2004). Manipulation of accounting numbers, whether by illicit means or the judicious use of financial reporting rules, isn't a novel occurrence. Earnings do or don't accurately reflect a firm's true performance, and accounting is commonly accepted as "a language with some wiggle room" for financial reporting (Stolowy & Lebas, 2006).

Management methods to raise reported profits to the appropriate level are referred to as Earining Management (Ning, 2009). Agency Cost and Earnings Management are linked by management's incentive to improve a company's financial image. The conventional principal-agent (PA) charges are included in agency costs. Due to a conflict of interest between the owner and management, the expenditures of agencies are incurred. The opposing interests of ownership and management, according to agency theory, enable leaders to restrict

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[1] Accounting and Finance, AAUP, k.hamdan2@student.aaup.edu

revenues in order to achieve their objectives and avoid conflicts with owners.

Agency theory, according to Miglo (2016), is concerned with informational asymmetry between investors and their management regarding the realities of their organizations. As a result, owners will have two methods to influence managers' performance: first, through strong governance, and second, by increasing debt levels in order to raise the worth of their shares (Brigham and Michael, 2014).

By extending its scope to all industrialized countries and presenting for the first time empirical findings on the significance of profitability in the Industrial Jordanian Firms' agency concerns, this research also contributes to the corpus of knowledge on corporate governance. Finally, this study adds to the expanding body of literature that raises questions about external influences in CG investigations (Pham, Suchard, & Zein, 2011, Schultz et al, 2010 Wintoki et al, 2012).

The research will answer 2 qustions respectively;

1. what is the relation between Earining Management and agency costs?

2. What impact does agency conflict regulation have on the earnings management of ASE-listed companies?

The study's primary goal is to investigate the effects of listed firms' Agency Cost and Earining Management on their financial performance. In specific, this study seeks to:

3. Examine whether there's an Agency Conflict occurrence in the ASE.

4. It tries to show the influence of agency conflict on the Earining Management of firms whose stocks are traded on the ASE.

To best of my knowledge, this is the first research in Jordan to look at the interrelationships between the expenses of Earining Management and Agency Cost. Financial information may be distorted by earnings management, impacting its authenticity, dependability, and transparency. This research is also useful for policymakers, whose main purpose is to guarantee that securities and futures markets run smoothly. This attempt will stoke interest in connected topics, specifically in Jordan's stock market. This research will educate shareholders on the applicability of agency theory in financial markets and on how to manage their relationships with corporate leaders. In addition, this study will assist in providing the management of Jordanian enterprises listed on the stock exchange with a comprehensive grasp of the impact of agency theory on Earning Management. Lastly, the current study is significant since it is the first in Jordan to address agency theory challenges as a result of the Jordan

exchange's agency problem, as well as how to evaluate measures to decrease conflict using past studies.

2. Literature Review

Prior Empirical Research

In Jordan, there is no bond market, making it difficult for businesses to get long-term debt financing. Other than trade finance and short- to medium-term bank loans, no other types of debt financing are permitted to be included in the balance sheets of sample companies.

Anazonwu et al. (2018) looked at the impact of agency costs on dividend distribution in Nigerian listed manufacturing companies. The study population includes publicly traded manufacturing companies, albeit It was only open to persons who worked in the Nigerian Stock Exchange's multinational and consumer products sectors. Mutual OLS Regression was used to test the hypotheses. According to the findings, the capital to revenue ratio and cash flows have a huge and favorable influence on dividend distribution, but leverage has a large and negative impact. According to the paper, managers should consider the impact of agency expenditures while designing and implementing a dividend policy.

Kim, et al. (2019), examined the existence of short-term investment firms that worsens agency problems between investors and lenders by forcing firm managers to consider shortsighted actions, increasing counterparty risk by lowering cash and resources available to satisfy debt commitments. The study demonstrated that the number of covenants in loans is adversely connected with the investment horizon of institutions, using data on bank loans to U.S. corporations from 1990 to 2010. Banks demand exorbitant gaps on loans to businesses with much more short-term firm characteristics, and the number of restrictions is favorably (negatively) related to short-term (long-term) ownership concentration.

Chen, Lu, and Sougiannis (2012) investigated at whether or not SG&A cost behaviour is influenced by agency concerns in addition to economic variables. According to this body of work, there exists a robust connection between the agency problem and cost irregularity. Companies included in the Standard & Poor's 1500 index were analysed for financial and governance data from 1996 to 2005.

Neewan and Lolong (2015), They explored the relationship between agency cost and corporate structure, dividend policy, business size, and capital structure. Between 2010 and 2011, The study analysed a sample of thirty Indonesia Stock Exchange-listed industrial companies. This study evaluated the data using a standard linear regression

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analysis. This research shows that insider ownership and capital structure significantly affect agency cost, with a 95% confidence interval. However, it is well-established that institutional ownership significantly mitigates agency costs. The study authors claim that there is weaker proof that dividend policy or firm size significantly affects government spending. These results can serve as a yardstick for executives to utilise in creating effective corporate governance, and investors can use them to gauge the value of a company.

In his study, Beaudoin (2008) analysed the impact of the agency problem on managers' discretionary accrual decisions. They also analysed the impact of the business environment on these choices. An experiment explored the impact of the principal-agent dilemma on the expenditure accrual decisions of business-unit managers and the role of business ethics in decreasing earnings management. Consistent with agency theory, he discovered that when there is an agency problem, business-unit managers behave in their own self-interest by reporting more discretionary outflow accumulations for growing their additional potential. The absence of an agency problem allows management to make decisions in the best interests of the company, such as reducing discretionary spending accruals in preparation for an IPO.

3. Research Methodology
Sample Selection and Data collection

 Based on the availability of data for Amman Stock Exchange-listed industrial enterprises, this study focused on 30 of the 169 listed industrial companies. This indicates that the study was limited to Jordanian industrial enterprises listed on a stock exchange. In order for all companies' data to be comparable, the study project collected secondary data from the selected enterprises for the years 2009 to 2019. The information was then entered in Microsoft Excel 2007 The study was based on corporations' financial disclosures.

Descriptive research relies on a statistical model to test the study's hypothesis.

H01: There is no correlation between agency cost and earnings management for companies listed on the Jordan Exchange.

H01: There is no correlation between agency cost and corporate governance for companies listed on the Jordan Exchange.

Study Variables

In order to determine how multiple factors (Earnings Management, Board Size, Board Independence, Chief Executive Officer, Leverage, and Firm Size) impact the final result, Agency theory is used to investigate the connection between agency costs and revenue management in Jordan (such as Agency Cost). In this case, a quantitative strategy might be best.

The dependent variable in this study is agency costs, which was calculated using SGA According to Singh and Davidson (2003), the proxy for PA agency costs is SGA (selling, general, and administrative) expenditures standardized by total assets. A good amount of SGA costs is considered a symptom of ineffective management using a linear regression model since SGA expenses are semi expenditures.

Earining Management is the variable of interest in this study's explanatory variables. To take corporate governance considerations, this study includes 30 firm-level explanatory variables in addition to EM. The 30 company-level explanatory factors are (1) board size; (2) board independence; (3) CEO duality; (4) leverage; and (5) firm size .

Panel data record the actions of individuals, organisations, etc., through time. Panel data can be seen as a special kind of time series data or a special kind of cross-sectional data. One-dimensional information in the form of time series and cross-sectional data can be extracted from panel data. A single entity's changes through time are shown by the time series component, whereas differences across objects are shown by the cross-sectional component.

In order to properly assess the study problem, we will assemble a large dataset. Because of this, the panel regression analytic model is recommended. This model calls for data on variables unique to each firm, data from both cross-sections and longitudinal studies, and data on these variables across time (the time-series component).

Table 1: Variable Measurements

Proxy		Description
Dependent variable		
PA SGA	PA SGA	SGA expenses/total assets
Independent variables		
EM	Earning Management	Time-series analysis was used to estimate discretionary accruals.
BS	Board Size	Natural logarithm of the overall number of members
BI	Board Independence	How many board members are insiders
CEO	CEO duality	If CEO duality exists, the dummy variable is 1, else it is 0.

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L	Leverage	Total obligation / Overall Asset
FS	Firm Size	Natural logarithm of total assets

Research Statistical Model

The study hypotheses are evaluated by using a panel data analysis. Panel data allow for better regulation of heteroskedasticity. Panel data analysis is comprised of the OLS, RE, and FE (Fixed Effect) methods. When deciding which model is more suitable for a given set of panel data, the Hausman test is used to compare the relative merits of the Random Effect and Fixed Effect approaches. Assuming the Hausman test yields a significant result, the data set in question is better served by FE; otherwise, The questionable data set is better serviced by RE (Saleh et al, 2008). Estimations also included descriptive statistics, statistical tests, and VIF analyses.

Model specification

The research presents the hypothesis that agency expenses contribute to poor profits management, and it shows how this impacts the bottom line. Panel data models investigate the deterministic and stochastic effects of a given variable (such as a person, subject, or time period). The primary distinction between fixed and random effect models is the role of dummy variables. Adding the dummies to the intercept transforms the model into a fixed effect one. To put it another way, the dummies are the error term in a random effect model. Changes in intercepts between groups are investigated by using a fixed group effect model, which assumes that entity or subject variance is constant and that all entity or subject slopes are identical. Fixed effect models make use of within-effect estimates and the least squares dummy variable (LSDV). Standard OLS regressions with dummy variables are fixed effect models (Baltagi, 2008). Following is a description of the explicit and implicit panel functional relationships between the variables of interest under observation that allow us to reach this conclusion empirically:

$$PA\,sga_{i.t} = f(EM_{i.t}, BS_{i.t}, BI_{i.t}, CEO_{i.t}, FS_{i.t}, L_{i.t}) \quad (1)$$
$$PA\,sga_{i.t} = \alpha + \beta_1 EM_{i.t} + \beta_2 BS_{i.t} + \beta_3 BI_{i.t} + \beta_4 CEO_{i.t} + \beta_5 FS_{i.t} + \beta_5 L_{i.t} + \varepsilon_{i,t} \quad (2)$$

4. Result and Discussion

Descriptive analysis

In this sample, selling, general, and administrative expenditures are estimated to account for 16% of total assets, according to the mean of PAsga. The amount of earnings management, according to the average time-series discretionary accruals EM, is 40%. The sample's largest board has 18 members, and its smallest board has 4; the sample's

maximum board size is 19, meaning that it has 19 members in total. According to the summary statistics of board independence, a minimum of zero implies that certain boards are totally comprised of insider members, while a maximum of 91% of the sample's directors are independent. According to the dummy variable CEO duality's mean value of 14%, 14% of the sampled companies have a CEO who also serves as the board chair. According to the average leverage, the sampled companies had a leverage ratio of about 33%.

Table 2: descriptive statistics

	PA SGA	EM	BS	BI	CEO	L	FS
Mean	0.166	0.409	8.078	0.378	0.139	0.332	16.984
Median	0.100	0.000	9.000	0.333	0.000	0.309	16.833
Maximum	5.199	1.000	18.000	0.917	1.000	0.998	20.925
Minimum	0.013	0.000	4.000	0.000	0.000	0.023	0.653
Std. Dev.	0.319	0.492	2.282	0.190	0.346	0.188	2.005
Number observations	330	330	330	330	330	330	330

Correlation

The strength and orientation of a linear relationship between two variables can be determined by calculating their correlation coefficient. As can be seen in the correlation matrix presented in Table 3, the link between the independent variables is weak (mostly lower than 0.30). An issue with multicollinearity arises when the variables in the regression are highly linked. Estimates of the VIFs (variance inflation factors) for evaluating the model's multicollinearity are shown in Table 3.

There is a negative correlation between Earining Management and PAsga, as measured by the PAsga ratio, which shows that there is a negative correlation between Earining Management and PAsga. The PAsga ratio also correlates negatively with larger board sizes. Based on the data, it appears that larger boards are associated with reduced costs for PA agencies. This contradicts the agency theory's claim that a large board is less effective, as the resource dependency hypothesis suggests that a larger board allows the corporation to bring in more resources or outside expertise, increasing the likelihood of sound decision-making. Since the PAsga ratio is negatively correlated with board independence, the level of PA agency conflicts grows in proportion to the number of independent board members.

The presence of CEO duality in a corporation may enhance disputes between the principle and agent since CEO duality has a favorable association with PAsga. Costs of PA agencies are inversely correlated with business size and leverage, which both exhibit strong association.

Table 3: Correlation Matrix & VIF

Variable	PA SGA	EM	BS	BI	CEO	L	FS	UNCERTENED	VIF
PA SGA	1.000								
EM	-0.052	1.000						1.41	1.02
BS	-0.169	0.82	1.000					1.28	1.26
BI	-0.013	-0.160	-0.015	1.000				1.18	1.18
CEO	0.042	0.032	-0.033	0.212	1.000			1.04	1.02
L	-0.057	-0.027	-0.265	-0.057	-0.029	1.000		1.16	1.14
FS	-0.059	0.083	0.232	-0.190	-0.293	-0.002	1.000	1.72	1.22

Note: The table displays correlation coefficients for each variable used in this study.

In the presence of multicollinearity, the variance inflation factor (VIF) examines the extent to which the variation in the predicted regression coefficients exceeds that of the coefficient estimator. Since the average VIF for the model's components is less than the minimum VIF in any row or the multicollinearity cutoff of 10 or 5, multicollinearity is not present in Table 3.

Hausman specification test

As indicated in Table 4, the p-value of the Hausman test is less than the 5% significance level, showing that the null hypothesis has been rejected and confirming that the fixed effects model is the most appropriate one to apply to the relevant data set.

Table 4: Hausman test

Test Ho : difference in coefficients not systematic		
	Chi-sq	Prob
Croos-section random	6	0.029

Regression Results

The data show signs of heteroskedasticity, as shown by Breusch-Pagan tests. As a result, it is possible that using pooled OLS regression will produce inaccurate conclusions and inefficient estimates of the coefficients. The results of the fixed effect multivariate regression analysis with agency conflicts as the dependent variable and the independent factors being (EM, BS, BI, CEO, LAV, and FS). Overall, the model adequately accounts for a sizeable portion of the observed variation in the dependent variable. According to the R-squared value of 0.24, the six independent variables explain 24% of the variance in the agency cost.

These findings demonstrate the significant effect EM has on the prices charged by PA regulatory agencies. Costs to the PA agency are shown to increase with both increasing EM and decreasing PA sga (Table 5).

If we assume that all other variables remain the same, then the average cost to the PA government for an increase of one unit of EM is $0.027. At the 10% significance level (= -0.027), the EM coefficient is significantly negative.

The agency cost index is unaffected by corporate governance issues. There is little correlation between board size and agency fees, and the board size has a minimal effect on those costs. The research of Kamyabi, Majbouri, and Ashae, Singh and Davidson, and Ang et al (2014). Our results showed that an independent board has a negative correlation with agency expense and so has no practical significance. No correlation was discovered between independent directors and agency costs by Ang et al. (2000), Singh and Davidson (2003), and Ibrahim and Abdul Samad (2011). Companies with more independent directorships will have lower agency costs, according to research by Gul et al. (2012), who argue that independent directors have a significant impact on the success of the business. The results show that the chief executive officer has a negative correlation with and a sizeable impact on agency costs. It demonstrates that the presence of the CEO reduces agency expenses and that his or her absence raises them. Based on our research, we know that there is a slender but beneficial relationship between agency cost and leverage. This fits with the findings of Zhang and Li (2008), who found that enterprises frequently make use of high degrees of leverage. According to their research, there is a positive (albeit not statistically significant) relationship between leverage and agency cost. Due to the increased vigilance of management as a result of the banks' strict supervision, an organization's monitoring expenses decrease as its debt level rises (Mustapha & Ahmad, 2011).

Table 5: Regression Results Under Fixed Effects

Variable	Coefficient	Std. Error	Prob. Value
C	0.539	0.288	0.062
EM	-0.027	0.035	0.091
BS	-0.012	0.018	0.512
BI	-0.024	0.180	0.892
CEO	-0.260	0.080	0.001
LAV	0.126	0.188	0.150
FS	-0.010	0.012	0.418
R Square	0.245		
F-statistics	2.712		
Durbin Watson	1.922		

Autocorrelation Test

In order to determine if the data have an autocorrelation problem, the authors use the Durbin Watson value (d). Autocorrelation shows

whether or not the linear regression and error term are significantly related to one another. The Durbin-Watson statistics value (d) is close to 2, therefore autocorrelation is not an issue.

5. Results Discussions

I believe that this study is the first to investigate the relationship between Earnings Management and agency costs in Jordan. This study specifically looked into how Earnings Management and PA SGA relate to one another. In Jordan, where businesses have agency issues, this study looked at whether Earnings Management decreases or increases agency expenses. The AC/EM nexus was tested using static and models.

The findings supported opportunistic Earning Management in Jordan by showing a strong and negative connection between Agency Cost and Earnings Management. These findings are in line with the literature's assertions that managers might deploy Earnings Management in opportunistic ways (e.g., Dechow & Sloan, 1991; Healy, 1985; Holthausen et al., 1995). Additionally, factors like CEO duality, firm size, leverage, board size, board independence, and other factors that are typically assumed to be relevant in understanding Agency Cost do not seem to have a big effect.

6. Conclusion

The consequences of agency cost and earnings management are examined in this paper. Since agency issues are common among Jordanian businesses, this research will determine if profits management helps in this area. The data used in this study comes from the Amman Stock Exchange and covers the years 2009 through 2019. In this analysis, selling, general, and administrative expenditures were normalised by total assets to arrive at agency costs as the dependent variable. Discretionary spending was estimated using a time-series analysis (Earnings management). When determining if agency cost issues and revenue management were incompatible, a static model was used. Earnings Management has been found to have a high correlation with advertising expenditures. While the agency cost index is unaffected by corporate governance issues.

This study has a number of restrictions. One may, for instance, broaden the scope of this study's examination to include numerous and unique markets and attempt to comprehend the variations. The current study's shortcomings present a wealth of options for future research endeavors.

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