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Ownership Structure and Investment Efficiency: Evidence From Egypt

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Abstract

This paper aims to examine the relationship between Ownership Structure Mechanisms (Managerial Ownership, Institutional Ownership, Block holder Ownership and Outside Director Ownership) and Investment Efficiency by using panel data analysis. To investigate this relationship used the multiple regression models. Findings of investigation of 35 firms listed on the Egyptian Stock Exchange in the period 2006 to 2015 by balanced Panel model representative. Results indicated that Managerial Ownership isn't related with investment efficiency. In contract, institutional ownership, block holder ownership and outside director ownership have a negative relationship with investment efficiency. In addition, the researcher found that control variables (Firm size, Debt ratio, Tobin's Q) not related to investment efficiency. These findings imply that the Majority of Egyptians firms relies on institutional without individual ownership and then reduces much of possible from agency problems and decreasing information asymmetry and facilitating the monitoring of investment decisions.

Keywords: Ownership structure, Investment efficiency, Panel data analysis, Egyptian stock exchange

1. Introduction

Prior studies indicate that the problems of asymmetric information and agency have a major impact on the investment efficiency (Chen, 2012) due to a conflict the interests of shareholders and manage and also a conflict between a majority and minority shareholders lead to reduce the efficiency of corporate investment. Agency problem is one of a major part in the economic literature that attempt to eliminate the conflicts between the interests of managers and shareholders, which that the payout cash to shareholders reduce the available resources to the control of managers lead to reduce the strengths of managers and then increasing the likelihood that incur these managers a monitoring task of the capital markets when the firm obtains a new capital (Jensen, 1986).

The Financial crisis showed high weakness features in the financial control systems, which lead to spread financial, accountancy and managerial corruption as a result executive manager's overriding on firm performance and utilization to achieve private shareholders. High firms restored to use loans to cover lower revenues and financing activities lead to increased bankruptcy for high firms in the 2000 year as a resulting weakness internal control mechanism. Many companies turned to develop internal mechanisms to control inside the firm (Kim and Nofsinger, 2007).

Ownership Structure is an important internal mechanism of corporate governance (Fama and Jensen, 1983 & Jensen1993, Chen 2013). Ownership Structure consists of four mechanisms: Managerial Ownership, Institutional Ownership, Block holder Ownership and outside director Ownership. This paper is organized into six sections including this section. Section 2 presents the previous empirical research and hypotheses development. Data collection and sample selection related issues have been delineated in section 3. Section 4 explains the methodology used. Empirical results and analysis are discussed in section 5 while the final section concludes the study.

2. Literature Review and Hypothesis Development

Many studies showed that Ownership Structure deal with agency problems through implementing efficient investment decisions and also improve firm performance (Chen, 2012). Those mechanisms include Managerial Ownership, Institutional Ownership, Block holder Ownership and outside director Ownership. We discuss how each mechanism effects on investment efficiency in the Egyptian stock market.

2.1 Literature Review for Managerial Ownership

Jensen and Meckling (1976) highlighted Managerial ownership may reduce the agency problems between managers and shareholders, thereby increasing shareholder wealth, but it may allow the support resources that are used incorrectly and then damage to the wealth of shareholders. Managerial ownership is a tool used in motivating managers to ensure their participation in monitoring the company's operations and efficiency of the administration, although the increase of managerial ownership may encourage managers to engage in high-risk investments and then the emergence of the agency problem of conflict of interest between managers and shareholders.

Chen et al. (2003) examined the relationship between managerial ownership and firm value in Japanese firms within the period from 1987-1995. This study denoted that there is a positive relationship between managerial ownership and firm value. Results indicated that dealing with managerial ownership and firm value considered self-variables through the simultaneous equation.

Chen (2013) investigated the relationship between adjustments in managerial ownership and firm value through two perspectives: the study of whether this relationship is heading toward the optimal level as an important source of managers when they modified their managerial ownership and analyzed the impact these adjustments on firm value. These results showed that a positive relationship between managerial ownership and firm value. Empirical results showed also that the market dealing positively with adjustment in managerial ownership in order to minimize distractions to get the optimal level.

Li et al. (2007) indicated that there are still efforts are being made for the development of corporate governance environment through financial transparency and managerial accountability and shareholder representation on the board. Chen and Yu (2012) Coincided with previous studies on the presence a positive relationship between managerial ownership and firm performance listed on the Taiwan stocks. Hence, based on the above discussion, I hypothesize the following:

Hypothesis 1. There is a significant relationship between managerial Ownership and investment efficiency.

2.2 Literature Review for Institutional Ownership

Balsam et al. (2002) indicated that institutional shareholders are the most capable of carrying out earnings management due to their ability to access information in a timely manner compared to non-founding shareholders. Its founding shareholders have ability to control in

the entry and exit of money with no ability to influence the share price, which leads to an increase in the voting rights they have, but it may Generated by the emergence of agency problem as a result of the omission of legal protection for minority shareholders.

Institutional shareholders support the main thrust of the decline arising from the diversification of risk. Arise many problems and most notably: the occurrence of bankruptcy costs that lead to the re-establishment of the company capital structure commensurate with the size of the liquidity.

Institutional shareholder has ability to monitor the executive management of the company due to their ability to deliver information to shareholders and monitor the organization performance in an efficient manner which is reflected in the financial performance of the company and lead to increased efficiency.

Institutional ownership has an important supervisory role in order to reduce agency costs. As the institutional ownership appoint the Board of Directors to serve their interests and be able to control the administration and then improve the current financial performance. Institutional ownership has an important role within the board through voting on important decisions that serves the company or to refrain from decisions that are harmful to their wealth.

Velury and Jenkins (2006) indicated that there is a positive relationship between institutional ownership and earning quality and also concentrated institutional ownership may influence negatively on earning quality.

Cho (1998) examined the relationship between ownership structure and investment efficiency. Regression results indicated that ownership structure effect on investment and then firm value. This study also raises doubts in terms of the assumption that the compensation policies such as: granting shares to executive managers and provide them with incentives that could maximize firm value.

Ferreira and Matos (2008) conducted in order to determine whether there is a relationship between institutional ownership and investment efficiency in addition to the examination of the role of institutional ownership around the world. Results indicated that there is a negative relationship between institutional ownership and investment efficiency leading to an increase in firm value. Hence, based on the above discussion, I hypothesize the following:

Hypothesis 2. There is a significant relationship between institutional Ownership and investment efficiency.

2.3 Literature Review for Block Holder Ownership

Shome and Singh (1995) examined the results for evaluation Block holder ownership for both block holder and institution. This study indicated that there is weaken the evidence for found continue monitoring from block holders, shareholders leading to increasing in the observed value that arising out of expectation about gain acquisitions by companies or through restrictions on any pushy administrative behavior in the future.

The possible sources of the block holder gains arise from reductions in the value of shares as a result of the increasing costs of the agency or the transfer of wealth from bondholders, as well as the reduction of stock gains such as the possibility of insider trading operations. The study also suggests that the potential benefits of the follow-up of blockhole of the company may be offset by the potential costs resulting from insider trading.

Thomsen et al. (2006) showed the relationship between block holder ownership and firm value through granger tests. Results indicated that there is no asymmetric relationship between block holder ownership and firm performance. The study also indicated a lack of correlation between block holder ownership and firm value in the united states or the United Kingdom, while in the continent of Europe. we find that there is a negative relationship between block holder ownership and firm value which, analysis of these negative relationship, we find that this link is only significant for companies that have a high initial block holder ownership (10%) because it is an evidence of a conflict of interest between block holders and minority investors as the proportion of block holders may be too high in the continent of Europe from the standpoint of equity value compared to the United States and the United Kingdom.

Tribo et al. (2007) analyzed the combined effect of the type of individual shareholders, whether individuals or non-financial companies or banks and their relationship with investments in research and development for companies to determine whether there is a relationship between block holder ownership and corporate performance. The results indicate the existence of a negative relationship between block holder ownership and the firm performance when these contributors have their block holders in banks while no positive relationship when the individual shareholders in non-financial companies, while no relationship when shareholders are individual. There is also a regular negative correlation between the number of individual shareholders and investment research and development. This study is important for decision-makers, academic studies. Hence, based on the above discussion, I hypothesize the following:

Hypothesis 3. There is a significant relationship between block holder Ownership and investment efficiency.

2.4 Literature Review for Outside Director Ownership

Yermack (2004) explained the impact of incentives granted to outside directors in firms that grant compensation or replacement or get other administrative positions on the overall performance of each company separately. There are changes occurring over time in the value of stock-based compensation, which creates a large disparity in wages for managers. The results indicated there is a positive relationship between the incentives of Outside director and firm value.

The incentives for outside director's mechanism has become of importance to all firms in all areas, as the Board of Directors is determined by the amount of compensation in the case of the absence of the agent and then determined the continuation of the members of the Board of

Directors by themselves in office, however, no restrictions impede the ability of the Board of Directors in the performance of their duties.

Institutional investors have issued standards for corporate governance and tried to be implemented through direct meetings and Shareholder decisions and advertising campaigns against companies with bad performance. Also, most outside director managers now get a large percentage of the annual Agencies either in the form of shares or share options. Hence; based on the above discussion we hypothesize the following:

Hypothesis 4. There is a significant relationship between outside director Ownership and investment efficiency.

3. Data and Methods

The study covers the time span of 2006 to 2015 of all firms listed on the EGX100 (32 firms outside the cabin) in the Egyptian Stock Market (ESM). The data for the ownership structure mechanisms and investment efficiency has been taken from the published financial statements of the companies through COMPASS (Income Fund- Financial Statements) about OSM over the period.

The total number of firms is 35 because there are some of firms merging and acquisition through the period between 2006-2015 and also some of firms have been liquidation due to Egyptian Revolution in 2011 and 2013so, it excluded from the final sample

The number of observations is 350 for the Egyptian Stock Market (ESM). We do use the panel data approach to investigate the relationship between ownership structure mechanisms and investment efficiency in the Egyptian market during 2006-2015.

Table 1. Sample of the relevant firms about CGM

Sectors	N in sectors	Ratio (%)
A- Basic Resources	1	2.86
B-Chemicals	2	5.71
C- Construction & Materials	5	14.28
D-Foods & Beverage	2	5.71
E-Industrial goods, services and Automobiles	6	17.14
F- Personal & Houshold Products	5	14.29
G- Real Estate	8	22.86

H- Media	1	2.86
I- Technology	1	2.86
j-Telecommunication	3	8.57
K-Travel & leisure	1	5.71
Total	35	100

This table below indicated that eleven sectors listed in the Egyptian market. Also, the majority of sample concentrated in real estate companies (22.86%) then industrial goods, services and automobiles approximately (14.29%) and then construction & materials (14.28%) while minority of sample is basic resources, media and technology approximately (2.86%).

4. Research Method

In this paper, we estimated a firm-specific model of investment as a function of growth opportunities (as measured by sales growth) and then use the residuals as a firm-specific proxy for deviations from expected investment. The model is described below:

$$\text{Investment}_{i,t+1} = \beta 0 + \beta 1 * \text{Sales Growth}_{i,t} + \varepsilon_{i,t+1} \quad (1)$$

- Investment $_{i,t+1}$ defined as the total investment or capital expenditures scaled by lagged property plant and equipment. This measure ignores other types of non-capital investments such as research and development, but it has been widely used in previous research (Lara et al. 2009).

- Sales Growth $_{i,t}$ is the percentage change in sales from year *t-1* to *t*. we classify firms based on the magnitude of the residuals (i.e., deviations from predicted investment) and rank these groups as the dependent variable. So, we sort firms yearly based on the residuals from Equation 1 into two groups:

➢ First group is under-investment which Firm-year observations in the sample given (i.e., the most negative residuals).

➢ Second group is observations in the sample (i.e., the most positive residuals) which are classified as over-investment. This division for over (under) investment ranked as dummy variable so, overinvestment ranked 1 (positive residuals) and under investment ranked zero (negative residuals).

For this study, the researcher used to panel data to estimate the relationship between Ownership structure and Investment efficiency as follows:

$$\text{Over (Under) Investment}_{i,t+1} = \alpha + \beta 1\ \text{Owstr}_{i,t} + \Sigma \gamma j\ \text{Control}_{j,i,t} + \varepsilon_{i,t+1} \quad (2)$$

$$\text{Over (Under) Investment}_{i,t+1} = \alpha + \beta 1\ MO_{i,t} + \beta 2\ IO_{i,t} + \beta 3\ BO_{i,t} + \beta 4\ OSO_{i,t} + \beta 5\ MO_{i,t} * OverI_{i,t+1} + \beta 6\ IO_{i,t} * OverI_{i,t+1} + \beta 7\ BO_{i,t} * OverI_{i,t+1} + \beta 8\ OSO_{i,t} * OverI_{i,t+1} + \Sigma \gamma j\ Control_{j,i,t} + \varepsilon_{i,t+1} \quad (3)$$

$$\text{Over (Under) Investment}_{i,t+1} = \alpha + \beta 1\ MO_{i,t} + \beta 2\ IO_{i,t} + \beta 3\ BO_{i,t} + \beta 4\ OSO_{i,t} + \beta 5\ MO_{i,t} * OverI_{i,t+1} + \beta 6\ IO_{i,t} * OverI_{i,t+1} + \beta 7\ BO_{i,t} * OverI_{i,t+1} + \beta 8\ OSO_{i,t} * OverI_{i,t+1} + \beta 9\ FS_{i,t} + \beta 10\ DR_{i,t} + \beta 11\ Q_{i,t} + \varepsilon_{i,t+1} \quad (4)$$

- The researcher summarized each variable in equation (3) with how to measure according to the recent studies. Fixed panel data is one of the most popular tests that used by the researchers in the recent studies so, it indicated to the best results comparing other panel data tests.

Table 2. Variable description

Variable	Abb.	Nature	Measure
Managerial Ownership	$MO_{i,t}$	Indep	Outstanding shares held by officers and directors
Institutional Ownership.	$IO_{i,t}$	Indep	Outstanding shares held by institutional investors
Blockholder Ownership.	$BO_{i,t}$	Indep	Outstanding shares owned by block holders (5%)
Outside Ownership	$OSO_{i,t}$	Indep	Outstanding shares held by outside directors
Firm Size	$FS_{i,t}$	Control	Log of total assets (Log Asset).
Debit Ratio	$DR_{i,t}$	Control	Ratio of total debt to total assets
Mkt-to-Book.	$Q_{i,t}$	Control	Ratio of the market value of total assets of the book value of total assets.
Investment Efficiency	Over (Under)	Dep	Dummy: over ranked 1 (positive residuals) and under investment ranked 0 (negative residuals).

5. Empirical Study

Table 3. Introduces the ordinary least squares test

Variable	Coefficient	Std. Error	t-Statistic	Prob.	VIF
SG	0.027	0.011	2.415	0.016	1.009
Investment (-1)	0.702	0.041	16.90	0.000	1.009
C	0.285031	0.039	7.141	0.000	---
R-squared	0.517	Mean dependent var		0.960	
Adjusted R-squared	0.514	S.D. dependent var		0.054	
S.E. of regression	0.037	Akaike info criterion		-3.699	
Sum squared resid	0.402	Schwarz criterion		-3.660	
Log likelihood	528.2	Hannan-Quinn criter.		-3.683	
F-statistic	150.8	Durbin-Watson stat		1.8149	
Prob (F-statistic)	0.000				

This table illustrates the association between SG and Investment (measured by; PPE/PPE t-1). As shown in the table, the coefficient of SG is positive (0.028) and statistically significant at 1.6% level. This means that the greater degree of SG, the more investment decisions the firm make.

Moreover, the F-test (150.885, P value= 0.00) shows the overall significance of the model. The model is significant because the significant value is less than (0.05).

Also, the R^2 shows that all the independent variables explain 51.8% of the variation in the (PPE/PPE t-1). The other 48.2%, which is the unexplained portion, is due to either random error in the regression model or other explanatory variables that need to be included in the model. This table illustrates also the Durbin-Watson test which used to test the presence of autocorrelation in the residuals. The Durbin-Watson value is between 0 and 4. Here in the model, the value equal (1.814) which means there is no autocorrelation in the model.

The Variance Inflation Factor (VIF) is used to measure the amount of multicollinearity in a set of multiple regression variables. VIF should be 5 or 10, above that indicate a multicollinearity problem. As shown in the table, VIF value (1.009) is within the acceptable range, therefore there is no multicollinearity problem between the independent variables.

After examining the association between investment and sales growth and revealing that there is positive relationship between them across all the listed firms in this research. Accordingly, the researcher divided the residuals into over (under)investment as follows. So, table 4 summarizes divided to two categories: one represented overinvestment (positive) residuals and zero indicated to underinvestment (negative) residuals resulting from equation 1.

Table 4. Presents the division of over (under) investment

Category		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	141	40.2	40.3	40.3
	1	209	59.5	59.7	59.7
	Total	350	99.7	100.0	

Table 4 above shows that the total observations used in the stusy during the period between 2006 -2015 that are involved over-investmrnt from the results of panel (1) representing 59.7% . It also shows that 40.3 % of under-investment in the total residuals.

Table 5. Descriptive statistics of study variables -eviews (v8)

Variables	Obs.	Min	Max	Mean	Median	SD	Skewness	Kurtosis
MO	350	0.00	0.80	0.18	0.10	0.21	1.25	3.62
IO	350	0.01	0.98	0.54	0.56	0.22	-0.33	2.32
BO	350	0.00	0.62	0.03	0.00	0.08	4.06	23.5
OSO	350	0.00	0.98	0.28	0.27	0.22	0.42	2.39
FS	350	7.22	10.98	9.19	9.10	0.81	0.13	2.76
Lev	350	0.01	10.41	1.20	0.59	1.51	2.78	13.6
Q	350	0.36	22.46	2.08	1.27	2.85	5.02	31.1

The table shows that the average percentage of managerial ownership (MO) in the Egyptian firms is approximately 18% and the standard deviation of MO is 0.21 which is consistent with study Chen et al. (2003), Li et al. (2007), Chen (2013). On average, 54% of institutional ownership (IO) the standard deviation of IO is 0.22 which consistent with prior studies (Velury and Jenkins2006).

While also the average of block holder ownership (BO) is 3% the standard deviation of BO is 0.08 which that isn't applied in Egypt due to the adoption of Egyptian companies to institutional ownership in the ownership structure significantly, which is consistent with results of previous studies: Shome and Singh (1995), Thomsen et al. (2006).Also, the average of outside director ownership (OSO) is 28% the standard deviation of OSO is 0.22 which consistent with the agency theory of the need for convergence in the service of the interests of all stockholders and managers together Jensen (1986).

In other words, Ownership structure represented by the sample study is based largely on institutional ownership (more than 50%), followed by outside direct ownership (over 20%) then followed managerial ownership about (18%) finally block holder ownership is approximately %1 or less which individual property that is virtually non-existent.

The upper limit and (lowest) institutional ownership was 0.98 (0.01), which indicates the high institutional ownership have listed companies in terms of the institutional ownership ratio ranging from 1% until it reaches more than 90%.

In the other hand, This Table indicated that the highest (lowest) ratio to outside director ownership was 0.98 (0.00). We find that the minimum and maximum managerial ownership is 0.80 (0.00). Managerial ownership ratios rang between zero and 80%, which explains the separation of ownership from management of those companies.

Regarding variables regulators find that the arithmetic means and (mediator) to the firm size (FS) is 9.19 (9.10), where the highest (lowest) rate to the size of the company is 10.98 (7.22), which indicates an increase in the size of the assets of company's representativeness of the study sample. Also, the arithmetic mean and (median) for the proportion of Leverage (Lev) is 1.20 (0.59), where the top rate and (lowest) to the proportion of the debt is 10.41 (0.01), indicating the greater gearing ratio to those of listed companies stock exchange and finally, we find that the arithmetic mean and (median) ratio Tobin's Q is 2.08 (1.27), where the top rate and (lowest) to the proportion of Tobin's Q is 22.46 (0.36) indicates where Increased corporate values there is a violation of normality assumption once all variables study except firm size (FS) which skewness and kurtosis scores are not zero. However, Kline (2015) mentioned that in social science it is common to violate the normality assumption; therefore, there is no series problem to apply the parametric analyses to test the hypotheses if the skewness and kurtosis of each item within the range ±3 and Kurtosis within range ±10.

5.1 Correlation Matrix

In this part, we show the correlation matrix between ownership structure (OSM) and investment efficiency either over- investment or under-investment to exclude multicollinearity.

Table 6. Correlation matrix

Covariance Analysis							
Sample: 2006 2015							
Included observations: 350							
Correlation							
t-Statistic							
Probability							
	INVEFF	MO	IO	BO	OSO	FS	LEV	Q
;2INVEFF	1.00							

MO	0.17	1.000						
	3.33	-----						
	0.00	-----						
IO	0.26	0.21	1.00					
	5.16	4.15	-----					
	0.00	0.00	-----					
BO	0.02	-0.03	-0.01	1.00				
	0.32	-0.66	-0.22	-----				
	0.75	0.50	0.81	-----				
OSO	-0.005	0.30	0.17	-0.25	1.000			

	-0.11	6.07	3.35	-5.00	-----			
	0.91	0.00	0.00	0.00	-----			
FS	0.20	-0.03	0.42	-0.05	0.07	1.00		
	3.92	-0.64	8.84	-1.11	1.38	-----		
	0.00	0.52	0.00	0.26	0.16	-----		
LEV	0.113	-0.13	0.13	0.07	0.004	0.22	1.00	
	2.136	-2.49	2.51	1.31	0.085	4.37	-----	
	0.03	0.01	0.01	0.19	0.93	0.00	-----	
Q	0.01	0.015	-0.15	-0.07	-0.10	-0.38	-0.02	1.000
	0.28	0.28	-2.91	-1.48	-1.93	-7.69	-0.39	-----
	0.77	0.77	0.00	0.13	0.05	0.00	0.69	-----

The table below indicates the correlation matrix between each variable from ownership structure mechanisms, control variables (Firm size , leverage and Tobin's Q) and over-under investment. This table shows the relation between Ownership Structure Mechanisms (OSM) and investment efficiency (IE) in the Egyptian market the results indicate that there are no significant relations between Bo, OSO, Q and investment efficiency in the Egyptian market. The results are robust across two different OSM measures (MO, IO).

Results indicated that find a positive relationship between MO, IO, FS, Lev and investment efficiency during the period from 2006-2015. Our results are consistent across different OSM, demonstrating that IE are related when markets are more segmented. Also, there is no multicollinearity between OSM variables which coefficients are ranges between -0.01 to 0.42 so, we investigate the relationship between OSM and IE using panel data models in the next part.

5.2 Regression Analysis

In this study, we used Panel data models that divided into three panel data tests : fixed, random and pooled so, we compare between three models to choose the appropriate model in this study.

Table 7. Hausman Test

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	27.99	11	0.00

To determine the fixed or random effects, we used Husman Test. This table shows that Chi-square test and level of significance Husman test. Results indicated reject the zero hypotheses (based on combined data and random effects) and accept the opposite hypothesis (based on data compilation and fixed effects). In the present study using Fixed Panel Effects.

Table 8. F-Statistic test and significance level of the F-Limer test

Redundant Fixed Effects Tests			
Equation: Untitled			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	7.65	(34,304)	0.00
Cross-section Chi-square	216.4	34	0.00

According to the table above (8) due to F. Statistic and the significance level the results of the test that is (7.65) and (0.000) sequence p-value <0.05; so, the zero hypotheses of this test is based on the pool data is reject and therefore used Fixed panel data.

Table 9. Fixed panel least squares

Cross-section fixed effects test equation
Dependent Variable: INVEFF
Method: Panel Least Squares

Sample: 2006 2015

Periods included: 10

Cross-sections included: 35

Total panel (balanced) observations: 350

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.071	0.110	0.650	0.51
MO	0.01	0.059	0.138	0.88
IO	-0.32	0.047	-6.907	0.00
BO	-0.39	0.170	-2.344	0.01
OSO	-0.15	0.055	-2.825	0.00
MO*Inv	0.01	0.068	0.132	0.89
IO*Inv	1.31	0.046	28.36	0.00
BO*Inv	0.44	0.184	2.400	0.01
OSO*Inv	0.40	0.075	5.312	0.00
FS	0.02	0.012	1.625	0.10
LEV	0.004	0.005	0.768	0.44
Q	0.004	0.003	0.1492	0.88
R-squared	0.912	Mean dependent var		0.402
Adjusted R-squared	0.909	S.D. dependent var		0.491
S.E. of regression	0.147	Akaike info criterion		-0.951
Sum squared resid	7.391	Schwarz criterion		-0.81

Log likelihood	178.4	Hannan-Quinn criter.	-0.898
F-statistic	319.3	Durbin-Watson stat	1.70
Prob(F-statistic)	0.00		

According to hypothesis of this study is expected to be a significant relationship between Ownership Structure Mechanisms (OSM) and investment efficiency (IE) which, Table (7) show that the regression model is significant (F=319,3 P<0.000) with an adjusted R-square of 0.90. So, it reveals that there is sufficient evidence to infer that there is a linear relationship between Ownership Structure Mechanisms (OSM) and Investment efficiency across all listed firms during the period studied. T-statistics and significance level related to corporate governance variables include institutional ownership, Block holder ownership, and Outside director ownership suggests that the 99% confidence level and then accept hypotheses (2), (3), (4), while there is no significant relationship between managerial ownership and investment efficiency (IE) and then rejected hypothesis (4).

Durbin-Watson statistic is (1.70) and as regard this statistic is between (0.5) to (2.5), so there is not autocorrelation between the residual models. F-Fisher probability is (0.000); the result indicates that the entire model is statistically significant. The R-squared indicates the explanatory power of the independent variables, which in this study Adjusted R-squared was (0.90) which statistically significant and indicates that the explanatory variables are well chosen.

This study find evidence that Managerial ownership is no significant associated with investment efficiency (MO= 0.01, t-stat =0.138) which these findings inconsistent with prior studies Chen et al. (2003), Li et al. (2007), Chen (2013), Chen and Yu (2012). In contrast, there are some studies interfered with that result, Cho (1998), Guo and Kumara (2012).

The coefficient of institutional ownership is a negative and significant related to investment efficiency (IO= -0.32, t-stat= -6.907) and then these results are conflict with Velury and Jenkins (2006), Biddle et al. (2009), Chen (2012), Lee and Chen (2011) but these finding consistent with Guo and Kumara (2012), Mashayekhi and Bazaz (2008), Ferreira and Matos (2008). Block holder ownership is influence negatively of investment efficiency (BO= -0.39, t-stat= -2.34) this finding is inconsistent with findings Shome and Singh (1995), Thomsen et al. (2006).

These finding also shows that there is a negative relationship between outside direct ownership and investment efficiency (OSO= -0.15, t-stat= -2.82) which isn't consistent with prior studies Yermack (2002). The regression results also show that the relationship between the control variables and investment efficiency. Results indicated that there is no relationship between firm size and investment efficiency (FS = 0.02, t-stat = 1.62) however the coefficient is positive which these findings aren't supported with prior studies (Boone et al. (2007) and Chen and Najjar (2012). The leverage ratio is insignificant related to investment efficiency,

although the coefficient is positive (lev=-0.004, t-stat= -0.76) and also market to book (Tobin's Q) is insignificant rather than positive (Q=0.004, stat=0.149).

6. Conclusion

This study provides evidence that ownership structure has a negative impact on investment efficiency which implies that the study results showed that the majority of companies rely on institutional ownership without block holder ownership. Institutional ownership plays an important role in reducing agency problems resulting from the conflict between managers and shareholders and reduces agency costs problems where that whenever increase institutional ownership resulting to raise the volume of investments in companies, thereby increasing the company's value.

Managerial ownership is working to reduce as much as possible from the agency problems by decreasing information asymmetry and facilitating the monitoring of investment decisions; (2) by increasing managerial incentives to throw over poorly performing projects earlier.

Block holder ownership isn't applied in Egypt due to the adoption of Egyptian companies to institutional ownership in the ownership structure significantly. These finding also indicate that outside director ownership is a positive significant with investment efficiency which consistent with the agency's theory of the need for convergence in the service of the interests of all stockholders and managers together (Jensen, 1986). The practices of corporate governance mechanism at the level of disclosure and transparency, accountability and the application of the principles of corporate governance in a more efficient and effective.

Many governments are allowing control of the companies and ensure that shareholders' ability to exercise their powers to intervene in case of problems with the company giving help companies to survive in an increasingly competitive environment through mergers and acquisitions, partnership and risk reduction operations through diversification of assets as well as the provision out of the market policy and the transfer of wealth smoothly between the future generations of the company and the divestment of the family and reduce asset chance of conflicts of interest in the companies and to support the administration's efforts through the provision of appropriate incentives for the board to follow the goals flowing in the interest of the company and shareholders in the long term (Broni and Velentzas, 2012).

The role of governance mechanisms is not limited to setting rules and monitoring their implementation or application, but also extends to the provision of the necessary environment to support their credibility, and this cannot be achieved only through cooperation between the government and the regulatory authority and the private sector to serve the interests of all parties concerned. So should strengthen accounting practices and auditing sound as that would lead the introduction of governance mechanisms to increase financial performance and achieve transparency which helps to attract new investments, whether domestic or foreign with the need to complete the legal framework that ensures the proper application of the mechanisms of governance, including the issuance the amended Capital Market Law and the Uniform Code of companies and the law of practicing the profession of accounting and auditing, and bankruptcy law.

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Appendix

Companies names available and listed in the Egyptian market during 2006-2015.

N	Company Name	Listing Date
1	Ezz Steel	25/05/1999
2	Egyptian Financial & Industrial	10/03/1996
3	Sidi Kerir Petrochemicals	09/03/2005
4	Sinai Cement	03/07/2000
5	South Valley Cement	08/10/1998
6	Giza General Contracting	19/06/1997

7	Elsaeed Contracting& Real Estate SCCD	07/05/1997
8	Extracted Oils	17/09/1995
9	Egypt for Poultry	06/12/2001
10	GB AUTO	07/03/2007
11	Canal Shipping Agencies	27/02/1995
12	Electro Cable Egypt	30/03/1995
13	Engineering Industries (ICON)	19/02/1982
14	Egyptian Transport (EGYTRANS)	28/12/1992
15	Maridive & oil services	07/04/1992
16	Alexandria Spinning & Weaving (SPINALEX)	17/09/1995
17	Nile Cotton Ginning	25/09/1996
18	Arab Cotton Ginning	08/07/1995
19	Oriental Weavers	14/12/1994
20	ARAB POLVARA SPINNING & WEAVING CO.	20/03/2002
21	T; M G Holding	25/11/2007
22	Egyptians Housing Development & Reconstruction	03/08/1994
23	El Kahera Housing	30/03/1995
24	United Housing & Development	14/12/1994
25	Heliopolis Housing	07/05/1995
26	Medinet Nasr Housing	07/05/1995
27	Six of October Development & Investment (SODIC)	10/03/1998

28	Palm Hills Development Company	27/12/200
29	Orascom Construction Industries	30/03/1998
30	Egyptian Media Production City	26/09/1999
31	Raya Holding for Technology	12/05/2005
32	Telecom Egypt	29/12/1992
33	Orange Egypt For Telecommunications	10/05/1998
34	Orascom Development Holding (AG)	03/12/2009
35	Egyptian for Tourism Resorts	10/02/1999