

# MANAGERIAL OWNERSHIP AND FIRM PERFORMANCE ON SELECTED JSE LISTED FIRMS

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## Abstract

This paper investigates if there is a relationship between managerial ownership and firm performance in selected firms listed on the JSE, and if so, what that relationship is. The study conducts regression analyses over a sample of 23 retail sector firms, observing data stretching from 2010 to 2013. The results are found to be robust. The results suggest that the hypothesis that a positive relationship exists between managerial ownership and performance be rejected as a negative relationship is found. Instead, the results of a two-stage least squares (2SLS) analysis find that managerial ownership does not impact firm performance in any direction. Overall the results of the study do not support the agency theory, as aligning the interests of managers and shareholders does not improve firm performance, at least within the retail sector.

**Keywords:** South Africa, Managerial Ownership, Endogeneity, Corporate Governance, Firm Performance

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## 1 Introduction

This paper seeks to contribute to the growing body of literature on firm performance and managerial ownership, as well as the impact that corporate governance has on firm performance using South African data. Prior studies have looked at developed countries and very little has been done on the South African market. The relationship between managerial ownership and firm performance falls within the agency theory upon which the corporate governance framework rests. Existing studies have provided mixed and contradictory findings. There are a few mechanisms that the agency theory recommends that should be used to reduce the agency problem. These mechanisms require that ownership be separated from control. According to Fama and Jensen (1983), the corporate board of directors can be used as a way to reduce the agency problem. This is also suggested by the King Report which governs South African firms (SAICA, 2013). Jensen and Meckling (1979), suggested that corporate governance be used as a way to reduce the agency conflict between the agent and principal.

The results of the existing studies are inconclusive as to whether there is a relationship, as well as what that relationship might be between managerial ownership and firm performance. For this reason, further research into the effect of managerial ownership on firm performance is necessary, as many scholars propagate the view that increasing managerial ownership will act as an incentive to align managers' actions with shareholders' best interests (Demsetz, 1983a). This relationship needs to be confirmed before

this method of incentive is encouraged, otherwise in attempting to minimise the agency problem, a negative impact may result. The study questions whether the changes in the managerial ownership levels are significantly large such that managerial ownership levels can be compared across time in the same firm. In other words, what is the influence of managerial ownership on firm performance within the retail sector in South Africa?

## 2 Literature review

There are two contrasting propositions in theory; one, which is the convergence of interests, and the other, is one of entrenchment. Earlier analyses by different scholars suggested that there is a linear relationship between firm performance and managerial ownership, as seen in studies by Mandacı and Gumus (2010) and Krivogorsky (2006). In contrast, other studies found the relationship between managerial ownership and firm performance to be nonlinear (Short and Keasey, 1999; Rose, 2005; Kapopoulos and Lazaretou, 2007; Ntim 2012).

The effects of managerial ownership on firm performance differ across different countries due to differences in corporate governance requirements (Aguilera and Cuervo-Cazurra, 2009). A study conducted by Brown and Caylor (2009) using a sample of firms listed in the United States (US) found a positive impact on firm value when firms practice good disclosure of corporate governance to shareholders and stakeholders. This is consistent with the requirements of the King Report. The King Report is similar to the Cadbury Report that is used in the

United Kingdom (UK); the difference is the transparency requirement, which requires South African firms to be transparent regarding the board structure and management techniques (Ntim et al., 2012a). According to (Ntim, 2011), the ownership of South African firms is highly concentrated, unlike like firms in the US and UK. However, the high concentration levels in South Africa are due to high ownership levels by large corporations. The King Report requires that managers also hold shares in the firm as a way to align the interests of shareholders and managers.

The relationship between firm performance and managerial ownership in South African listed firms is expected to be different to that of other countries owing to the fact that the effect of managerial ownership in developing countries is different to that of developed countries (Chen and Yu, 2012). The ownership structures of firms in developing markets are generally dominated by founding families or the founding member (Cheng et al., 2012; Delios et al., 2006; Tam and Tan, 2007). Developing markets are also exposed to the lack of protection of creditors and shareholders (Shleifer and Vishny, 1997). Similarly, the South African market is unique in that it ranges from relatively higher institutional ownership, which includes government ownership through to a prevalence of block ownership. However, the country has weak compliance with regulations and shareholder activism (Ntim et al., 2012b).

In the modern corporation world, agency problems are perpetuated by the separation of control and ownership. Agency problems of adverse selection and moral hazard are embedded in publicly traded firms under the Anglo-Saxon model of governance. This model presumes that opportunism is institutionalised and executives are rationally economic (Fama and Jensen, 1983; Shleifer and Vishny, 1997). Ward et al. (2009) conducted a study focusing primarily on internal mechanisms that are available to control agency issues for firms using Anglo-Saxon models of governance, through the board of directors, and the impact that firm performance had on these mechanisms. The study suggested that governance mechanisms be tied together and not be looked at in isolation. This would subsequently lead to the protection of shareholders' interests.

According to Aguilera and Cuervo-Cazurra (2009), in 1994 South Africa was the first developing country to introduce a code of good governance. Like the UK and the US, South Africa has updated its code of good governance, namely, the King Report, a few times since the introduction of its first version. The need for codes of good corporate governance increase as the number of publicly listed firms increases. Unlike most countries that follow the Cadbury Code closely, South Africa is said to have a unique institutional and corporate governance environment (Ntim et al., 2012a).

An analysis by Demsetz and Lehn (1985), found the relationship between managerial ownership and firm performance to be linear. However, empirical evidence to date, is conflicting on the relationship between managerial ownership and firm performance. Later empirical evidence indicates that managerial ownership takes on a nonlinear form. Short and Keasey (1999) found the relationship between firm performance and managerial ownership to be a cubic relationship for accounting and market measures of performance. In contrast, Demsetz (1983) suggested that at low levels of ownership, managers work towards maximising shareholder value as a result of influences by market forces at low levels. However, at certain levels of managerial ownership managers may prefer an increase in their perquisites as opposed to increasing the value of the firm, which may lead to entrenchment at high levels of managerial ownership (Cheng et al., 2012). Jensen and Meckling (1979) suggested the hypothesis of convergence of interest, which inferred that there was a linear relationship between managerial ownership and firm performance. This was due to the fact that agency theory was expected to help in the reduction of agency problems and align the interests of management with those of shareholders. At low levels of managerial ownership, market forces help align the interests of managers with those of shareholders. While at high levels of managerial ownership, managers prefer to take on goals that do not increase the value of the firm.

According to the study conducted by Drakos and Bekiris (2010), the relationship between ownership structure and firm performance in firms on the Athens Stock Exchange differed significantly relative to firms in the US and the UK. Greek firms were found to have higher managerial ownership that exceeds 35%, because of a different corporate governance framework than that of the UK and US. A sample of 146 panel data was used for five years; it was found that when managerial ownership is treated as endogenous there is a positive impact on firm performance, which means that the relationship is positive and significant. This is consistent with the work of Jensen and Meckling (1976) and Short and Keasey (1999).

It is evident from above the empirical results that the relationship between managerial ownership and firm performance remains inconclusive. The relationship between the two variables can either be linear or nonlinear, and in some cases there is no relationship. It therefore is important to determine the relationship in the South African market and which of the two propositions it follows: that of entrenchment or that of convergence of interests. It can further be seen that in emerging markets there are high concentration levels as well as high block ownership, and the concentration levels may or may not apply to the South African retail sector. Codes of governance have played an important role in the markets particularly in developing economies. The King Report is used as an institutional framework in the

South African market; it ensures the protection of shareholders' interests and attempts to reduce the agency problem and also includes the recommendations made by O'Shea (2005). This study extends the literature on the relationship between managerial ownership and firm performance by empirically focusing on the South African retail sector. Furthermore, the study looks at the concentration levels in the chosen sample.

### 3 Methodology and research design

The sample used in this study consists of 22 firms in the South African retail sector, which is part of the consumer services industry as listed on the JSE, over the period March 2010 to March 2013. Unlike previous studies, this study looks at a panel of companies instead of one cross section and focuses on a specific sector. The data were obtained from McGregor BFA. The sample increases during the course of the period as one firm is included later in the period. Following the work done by Kapopoulos and Lazaretou (2007), firms have to be listed for at least a year so as to eliminate the effects that result from the new listing. One firm is excluded from the sample due to the lack of relevant data. The sample consists of 21 companies in the period 2010 to 2012, and 22 firms for the year 2013. This results in a sample of 85 firm years. The time period is in line with the implementation of the King Report III of 2009. This leads to unbalanced panel data, which means that the numbers of firms under observation in each year are not equal (Baltagi and Song, 2006). The sample represents firms for which all necessary data could be accessed. This study is different to other studies in that it looks specifically at the retail sector, unlike previous studies that looked at a number of sectors and industries across all listed companies, with the exception of the financial and public utilities sectors (Fahlenbrach and Stulz, 2009; Rose, 2005; Florackis et al. 2009).

The key variables of interest are managerial ownership as measured by director ownership, and firm performance as measured by Tobin's Q and return on assets (ROA). Tobin's Q is the market values of the firm over the replacement cost of its

assets. The use of Tobin's Q as a performance measure can be seen in a number of studies of managerial ownership and firm performance (Drakos and Bekiris (2010); Rose (2005); Ntim (2012), Florackis et al. (2009); Demsetz and Lehn (1985)). ROA is the ratio net income over total assets and is a measure of the accounting performance of the firm. Following the work of Mandacı and Gumus (2010) and Chen and Yu (2012), ROA is used as a dependent variable as a means of a robustness check. The ownership data is updated when it changes, this is consistent with Fahlenbrach and Stulz (2009), and managerial ownership is measured as director ownership percentage (Fahlenbrach and Stulz, 2009; Ntim, 2012).

Ownership concentration is said to have an impact on firm performance and will be taken as the top five shareholders in the firm; ownership concentration information is taken under statutory information on McGregor BFA. Shareholders that own a larger percentage of the firm are more likely to monitor their investment and thus it is expected that they have an impact on the performance of the firm. The growth of the firm is measured as sales growth of the firm and is expected to be positive. Sales growth is used to control the impact of growth of the firm on its performance (Short and Keasey, 1999; Ntim, 2012). Gearing is measured by the debt ratio and is expected to have a negative impact on firm performance as a result of increasing bankruptcy risks when a firm takes on more debt. However, that result contrasts with that of Short and Keasey (1999) who found the result to be positive. With the differing results, it is anticipated that the result be a negative or positive relationship. Following the work of Rose (2005), Mandacı and Gumus (2010), and Ntim (2012), capital expenditure is expected to have a negative, positive or no relationship with firm performance. Firm size is measured by the logarithm of the total assets of the firm and is expected to have a positive relationship with firm performance (Chen and Yu, 2012; Mandacı and Gumus, 2010; Demsetz and Villalonga, 2001). This is due to the fact that larger firms have larger investments.

**Table 1.** Definition of variables

Variables	Definition
<b>Dependent Variables</b>	
TOBINSQ	Tobin's Q. Measures the market performance of the firm
ROA	Return on assets. Measures the accounting performance of the firm
<b>Independent variables</b>	
MO	Managerial ownership. Measured by the percentage of shares held by directors
<b>Control Variables</b>	
Growth	Sales growth. The firm's sales growth
CAPEX	Capital expenditure. Measured by net capital expenditure
SIZE	Size of firm. Log of firm's total assets
OWNER CON	Top 5 shareholders of the firm

An assumption is made that managerial ownership causes firm performance and not vice versa. However, it is possible to have reverse causality. Therefore, endogeneity can be accounted for. Numerous past studies have neglected the endogeneity problem. This paper follows the work of Ntim (2012), Rose (2005), and Drakos and Bekiris (2010), and uses simultaneous equations to solve the problem of endogeneity. This is done as a means to correct the interpretation of the empirical results of the study.

Different models were used to investigate the effects of the explanatory variables on the dependent variable. Managerial ownership (MO) is the percentage of managerial ownership within the firms.

Tobin's Q (TOBINSQ) and return on assets (ROA) are firm performance measurements; the former is market related and the latter is an accounting figure. Capital expenditure (CAPEX) measures the net capital expenditure that firms utilize on research and development. Size (SIZE) is the log of total assets of the firm; it is a measure of the size of the firm. Growth (GROWTH) is measured as the annual percentage change in sales. Gearing is measured as the debt ratio of the firms. Ownership concentration (OC) is measured by the top five shareholders in the firm and measures the ownership concentration of the firm. Multiple regressions are used to measure the effect of managerial ownership on firm performance as per the study by Ntim (2012) :

Model 1

$$\text{TOBINSQ} = \beta_0 + \alpha \text{MO}_t + \Psi \text{capex}_t + \theta \text{gear}_t + \Upsilon \text{growth}_t + \Omega \text{size}_t + \varepsilon_t \quad (1)$$

Model 2

$$\text{TOBINSQ} = \beta_0 + \alpha \text{MO}_t^2 + \Psi \text{capex}_t + \theta \text{gear}_t + \Upsilon \text{growth}_t + \Omega \text{size}_t + \varepsilon_t \quad (2)$$

Model 3

$$\text{TOBINSQ} = \beta_0 + \alpha \text{MO}_t^3 + \Psi \text{capex}_t + \theta \text{gear}_t + \Upsilon \text{growth}_t + \Omega \text{size}_t + \varepsilon_t \quad (3)$$

### 3.1 Robustness check models

Model 4

$$\text{ROA} = \beta_{0t} + \alpha \text{MO}_t + \Psi \text{capex}_t + \theta \text{gear}_t + \Upsilon \text{growth}_t + \Omega \text{size}_t + \varepsilon_t \quad (4)$$

Model 5

$$\text{ROA} = \beta_0 + \alpha \text{MO}_t^2 + \Psi \text{capex}_t + \theta \text{gear}_t + \Upsilon \text{growth}_t + \Omega \text{size}_t + \varepsilon_t \quad (5)$$

Model 6

$$\text{ROA} = \beta_0 + \alpha \text{MO}_t^3 + \Psi \text{capex}_t + \theta \text{gear}_t + \Upsilon \text{growth}_t + \Omega \text{size}_t + \varepsilon_t \quad (6)$$

### 3.2 Endogeneity check model

Model 7

$$\text{TOBINSQ} = \beta_{0t} + \alpha \text{MO}_{t-1} + \Psi \text{capex}_t + \theta \text{gear}_t + \Upsilon \text{growth}_t + \lambda \text{OC}_t + \Omega \text{size}_t + \varepsilon_t \quad (7)$$

Managerial ownership is squared in the first and fifth models to determine whether a nonlinear relationship exists. Managerial ownership is then cubed in the third and sixth to confirm the relationship between managerial ownership and firm performance.

Agency theory suggests that an increase in the level of managerial ownership will lead to an increase and improvement in firm performance. This is due to the conflict of interest between shareholders and managers being reduced. Therefore, a positive relationship is expected for the relationship between

firm performance and managerial ownership. The hypothesis of the study is therefore as follows:

$H_0$  : The level of managerial ownership is not significantly related to firm performance.

$H_1$  : The level of managerial ownership is significantly related to firm performance.

## 4 Empirical analysis

### 4.1 Descriptive statistics

Table 2 below is a summary of the descriptive statistics of all the variables for all 85 firm years that are included in determining the relationship between

managerial ownership and firm performance. The mean for managerial ownership is 23.6% and the median is 6.4%. Consistent with the work of Ntim (2012), all variables generally have a wide spread suggesting that the sample has been chosen well and eliminates the chances of selection bias.

**Table 2.** Descriptive statistics

	Managerial ownership	Tobin Q	Return on Assets	Capital expenditure	Size	Growth	Gearing	Ownership concentration
Mean	23.673	2.3995	14.736	12.740	14.975	13.105	0.5123	54.502
Median	6.4800	2.0300	15.150	12.609	15.379	9.7800	0.5300	50.125
Maximum	114.48	6.1400	43.240	14.993	17.326	90.890	0.8900	92.500
Minimum	0.0000	0.1500	-6.540	9.3533	11.954	-25.76	0.1300	8.1000
Standard deviation	31.013	1.7914	12.688	1.7213	1.5248	27.176	0.2451	23.404

**Table 3.** Multivariate regressions

Regressors	MODEL 1 Coefficient T-stat	MODEL 2 Coefficient T-stat	MODEL 3 Coefficient T-stat
MO	-0.008473 -4.112372*	-1.58E-05 -2.943418*	-3.62E-08 -2.614701*
CAPEX	-4.16E-08 -0.247452	-7.34E-08 -0.418046	-7.89E-08 -0.444622
GEARING	-3.055822 -5.163897*	-4.946758 -3.108618*	-3.066149 -4.827559*
GROWTH	0.008911 1.425761	0.010445 1.602998	0.010639 1.616035
SIZE	0.367282 3.136049*	0.484098 4.204868*	0.504432 4.372987*
CONSTANT	-1.599276 -0.948237	-3.543551 -2.195234	-3.900533 -2.424975
F-STAT	12.29116	9.875467	9.340351
PROB	0.000000	0.000000	0.000001

Note: \* statistically significant at the 5% level and \*\* statistically significant at the 10% level

Firstly, to determine whether managerial ownership (MO) has an impact on firm performance (TOBINSQ), TOBINSQ is regressed on MO. It is found that managerial ownership has a statistically significant and negative effect on firm performance. The evidence shows that in the first model there is a statistically significant and negative relationship between firm performance and managerial ownership. This is consistent with the evidence of Demsetz and Villalonga (2001). However, this is inconsistent with the evidence of Mandacı and Gumus (2010) and Krivogorsky (2006). This evidence does not theoretically support the solution to the agency

problem, which suggests that in order to reduce the agency problem the interest of managers should be aligned with those of shareholders, which is also a recommendation in the King Report.

Secondly, a nonlinear relationship between TOBINSQ and MO is determined; this was suggested by a number of researchers (Short and Keasey, 1999; Davies et al., 2005 and Ntim, 2012). This is done by replacing MO with  $MO^2$ . The evidence shows a negative and statistically significant relationship between managerial ownership and firm performance. The coefficient on the intercept is still statistically significant. To confirm the nonlinear relationship,

MO is cubed; the results are statistically significant and negative.

The results of the multivariate regressions for models 1, 2 and 3 are statistically significant and negative as can be seen in Table 3 above. Therefore, these results reject the null hypothesis and are consistent with the findings by Ntim (2012), who found statistically insignificant results when director ownership was squared and then cubed. It can therefore be concluded that these results support the curvilinear relationship found by Davies et al. (2005). All the control variables excluding GEARING and

SIZE are statistically insignificant, which means that they do not have an effect on firm performance. GEARING has a negative and statistically significant relationship as expected. SIZE has a positive and statistically significant relationship; both these control variables are as predicted.

#### 4.2 Robustness check

As part of the robustness check, return on assets (ROA) is used as a measure of firm performance instead of TOBINSQ.

**Table 4.** Regression results

Regressors	Model 4 Coefficient t-stat	Model 5 Coefficient t-stat	Model 6 Coefficient t-stat
MO	-0.221411 -1.901931**	-0.002180 -1.983391**	-1.73E-05 -1.828688**
CAPEX	-27.77156 -1.125319	-31.88607 -1.281559	-29.83233 -1.187007
GEARING	-19.27891 -1.605758	-22.64584 -1.905384**	-24.38366 -2.000118**
GROWTH	-0.046172 -0.433164	-0.036101 -0.349643	-0.018931 -2.000118
SIZE	3.520157 1.299179	4.359786 1.730636	4.948322 1.980451
CONSTANT	47.23977 0.832185	44.39314 0.808599	29.63848 0.561088
F-STAT	2.237340	2.327838	2.159213
PROB	0.108014	0.097723	0.117855

Note: \* is statistically significant at the 5% level and \*\* is statistically significant at the 10% level

As can be seen from the above results, in all three models, 4, 5, and 6, MO is statistically significant and has a negative relationship with ROA. It can therefore be concluded that the model is in fact robust to the use of ROA as a measure of firm performance instead of TOBINQ. ROA is used as a robustness check to assess the validity of the results.

So far the study has used OLS and assumed that the only endogenous variable is firm performance. This implies that managerial ownership influences firm performance and not the other way around. It is therefore important to account for the endogeneity problem as our results may be spurious due to omitted variables (Drakos and Bekiris, 2010; Henry, 2008). An analysis of the effects of endogeneity in the relationship between managerial ownership and firm performance, by following Ntim (2012) and Davies et al. (2005), and making use of 2SLS is done and is conjectured that managerial ownership is determined by all the control variables included in the models.

Past studies made use of the fixed effects method to control for endogeneity, however, it is not without flaws; this study follows the instrumental variable method. The estimated model of simultaneous equations was derived using the 2SLS econometric technique. However, it is important to bear in mind

that simultaneous equations are not a remedy for the endogeneity problem, but they deal with the simultaneous causation problem. The Hausman exogeneity test is conducted to test whether there is an endogenous relationship between managerial ownership and firm performance. The null hypothesis of the Hausman test is that the OLS estimates are consistent; the alternative is that OLS estimates are not consistent so the instrumental variable (4) estimation is necessary. If the null hypothesis cannot be rejected it is inferred that the variable in question is to be considered as exogenous and 4 estimates are consistent. When the null hypothesis is rejected, this means that the variable in question is treated as endogenous. The results of the Hausman tests for this study lead to the rejection of the null hypothesis and it can therefore be said that MO is endogenous and TOBINQ is exogenous (Brooks, 2008).

It can therefore be concluded that 2SLS is an appropriate technique and that the previous results from the OLS technique may be misleading. In the first stage, MO is determined by the control variables specified in Model 1. In the second stage, MO(-1) is used as an instrument instead of MO, the equation is as follows:

**Table 5.** Model 7 regression results

Regressors	Model 7 Coefficient t-stat
MO	-0.004951 -0.332791
CAPEX	0.138340 0.444170
GEARING	-3.509145 -1.265595
GROWTH	0.026648 1.750129
SIZE	9.20E-08 0.635309
OWNERSHIP CONCENTRATION	-0.029438 -1.229460
CONSTANT	3.070571 0.622713
F-STAT	1.815747
PROB	0.172751

Note: \* is statistically significant at the 5% level and \*\* is statistically significant at the 10% level.

Managerial ownership is negative but not statistically significant, this means it is equal to zero as shown in Model 7. The results therefore suggest that there is a negative and statistically insignificant relationship between managerial ownership and firm performance. It is therefore concluded that the model is not robust to endogeneity problems that may be caused by omitted variables. These results are similar to those of Rose (2005), where the results of a 3SLS technique were used and it was found that there was a significant relationship between managerial ownership and firm performance, but firm performance caused managerial ownership and not the other way around as would be expected.

## 5 Conclusion

This study investigated the relationship between managerial ownership and firm performance of firms that fall under the retail sector. It uses a sample period of 2010 to 2013; this period was chosen for the study as this period comes after the most recent corporate governance improvements in South African firms. The results do not provide support for the agency theory; aligning the interests of managers and shareholders does not improve firm performance. The King III Report requires that the interests of managers and shareholders be aligned as a way to improve firm performance. The study sought to address the question that pertains to the influence of managerial ownership

on firm performance using a proxy of firms in the retail sector of the Johannesburg Stock Exchange. Evidence in this study shows that firms in the retail sector do not benefit from managerial ownership. It is therefore suggested that other mechanisms be used to align the interests of managers and shareholders to minimize the agency problem at least in the retail sector. A negative relationship between managerial ownership and firm performance may support the work by Demsetz (1983a), who finds that too much managerial ownership can lead to managers caring about their own interests and decrease firm value. The endogeneity problem is taken into account and simultaneous equations are employed using the Hausman (1978) test, and subsequently the two-stage least square is applied, which shows that there is no relationship between managerial ownership and firm performance. This study makes a contribution to previous literature by looking at the South African market, which is unique, instead of looking at an emerging market where in most cases there is little or no valid corporate governance structure. It also looks at a specific sector of the JSE, which is the retail sector; previous studies look at a wide range of industries. Secondly, this study shows that managerial ownership and firm performance have a negative relationship, which is not consistent with previous studies. It is therefore important to discuss the results further as they differ from the majority of previous studies. The differences may be due to the sample that

is chosen and the sector that is under observation, as, unlike other emerging markets, there is relatively low block ownership concentration in the South African retail sector. Investors who are interested in investing in the South African retail sector can look at the changes in managerial ownership levels, and if there is a low level of managerial ownership the firm is expected to perform better. The inverse relationship between managerial ownership and firm performance in the retail sector does not necessarily apply to the entire JSE.

The study looks specifically at the retail sector, which itself falls under consumer services, therefore the sample is relatively small; this is a limitation as there is not enough variation. The chosen period is also a limitation as other studies looked at the firm performance over more than four years. The study focuses on internal factors of the firms; further studies should consider also looking at external factors, such as the macro economy, inflation, and interest rates, as they generally have a significant impact on firm performance.

## References

1. Aguilera, R.V. and Cuervo-Cazurra A. (2009), "Codes of good governance", *Corporate Governance: An International Review*, Vol. 17, pp. 376-387.
2. Baltagi, B.H. and Song, S.H. (2006), "Unbalanced panel data: A survey", *Statistical Papers*, Vol. 47, pp. 493-523.
3. Brooks, C. (2008), *Introductory Econometrics for Finance*, Cambridge University Press, New York, NY.
4. Brown, L.D. and Caylor, M.L. (2009), "Corporate governance and firm operating performance", *Review of Quantitative Finance and Accounting*, Vol. 32, pp. 129-144.
5. Chen, C-J. and Yu, C-MJ. (2012), "Managerial ownership, diversification, and firm performance: Evidence from an emerging market", *International Business Review*, Vol. 21, pp. 518-534.
6. Chen, Z., Cheung Y-L., Stouraitis, A. and Wong, A.W.S. (2005), "Ownership concentration, firm performance, and dividend policy in Hong Kong", *Pacific-Basin Finance Journal*, Vol. 13, pp. 431-449.
7. Cheng, P., Su, L.N. and Zhu, X.K. (2012), "Managerial ownership, board monitoring and firm performance in a family-concentrated corporate environment", *Accounting & Finance*, Vol. 52, pp. 1061-1081.
8. Connelly, J.T., Limpaphayom, P. and Nagarajan, N.J. (2012), "Form versus substance: The effect of ownership structure and corporate governance on firm value in Thailand", *Journal of Banking & Finance*, Vol. 36, pp. 1722-1743.
9. Davies, J., Hillier, D. and McColgan, P. (2005), "Ownership structure, managerial behavior and corporate value", *Journal of Corporate Finance*, Vol. 11, pp. 645-660.
10. Delios, A., Wu, Z.J. and Zhou, N. (2006), "A new perspective on ownership identities in China's listed companies", *Management and Organization Review*, Vol. 2, pp. 319-343.
11. Demsetz, H. (1983a), "The structure of ownership and the theory of the firm", *Journal of Law and Economics*, Vol. 26, pp. 375-390.
12. Demsetz, H. and Lehn, K. (1985), "The structure of corporate ownership: Causes and consequences", *The Journal of Political Economy*, Vol. 93 No. 6, pp. 1155-1177.
13. Demsetz, H. and Villalonga, B. (2001), "Ownership structure and corporate performance", *Journal of Corporate Finance*, Vol. 7, pp. 209-233.
14. Drakos, A. and Bekiris, F. (2010), "Corporate performance, managerial ownership and endogeneity: A simultaneous equations analysis for the Athens stock exchange", *Research in International Business and Finance*, Vol. 24, pp. 24-38.
15. Fahlenbrach, R. and Stulz, R.M. (2009), "Managerial ownership dynamics and firm value", *Journal of Financial Economics*, Vol. 92, pp. 342-361.
16. Fama, E.F. and Jensen, M.C. (1983), "Agency problems and residual claims", *Journal of Law and Economics*, Vol. 26 No. 2, 327-349.
17. Florackis, C., Kostakis, A. and Ozkan, A. (2009), "Managerial ownership and performance", *Journal of Business Research*, Vol. 62, pp. 1350-1357.
18. Henry, D. (2008), "Corporate governance structure and the valuation of Australian firms: Is there value in ticking the boxes?", *Journal of Business Finance & Accounting*, Vol. 35, pp. 912-942.
19. Himmelberg, C.P., Hubbard, R.G. and Palia, D. (1999), "Understanding the determinants of managerial ownership and the link between ownership and performance", *Journal of Financial Economics*, Vol. 53, pp. 353-384.
20. Hu, Y. and Zhou, X. (2008), "The performance effect of managerial ownership: Evidence from China", *Journal of Banking & Finance* 32, Vol. 32 No. 10, pp. 2099-2110.
21. Jensen, M.C. and Meckling, W.H. (1979), *Theory of the firm: Managerial behavior, agency costs, and ownership structure*: Springer.
22. Kapopoulos, P. and Lazaretou, S. (2007), "Corporate ownership structure and firm performance: Evidence from Greek firms", *Corporate Governance: An International Review*, Vol. 15, pp. 144-158.
23. Krivogorsky, V. (2006), "Ownership, board structure, and performance in continental Europe", *International Journal of Accounting*, Vol. 41, pp. 176-197.
24. Mandaci, P. and Gumus, G. (2010), "Ownership concentration, managerial ownership and firm performance: Evidence from Turkey", *South East European Journal of Economics and Business*, Vol. 5, pp. 57-66.
25. Ntim, C.G. (2011), *The King reports, independent non-executive directors and firm valuation on the*



- Johannesburg stock exchange. *Corporate Ownership and Control*, Vol. 9, No. 1 (29. August 2011): pp. 428-440
26. Ntim, C.G. (2012), "Director shareownership and corporate performance in South Africa", *African Journal of Accounting, Auditing and Finance*, Vol. 1, pp. 359-373.
27. Ntim, C.G., Opong, K.K. and Danbolt, J. (2012a), "The relative value relevance of shareholder versus stakeholder corporate governance disclosure policy reforms in South Africa", *Corporate Governance: An International Review*, Vol. 20, pp. 84-105.
28. Ntim, C.G., Opong, K.K., Danbolt, J. (2012b), "Voluntary corporate governance disclosures by post-apartheid South African corporations", *Journal of Applied Accounting Research*, Vol. 13, pp. 122-144.
29. O'Shea, N. (2005), "Governance; Where we are and what's next", *Accountancy Ireland*, Vol. 37, p. 33.
30. Ponnu, C.H. (2008), "Corporate governance structures and the performance of Malaysian public listed companies", *International Review of Business Research Papers*, Vol. 4, pp. 217-230.
31. Rose, C. (2005), "Managerial ownership and firm performance in listed Danish firms: In search of the missing link", *European Management Journal*, Vol. 23, pp. 542-553.
32. SAICA. (2013), *King Report On Corporate Governance*. Available at: <https://www.saica.co.za/Technical/LegalandGovernance/King/tabid/2938/language/en-ZA/Default.aspx>.
33. Shleifer, A. and Vishny, R.W. (1997), "A survey of corporate governance", *The Journal of Finance*, Vol. 52, pp. 737-783.
34. Short, H. and Keasey, K. (1999), "Managerial ownership and the performance of firms: Evidence from the UK", *Journal of Corporate Finance*, Vol. 5, pp. 79-101.
35. Tam, O.K. and Tan, M.G.S. (2007), "Ownership, governance and firm performance in Malaysia", *Corporate Governance: An International Review*, Vol. 15, pp. 208-222.
36. Ward, A.J., Brown, J.A. and Rodriguez, D. (2009), "Governance bundles, firm performance, and the substitutability and complementarity of governance mechanisms", *Corporate Governance: An International Review*, Vol. 17, pp. 646-660.