

The Effects of Corporate Governance on Firm Performance

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Abstract

In the light of corporate financial scandals, there is an ever increasing attention on corporate governance issues. As the investors look for emerging economies to diversify their investment portfolios to maximize returns they are equally concerned about governance factors to minimize risks in these companies. This paper examines the impact of corporate governance variables on firms' financial performance. Influence of corporate governance variables size of the board, proportion of non-executive independent directors, directors ownership, directors remuneration structure on firms' financial performance Return on Equity (ROE) is researched using the firms traded in German index DAX30. This research finds that some of corporate governance variables do influence firms' performance. The number of directors from the board have a negative impact on financial performance, while variables like board independence or executive directors remuneration are positively correlated with financial performance measured using Return on Equity.

Keywords: corporate governance, board structure, ownership structure, executive compensation, firm performance

1. Introduction

At the culmination of every financial crisis academicians, regulators, governments tend to focus on the corporate governance more vigorously in order to enhance investors' confidence that would attract investments. According to the OECD Principles of Corporate Governance, the corporate governance framework should promote transparent and efficient markets, be consistent with the rule of law and clearly state the division of responsibilities among different supervisory, regulatory and enforcement authorities. Corporate governance describes the structure of rights and responsibilities among the parties that have a stake in the firm. According to Mcconomy et al. (2000), system of corporate governance could be defined as a set of processes and structures used to direct a corporation's business. Once implemented, an effective corporate governance system can help to ensure an appropriate division of power among shareholders, the board of directors and management.

But corporate governance is not just corporate management; it is something much broader to include a fair, efficient and transparent administration to meet certain well-defined objectives. It is a system of structuring, operating and controlling a company with a view to achieve long term strategic goals to satisfy shareholders, creditors, employees, customers and suppliers, and complying with the legal and regulatory requirements, apart from meeting environmental and local community needs. Good corporate governance should help local companies to gain access to foreign capital and foreign companies tend to gain investment opportunities providing portfolio diversification opportunities. According to LaPorta et al (1999), evidence suggests that firms in emerging economies (compared with their counterparts in developed countries) are discounted in financial markets because of weak governance. Rajagopalan and Zhang (2009) firmly felt that investors gain confidence in those firms that practice good corporate governance and these firms are at added advantage in accessing capital compared to firms that lack good corporate governance.

Prominent examples of corporate scandals like Enron and WorldCom in the US, Marconi in the UK and many others in different parts of the world, many of which were caused by, or at least exacerbated by, governance weaknesses, give rise to financial community's concerns about the appropriateness of the mere use of firm profitability or growth prospects in valuing a firm as

well as the necessity of effective control mechanisms in ensuring use of investors' funds in value-maximizing projects. However, there is no unequivocal evidence to suggest that better corporate governance enhances firm performance in different market settings (Klein, Shapiro and Young, 2005). As a result, investors are still much skeptic about the existence of the link between good governance and performance indicators like share price performance, despite the increasing volume of cross-country and individual country level evidence mainly suggesting a positive link between corporate governance and firm performance.

In this context, this study is an attempt to find whether there exists any relationship between corporate governance and firm performance or not.

The remainder of the paper is structured as follows: Section 2 examines various theoretical and empirical studies which explored the relationship between corporate governance and firm performance from literature, followed by an empirical study of this relation using data for companies listed in the german index DAX30 in section 3 and section 4 presents concluding remarks.

2. Literature review

There exists a well number of anecdotal evidence of a link between corporate governance practices and firm performance. But the empirical studies mainly focus on specific dimensions or attributes of corporate governance like board structure and composition; the role of non-executive directors; other control mechanisms such as director and managerial stockholdings, ownership concentration, debt financing, executive labour market and corporate control market; top management and compensation; capital market pressure and short-termism; social responsibilities and internationalization. This chapter provides a summary of some of the major studies over the last couple of years, showing the mixed findings on the relationship between specific attributes of corporate governance and corporate performance.

First, we will analyze *the relation between board structure and firms performance*. Board composition refers to the number of independent non-executive directors on the board relative to the total number of directors. An independent non-executive director is defined as independent directors who have no affiliation with the firm except for their directorship (Clifford and Evans, 1997). There is an apparent presumption that boards with significant outside directors

will make different and perhaps better decisions than boards dominated by insiders. The argument for the need of independent non-executive directors on the board substantiated from the agency theory which states that due to the separation between ownership and control, managers (given the opportunity) would tend to pursue their own goals at the expense of the shareholders (Jensen and Meckling, 1976). Hence, by having independent non executive directors on the board, these directors would help to monitor and control the opportunistic behaviour of management, and assist in evaluating the management more objectively.

Empirically, studies on the association between independent non-executive directors and firm performance have shown mixed results. In their study among Belgian companies, Dehaene et al. (2001) found a significant positive relationship between the number of external directors and return on equity, which lends support to the notion that outside directors provide superior benefits to the firm as a result of their independence from firm management and this is taken into account by investors in making investment decisions. On the contrary, there were also studies that found negative association between independent non-executive directors and firm performance. One such study is by Agrawal and Knoeber (1996), who discovered a significant negative relationship between board outsider and firm performance. This is also supported by the findings of Bhagat and Black (1999) who established that firms with majority outside directors perform worse than other firms. These studies show that independent non-executive directors do not necessarily have positive impact on firm performance, implying that in these cases perhaps the independent non-executive directors do not play their roles effectively.

A potentially important factor that may reduce manager–shareholder conflicts is *stock ownership by board members* (both executive and non-executive). To the extent that board members own part of the firm, they develop shareholder-like interests and are less likely to engage in behaviour that is detrimental to shareholders. In other words, managerial shareholdings help align the interests of shareholders and managers since as the company’s performance increases, the managers benefit via their equity interests in the company (Jensen and Meckling, 1976). Therefore, managerial ownership is argued to be inversely related to agency conflicts between managers and shareholders, and to be positively related to corporate performance. However, Morck et al. (1988) argued that higher levels of managerial equity ownership may decrease financial performance since managers with significant ownership stakes may gain such power that they neglect or become less considerate of the interests of other shareholders. This is

because they are in the position where they have considerable voting rights and they are also the ones who make the judgement on how to run the company. This may lead them to make decisions that confer benefits to themselves to the detriment of other stakeholders.

One of the key monitoring mechanisms advocated by the agency perspective is the *separation of the roles of CEO from chairperson*. If the two roles are not separated, this means that the CEO also chairs the group of people in charge of monitoring and evaluating the CEO's performance, and hence duality exists. This situation also gives rise to possible conflict of interest and may impair the independence of the monitoring group. This is because in such situation, the ability of the CEO/Chairperson to exercise independent self-evaluation is questionable (Rechner and Dalton, 1989). Fosberg and Nelson (1999) discovered that firms that switch to the dual leadership structure (separated roles between the CEO and the chairman) to control agency problems experienced a significant improvement in performance which is measured by the operating income before depreciation, interest and taxes to total assets ratio. Dehaene et al. (2001) found evidence that where the functions of chairman and chief executive are combined, the return on assets is significantly higher than otherwise, which suggests a positive relationship between duality and firm performance. They argued that when the chairman is also active as the CEO in the daily activities of the firm, he will try to invest as much as possible to increase the size of the firm or to boost his personal status.

On the contrary, Rechner and Dalton (1989) found no significant difference between shareholders returns of companies with CEO duality and those that separate the two roles. The study consists of companies from the Fortune 500 group, and the data was collected from the year 1978 to 1983. They concluded that there is little justification to infer that it is an unprofitable move for a company to have CEO duality.

Another aspect studied in the relation of corporate governance and firm performance is the *board size*. Limiting board size is believed to improve firm performance because the benefits of larger boards (increased monitoring) are outweighed by the poorer communication and decision making of larger groups (Lipton and Lorsch, 1992; Jensen, 1993). Consistent with this notion, Yermack (1996) documents an inverse relation between board size and profitability, asset utilization, and Tobin's Q. Anderson et al. (2004) show that the cost of debt is lower for larger boards, presumably because creditors view these firms as having more effective monitors of their financial accounting processes. Brown and Caylor (2004) add to this literature by showing that

firms with board sizes of between 6 and 15 have higher returns on equity and higher net profit margins than do firms with other board sizes. Conyon and Peck (1998b) also conclude that the effect of board size on corporate performance (return on equity) is generally negative.

Some studies also took into consideration the relationship between *managerial compensation* and firms' financial performance. Core, Holthausen and Larcker (1999) report that CEOs can earn greater compensation from firms with weaker governance characteristics like CEO being the chair of the board, large board size, greater percentage of outside directors being appointed by the CEO, relaxed retirement age for outside directors and presence of increasing proportion of outside directors serving three or more other boards. Hall and Liebman (1998) and Main, Bruce and Buck (1996) find that when stock options are included, a stronger pay-performance link can be identified. In another study, using time series data from the UK and Germany, Conyon and Schwalbac (2000) report a significant positive association between cash pay and company performance in both countries.

On the other hand, using panel data on large, publicly traded UK companies gathered between 1991 and 1994, Conyon and Peck (1998) document that board monitoring, measured in terms of the proportion of nonexecutive directors on a board and the presence of remuneration committees and CEO duality, do have only a limited effect on the level of top management pay.

3. Case study

Sample data and variables

For the study we used empirical data for the 23 companies listed in the German stock index DAX30. The data used are panel observations (longitudinal) that capture the evolution of the same companies over time. The reason we used data from 23 of the 30 companies listed in the German stock index was the lack of complete observations for the entire period under review for some companies and the need to achieve a balanced panel. Data were analyzed in five years, 2009-2013, and were collected from the audited annual reports of each company. Necessary information for the empirical study were drawn from companies' financial statements presented in annual reports and on their basis were calculated indicators of profitability.

The panel contains related data obtained from 23 companies for a period of five years, total 115 records. Panel data was conducted in Excel and its processing was done in Eviews.

The variables used in the analysis are:

- Return on Equity rate of the company (ROE) as a measure of financial performance;
- size of the board of the company, ie the number of directors in its structure;
- board independence, measured by the proportion of non-executive independent directors/total number of board members;
- Percentage shares held by persons in the management structure of the company's total shares;
- The total amount of wages obtained by CEOs;
- The percentage of the variable part of the total executive pay, paid based on performance;
- Financial Leverage;
- Company size, measured as total assets;
- Domestic expenditure on R & D/sales;

Methodology, empirical results

Statistical technique multiple regression analysis had been employed to test the relationship between financial performance measured by Return on Equity and corporate governance variables.

Due to the fact that the major problem with this model is that it does not distinguish between the various companies included in the panel and denies the heterogeneity or individuality that may exist among the 23 companies, we also tested the relationship between corporate governance and firms' performance using Fixed Effect and Random Effect Models. Using Hausman Test, we decided in the end which model is the acceptable one, the result showing that the Random Effect one is more suitable.

Regression equation is:

$$\text{ROE} = c_0 + c_1 \text{BOARD} + c_2 \cdot \text{INDEP} + c_3 \cdot \text{ACTIUNI} + c_4 \cdot \text{L_SALEXEC} + c_5 \cdot \text{SALVAR} + c_6 \cdot \text{LEVIER} + c_7 \cdot \text{L_TACTIVE} + c_8 \cdot \text{C_D} + \varepsilon$$

As three of the variables (percentage of shares held by the management, the proportion of executive pay awarded based on performance and expenditure of research and development in

sales) proved to be statistically insignificant, they were excluded from the model, estimating a new one. Non-stationarity of the two time series (Board and Indep) led to the need to differentiate those variables in the previous model, in order to validate the unit-root condition.

After testing the models presented in the previous subsections, we obtained the following regression equation showing the link between financial performance of listed companies in Germany in the index DAX30 and a series of variables of corporate governance:

$$ROE = -0.0045 - 0.0117BOARD + 0.1908 \cdot INDEP + 0.0817 \cdot L_SALEXEC + 0.2244 \cdot L_TACTIVE$$

The four independent variables were 9.31% lower probability of having zero coefficients, being significant in statistical terms. However, the adjusted R^2 indicator is quite low, only 27.97%, so the variation in return on equity (ROE) can be explained very little with the three corporate governance variables and control variable (total company assets). There are so many other unidentified factors that determine the changes in ROE, which were not included in this study.

The below table shows a summary of the relation identified between financial performance and corporate governance variables using the three econometric models:

Variable	Multiple Regression		Fixed Effect Model		Random Effect Model	
	Dependency	Coefficient	Dependency	Coefficient	Dependency	Coefficient
Board Size	-	0.0117	-	0.0151	-	0.0117
Board Independence	+	0.1908	+	0.1337	+	0.1908
Executive directors remuneration	+	0.0817	+	0.0798	+	0.0817
Firm Size	+	0.2244	+	0.2672	+	0.2244

The relationship between financial performance and board size identified in our models is negative, but the impact of board size has on the profitability of the company is not very strong, the coefficient being a small one. This can be justified by the results obtained in numerous studies in the literature that have documented the existence of a negative relationship between board size and financial performance. It is considered that larger boards are less efficient and slow in making decisions, as it is more difficult for the firm to arrange meetings of the board and for the board to reach a consensus. Limiting the size of the board can improve the financial

performance of the company, the benefits of a large board with increased monitoring capacity being blurred by the possible existence of a weak communication and decision-making capacity affected by group size.

The relationship between financial performance and the percentage of independent directors on company management for the companies included in the sample proved positive. Thus, this result confirms the presumption that a board of directors with a significant number of external directors will make different decisions and probably better than a board dominated by people inside the company. By separating power of control, the existence of independent non-executive directors help effective monitoring and control of opportunistic management behavior, assisting in the objective evaluation of their work.

Very few studies in the literature have identified negative relationship between the number of independent directors and financial performance, a possible explanation of which is quite likely that in these cases the directors have not effectively fulfill their duties.

The identified relationship between executive pay and its financial performance is also positive, empirical results concluding that a one thousand euro increase executive salaries could increase by 0.08 percent return on equity. Despite the size of the coefficient of the independent variable, which is small, the nature of the relationship between the two makes sense.

The positive relationship between the two variables can lead us to the conclusion that for the companies in the sample, management compensation is seen as a motivation for them to engage more actively in making the right decisions for the company's performance, decisions that satisfy the goals and interests of shareholders. Remuneration in terms of encouraging executives can reduce the agency costs.

Conclusions

In the context of national economies globalization, corporate governance is considered an important comparative advantage for companies because it increases the confidence of foreign investors in the private sector. Therefore, corporate governance is a surveillance tool that provides information about the operations and performance of private companies, but also national economies. An interesting comparison is that corporate governance is for modern companies what democracy was for the ancient states. Corporate governance is nothing more

than the application of fundamental democratic principles in an organizational typology as a company.

Based on these statements, we can conclude that corporate governance is a form of organization and management of a company where the decision is taken in consultation with shareholders, taking into account their will and their interests. It is government by shareholders, the supreme power belonging to them and being exercised directly by them in general meetings or indirectly through elected representatives, the Board of Directors or the Supervisory Board, in order to pursue the interests and aspirations of the shareholders.

Recent studies have linked corporate performance and efficiency of the corporate governance model. Shareholders attach great importance to corporate governance systems implemented in the company, being willing to pay extra for good results in this field, since they are guaranteed a fair and equal treatment.

Companies are well aware of this reality and give it considerably more importance, while endeavoring to achieve high standards of corporate governance. They are perceived as representatives of governance based on added value, being able to maximize corporate value through systems and processes that enable their governing bodies to perform. Finally, the test of the effectiveness of a company's governance model is the extent to which it fails to achieve the main objective, fulfill the mission and strategy of a company in terms of shareholder interests.

Corporate governance aims to increase the company's performance and harmonization of various interest groups. But the performance of a company is not only to achieve superior financial results, i.e. maximizing profits, ability to generate cash flows to ensure its operation and expansion, but all financial and non-financial aspects of its work. Performance of listed companies is significantly influenced by the shape of corporate governance, namely the ability to identify and harmonize interests of different social partners.

In this context, the present work aimed to test the way in which corporate governance affects financial performance of listed companies. Study results revealed a few links statistically significant for companies included in the sample analyzed.

Even though the study presented in this paper identified only part of the corporate governance variables that influence modern corporate financial performance, given the trends in the international market, a natural conclusion is that corporate governance will remain on the management and investors list a long time to come. It comes down to a simple fact: companies

that adopt a culture of transparency and effective corporate governance model will have a much better performance and those who refuse to accept this reality and, more recently, necessity, will record weaker results.

Bibliography

Ciobanu A 2006, *Măsurarea performanței întreprinderii*, Editura ASE, București.

Dragotă V, Brașoveanu Obreja L & Dragotă IM 2012, *Management financiar*, ed. 2, vol.1, Editura Economică, București.

Stancu I & Stancu D 2012, *Finanțe corporative cu Excel*, Editura Economică, București.

Aggarwal, RK & Samwick AA 1999, *The Other Side of the Trade-off: The Impact of Risk on Executive Compensation*, Journal of Political Economy, Vol. 107, Nr. 1, pp. 65-105.

Agrawal, A & Knoeber, CR 1996, *Firm Performance and Mechanisms to Control Agency Problems Between Manager and Shareholders*, Journal of Financial and Quantitative Analysis, 31, pp. 377-389.

Aguilera, R & Cuervo-Cazurra, A 2004, *Codes of good governance world-wide: what is the trigger?*, Organization Studies, 25 (3), pp. 415-443.

Attiya J & Robina I 2008, *Ownership Concentration, Corporate Governance and Firm Performance: Evidence from Pakistan*, The Pakistan Development Review, vol.47, pag.643-659.

Bacon, J 1973, *Corporate directorship practice, member and committees of the board*, New York: The conference board.

Bhagat, S & Black, B 1999, *The Uncertain Relationship between Board Composition and Firm Performance*, Business Lawyer, 54, pp. 921-963..

Brick IE, Palmon O & Wald JK 2006, *CEO Compensation, Director Compensation, and Firm Performance: Evidence of Cronyism?*, Journal of Corporate Finance, Vol. 12, Nr. 3, pp. 403-423.

Brickley, JA & James, CM 1987, *The Takeover Market, Corporate Board Composition and Ownership Structure: The Case of Banking*, Journal of Law and Economics, 30, pp. 161-180.

Cheng 2008, *Board size and the variability of corporate performance*, Journal of Financial Economics, 87:157–176.

Clifford, P & Evans, R 1997, *Non-Executive Directors: A Question of Independence*, Research and Theory Papers.

Canyon MJ & Peck SI 1998, *Board Committee, Remuneration Committees, and Top Management Compensation*, Academy of Management Journal, Vol. 41, Nr. 2, pp. 146-157.

Canyon, MJ & Schwalbach J 2000, *Executive Compensation: Evidence from the UK and Germany*, Long Range Planning, Vol. 33, Nr. 4, pp. 504-526.

Core, JE, Holthausen, RW & Larcker DF 1999, *Corporate Governance, Chief Executive Officer Compensation, and Firm Performance*, Journal of Financial Economics, Vol.51, pp. 371-406.

Dehaene, A, De Vuyst, V & Ooghe, H 2001, *Corporate Performance and Board Structure in Belgian Companies*, Long Range Planning, 34, 3, pp 383-398.

Eisenberg, T, Sundgren, S & Wells, M 1998, *Larger Board Size and Decreasing Firm Value in Small Firms*, Journal of Financial Economics, 48, pp 35–54.

Evans, J & Weir, C 1995, *Decision Processes, Monitoring, Incentives and Large Firm Performance in the UK*, Management Decision, 33, 6, pp 32-38.

Fama, EF & Jensen, MC 1983, *Separation of ownership and control*, Journal of Law and Economics, 26, pp 301-324.

Grinyer, JR 1995, *A New Concept for Amortising Goodwill*, University of Dundee.

Jensen, MC & Meckling, WH 1976, *Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure*, Journal of Financial Economics, 3, pp. 305-360.

Morck, R, Shleifer, A & Vishny, RW 1988, *Management Ownership and Market Valuation: An Empirical Analysis*, Journal of Financial Economics, 20, pp 293-315.

Oman, C, Fries, S & Buitter, W 2003, *Corporate Governance in Developing, Transition and Emerging–Market Economies*, Policy Brief , Nr. 23, OECD.

Pankaj V, Vijay K & Vasal VK 2012, *Corporate Governance Index and Firm Performance. Empirical evidence from India*, Department of Business Economics, University of Delhi.

Rechner, PL & Dalton, DR 1989, *The Impact of CEO as Board Chairperson on Corporate Performance: Evidence vs. Rhetoric*, The Academy of Management Executives, 111, 2, pp 141-143.

Yermack, D 1996, *Higher Market Valuation of Companies with a Small Board of Directors*, Journal of Financial Economics, 40, pp 185-211.

Zubaidah Z, Nurmala M & Kamaruzaman J 2009, *Board Structure and Corporate Performance in Malaysia*, International Journal of Economics and Finance, vol.1, nr.1.

German Corporate Governance Code

Annexes

Descriptive statistics:

	ROE	BOARD	INDEP	ACTIUNI	SALEXEC	SALVAR	LEVIER	TACTIVE	C_D
Mean	0.119652	22.37391	0.661406	0.074899	17628.37	0.635115	0.279347	194552.5	0.239291
Median	0.123000	22.00000	0.666700	0.010000	13711.62	0.549300	0.338400	32749.00	0.010400
Maximum	0.333530	38.00000	0.840000	0.608900	70586.49	8.093500	0.538200	2154103.	9.791800
Minimum	0.000500	13.00000	0.347800	0.000000	3605.108	0.000000	0.007700	4594.000	0.000000
Std. Dev.	0.073186	5.262347	0.106798	0.162963	12280.12	0.892525	0.147700	400731.8	1.356853
Skewness	0.303263	0.376879	-0.724864	2.264379	1.754174	7.017329	-0.500129	3.343821	6.374420
Kurtosis	2.700239	2.772916	3.229284	6.852450	6.789251	54.66404	1.912454	14.35966	42.81866
Jarque-Bera	2.193289	2.969488	10.32260	169.3903	127.7790	13733.61	10.46151	832.6312	8376.115
Probability	0.333990	0.226560	0.005734	0.000000	0.000000	0.000000	0.005349	0.000000	0.000000
Sum	13.75997	2573.000	76.06168	8.613400	2027262.	73.03820	32.12492	22373533	27.51850
Sum Sq. Dev.	0.610613	3156.922	1.300261	3.027474	1.72E+10	90.81241	2.486951	1.83E+13	209.8798
Observations	115	115	115	115	115	115	115	115	115

Independent variables correlation matrix:

	BOARD	INDEP	ACTIUNI	SALEXEC	SALVAR	LEVIER	TACTIVE	C_D
BOARD	1	0.190637	0.021496	0.451278	0.090408	0.019357	0.506559	-0.176781
INDEP	0.190637	1	-0.228473	-0.170446	-0.062075	0.088119	-0.207608	0.095120
ACTIUNI	0.021496	-0.228473	1	-0.183522	-0.030682	-0.058837	-0.174587	-0.067698
SALEXEC	0.451278	-0.170446	-0.183522	1	0.285716	0.042248	0.355880	-0.070939
SALVAR	0.090408	-0.062075	-0.030682	0.285716	1	-0.013966	-0.040128	0.012718
LEVIER	0.019357	0.088119	-0.058837	0.042248	-0.013966	1	-0.327237	0.084418
TACTIVE	0.506559	-0.207608	-0.174587	0.355880	-0.040128	-0.327237	1	-0.072267
C_D	-0.176781	0.095120	-0.067698	-0.070939	0.012718	0.084418	-0.072267	1

Multiple regression model:

Dependent Variable: DROE				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.004518	0.007620	-0.592915	0.0548
DBOARD	-0.011717	0.004320	-2.712325	0.0081
DINDEP	0.190856	0.114830	1.662075	0.0901
DL_SALEXEC	0.081765	0.019679	4.154973	0.0001
DL_TACTIVE	0.224431	0.063649	3.526075	0.0007
R-squared	0.311425	Mean dependent var		0.011215
Adjusted R-squared	0.279766	S.D. dependent var		0.070497
S.E. of regression	0.059829	Akaike info criterion		-2.741849
Sum squared resid	0.311414	Schwarz criterion		-2.604796
Log likelihood	131.1251	Hannan-Quinn criter.		-2.686533
F-statistic	9.836951	Durbin-Watson stat		2.312064
Prob(F-statistic)	0.000001			

Fixed Effects Model:

Dependent Variable: DROE				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.007616	0.008847	-0.860820	0.0925
DBOARD	-0.015169	0.005690	-2.665832	0.0097
DINDEP	0.133730	0.140742	0.950176	0.0655
DL_SALEXEC	0.079856	0.023814	3.353276	0.0013
DL_TACTIVE	0.267267	0.084959	3.145832	0.0025
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.387174	Mean dependent var		0.011215
Adjusted R-squared	0.142044	S.D. dependent var		0.070497
S.E. of regression	0.065299	Akaike info criterion		-2.380132
Sum squared resid	0.277155	Schwarz criterion		-1.640042
Log likelihood	136.4861	Hannan-Quinn criter.		-2.081426
F-statistic	1.579461	Durbin-Watson stat		2.348016
Prob(F-statistic)	0.020424			

Random Effects Model:

Dependent Variable: DROE				
Method: Panel EGLS (Cross-section random effects)				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.004518	0.008317	-0.543246	0.0883
DBOARD	-0.011717	0.004715	-2.485112	0.0149
DINDEP	0.190856	0.125329	1.522842	0.0931
DL_SALEXEC	0.081765	0.021478	3.806909	0.0003
DL_TACTIVE	0.224431	0.069468	3.230694	0.0017
Effects Specification				
			S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			0.065299	1.0000
Weighted Statistics				
R-squared	0.311425	Mean dependent var		0.011215
Adjusted R-squared	0.279766	S.D. dependent var		0.070497
S.E. of regression	0.059829	Sum squared resid		0.311414
F-statistic	9.836951	Durbin-Watson stat		2.312064
Prob(F-statistic)	0.000001			
Unweighted Statistics				
R-squared	0.311425	Mean dependent var		0.011215
Sum squared resid	0.311414	Durbin-Watson stat		2.312064