Corporations Characteristics Affecting its Profitability Empirical Study from Jordanian Industrial Corporations

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Abstract

Purpose *– This research aims to: identify The Effect of Corporation's Characteristics on its Profitability on Jordanian Industrial Corporations (JIC) Listed on Amman Stock Exchange (ASE) from the year 2011 to 2015.The Profitability is measured by Return on Sales (ROS) and Earnings per Share (EPS).* ***Design/ Methodology/ Approach****: the population of the study includes 72 industrial corporations; eight of these corporations were excluded from the study due to financial difficulties. While (19) of them were listed in First Market, (33) corporations listed in Second Market and the other (12) were listed in Third Market .Financial data had been analyzed using multiple linear regression of cross sectional and time series data using statistical analysis program (E-views).****Findings****-the major findings show that there is positive statistical impact of the following independent variables, Corporation's Size, Institutional Investor, Corporation's age, and Productivity On Corporation's Profitability. The study shows that there is a negative statistical impact of Debt Ratios on Corporation's Profitability. Also, there is a negative impact of Liquidity Ratios on Corporation's Profitability but it wasn't statistically significant at a = 0.05.****Originality/Value****–This is one of the few studies which attempts to reduce the gap of profitability studies based on evidence from developed and developing countries, because most profitability studies up to date are based on evidence from developed countries, but there are few studies that provide evidence from developing countries.*

Keywords: Profitability, Corporation's Characteristics, factors affecting Profitability.

1. Introduction

The Corporations differ in its characteristics from one corporation to another; these characteristics include corporation's size, debit ratio, percentage shares of institutional investor, corporation's age, liquidity ratio, and productivity.

The commercial activity of the corporations depends on internal and external financing. Internal Financing consists of, Retained earnings and Property rights, the external financing may be in the form of direct or indirect financing, and the direct external financing is done by issuing corporation's shares or bonds using the proceeds to finance various activities. The indirect external financing is accomplished by borrowing (short / long term) loans from banks and financial institutions.

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The Jordanian industry sector is important for the Jordanian economy in which the development of Jordanian industrial corporations (JIC) will affect positively Jordanian economy. In terms of performance for the year 2015, the trading value at Amman Stock Exchange (ASE) reached JD3.4 billion; an increase by 51% compared to 2014.The year 2015 has witnessed a number of economic developments which impacted the global and Arab region's economy and that prompted the International Monetary Fund to cut its global growth forecast for 2015-2016 to 3.1%, 3.6% respectively. One of the most important developments was the expectations for slower economic growth in China, the world's second largest economy, as a result of the decline in its industrial indicators, in addition to the significant drop in oil prices.

At the local level, the Jordanian economy has witnessed a number of developments for the year 2015; where Jordan's global ranking improved in cross border trading from 54 out of 189 countries to 50, according to the World Bank Doing Business Report published on 27/10/2015, which had a clear impact on improving Jordan's ranking in the cross-border commerce indicator. Moreover, Jordan's ranking rose to become fifth among the Arab countries on the 2015 Global Prosperity Index, issued by the British Legatum Institute.

The Jordan Economy achieved a positive growth during 2015; the preliminary indicators revealed a real growth of 2.3% in Gross Domestic Product (GDP) at constant prices during the first three quarters of the year 2015, compared to 3.1% for the year 2014, most of the economic activities marked varied real growth. In the meantime, the Consumer Price Index (CPI) decreased by 0.9% during the year 2015 compared to an increase of 2.8% for the year 2014.As for the monetary policy indicators, the Central Bank of Jordan (CBJ) decreased the re-discount rate from 4.25% by the end of 2014 to 3.75% by the end of 2015 (ASE,2015). The performance of the corporation is measured by its ability to achieve maximum rate of profit at the lowest possible cost. This study investigates the factors (corporation's characteristics) that have an impact on the profitability of Jordanian industrial corporations (JIC).

2. Research Problem

The problem of the study is to identify the factors (corporation's characteristics) that have an impact on the profitability of Jordanian industrial corporations (JIC) Listed on Amman Stock Exchange (ASE) from the year 2011 to 2015. The Profitability is measured by Return on Sales (ROS) and Earnings per Share (EPS). The study attempts to answer the following questions:

(1) What is the relationship between corporation's profitability and its size?
(2) What is the relationship between corporation's profitability and its debt ratio?
(3) What is the relationship between corporation's profitability and its age?
(4) What is the relationship between corporation's profitability and its liquidity ratio?
(5) What is the relationship between corporation's profitability and percentage shares of institutional investor?
(6) What is the relationship between corporation's profitability and its productivity?

3. Research Objectives

This study aimed to identify the impact of the following independent variables (corporation's characteristics) corporation's size, debit ratio, percentage shares of institutional investor, corporation's age, liquidity ratio and productivity on profitability of Jordanian industrial corporations (JIC).The Profitability is measured by Return on Sales (ROS) and Earnings per Share (EPS).

The study objectives can be interpreted through the following questions:

1. What is the impact of corporation's size on its profitability?
2. What is the impact of percentage shares of institutional investor on its profitability?
3. What is the impact of debt ratio on its profitability?
4. What is the impact of liquidity ratio on its profitability?
5. What is the impact of corporation's age on its profitability?
6. What is the impact of productivity on its profitability?

4. Research Hypotheses

The main hypotheses of the study are:

H01: There isn't any impact of corporation's size on its Profitability measured by Return on Sales (ROS).

H02: There isn't any impact of percentage shares of institutional investor on its Profitability measured by Return on Sales (ROS).
H03: There isn't any impact of corporation's age on its Profitability measured by Return on Sales (ROS).
H04: There isn't any impact of corporation's productivity on its Profitability measured by Return on Sales (ROS).
H05: There isn't any impact of corporation's debt ratio on its Profitability measured by Return on Sales (ROS).
H06: There isn't any impact of corporation's liquidity ratio on its Profitability measured by Return on Sales (ROS).
H07: There isn't any impact of corporation's size on its Profitability measured by Earnings per Share (EPS).
H08: There isn't any impact of percentage shares of institutional investor on its Profitability measured by Earnings per Share (EPS).
H09: There isn't any impact of corporation's age on its Profitability measured by Earnings per Share (EPS).
H010: There isn't any impact of corporation's productivity on its Profitability measured by Earnings per Share (EPS).
H011: There isn't any impact of corporation's debt ration its Profitability measured by Earnings per Share (EPS).
H012: There isn't any impact of corporation's liquidity ratio on its Profitability measured by Earnings per Share (EPS).

4.1 Importance of the Research

This study attempts to reduce the gap of profitability studies which are based on evidence from developed and developing countries. Most profitability studies up to date are based on evidence from developed countries, but there are few studies that provide evidence from developing countries. The final results could be very important for both private and public scoters in Jordan.

4.2 Research Model

Research Model aimed to measure the impact of independent variables on Profitability of Jordanian Institutional corporations listed in Amman Stock Exchange. Figure 1 shows the model in which it shows the independent variables as a function of corporation's Profitability (Insert Figure 1).

The following equation was estimated using the method of multiple regression analysis:

P(i): = a0 + a1Cs (i): + a2Nsh(i): + a3Dr(i): + a4Age(i): + a5L(i): +a6CP (i): +e (i)

Where:
P (i): Corporation's profitability measured by profitability ratios of the corporation (i).

a0: Constant of the regression equation.
a1: The coefficient of the regression equation, which reflects the sensitivity change in the corporation's profitability as a result of the change in the independent variable.

Cs (i): Size of Corporation (i).

Nshi: Number of Institutional Investor of Corporation (i).

Dr (i): Debit Ratio of Corporation (i).

Age (i): Age of Corporation (i).

L (i): Liquidity ratio of corporation (i).

CP (i): Productivity of Corporation (i).

e (i): Random Error, and it represents that part of the profitability of a corporation that changes randomly as a result of other factors not included in the model.

5. Variables of the Study

5.1.1 Dependent variables:

Corporation's Profitability: Measure the success of the corporation by using existing resources. To achieve the research objectives, two measurements of Profitability had been used; Return on Sales (ROS) and Earnings per Share (EPS).

5.1.1.1 Return on Sales (ROS): Measures the percentage of each JDs of sales that results in net income. It's calculated by dividing net income by net sales as shown in the equation; Return on Sales = Net Income / Net Sales.

5.1.1.2 Earnings per Share (EPS): A measure of net income earned on each ordinary share.
It's calculated as shown in the equation; Earnings per Share = Net Income / Average Ordinary Shares.

5.1.2 Independent variables:

5.1.2.1 Corporation's size: Total sales are used in this study to measure this variable.
5.1.2.2 Institutional investors: This variable reflects the amount of funds invested in the capital of the Corporation which exceeds 5% for each Institutional investor.
5.1.2.3 Corporation's age: This variable is calculated by subtracting company's foundation year from the year 2015.
5.1.2.4 Debt Ratio: This variable is calculated by dividing total liabilities on total assets.
5.1.2.5 Liquidity ratio: This variable is calculated by dividing current assets on current liabilities.
5.1.2.6 Productivity: Productivity is measured by assets turnover ratio, by dividing total sales on total assets.

5.2 Literature Review

Profitability is the company's ability to manage its activities, skills and resources to achieve its objectives during a specific time. The primary objective of any corporations is to maximize its profitability and its market value (Al-krghi, 2010).

Modern capital structure theory began by Modigliani and Miller's classical paper (1958) which led to the development of a large number of theoretical and empirical papers. These papers examine the capital structure of chosen listed companies. The main proposition of this work is that, under a number of restrictive assumptions, the value of a company is independent from its financial structure. These assumptions include the absence of taxes, transactions and bankruptcy costs, equality of lending and borrowing rates and finally the independence of the productive activities of the company from its financing decisions.

Following the classical work of Modigliani and Miller (1958) which argued that the value of a company is independent from its financial structure, the theoretical and empirical capital structure studies, have been extended to incorporate additional factors.

(Mkamreh, 1986) investigated factors that affect performance of Jordanian companies by analyzing the information which referred to 55 companies listed in Amman Stock Exchange during the period from1980 to 1982. The study found that Jordanian company's performance is influenced by the size of total assets, undisturbed profits, number of shareholders and company's debt ratio.

(Salameh, 1994) interprets the relationship between size and return of industrial companies which listed in Amman Stock Exchange. The study concludes that the returns of large companies are much more than the small ones, while the risk of all companies are the same whether it's standard deviation or Beta coefficient. This study revealed that there is a difference between earnings per share for large and small companies.

(Wang, 1997) shows the impact of ownership structure on performance of companies which listed in Chinese Exchange Market. It appears from the empirical Analysis that ownership structure highly influences the company performance.There is a positive correlation between profit and concentration of ownership, and its higher if the company controlled by individuals than those controlled by the government. On the other hand, there is a negative correlation between profit and percentage of shares owned by government. So this study comments that good company's performance resulted when individuals manage the company.

(Ozkan, 2001) examined through his study which held on 2001 the constraint of ownership structure of British public shareholding companies. The study found two contradictory correlations; there is negative correlation between profits and liquidity ratio and between averages of growth with debt, On the other hand there is the positive correlation between company size and degree of financial leverage.

Ram, K. *et al*. (2001) attempt to provide an empirical validation of widely held existing theories on the determinants of firm performance in the Indian context.

The study uses financial statement and capital market data of 566 large Indian firms over a time frame of eight years divided into two sub-periods (1992-96, and 1996-2000) to study Indian firms' financial performance across various dimensions, shareholder value, accounting profitability and its components, growth and risk of the sample firms. It reveals that even on the same data, the determinants of market-based performance measures, accounting based performance measures differ due to influence of 'Capital Market Conditions.

It found that size, marketing expenditure, and international diversification had a positive relation with a firm's market valuation. Apart from these firm attributes that reflect either operating parameters of firms or 'strategic choice' of firm managers, it also found that a firm's ownership composition, particularly the level of equity ownership by Domestic Financial Institutions and Dispersed Public Shareholders, and the leverage of the firm were important factors affecting its financial performance. The different implications of the findings for various stakeholders of a firm are also discussed.

(Jean's, 2004) showed the impact of Chinese capital structure on profits; the sample was taken from companies listed in China Stock Market. The study focused also on the industrial sector for the period from 1995 to 2000. The researcher found a negative correlation between profits and debt, and positive one between growth opportunities and debt. Also there is negative one between companies' size and long-term debt financing.

(Al-khdash & Al-abady, 2005) Their study focused on factors that influence return on shareholders' equity as percentage based on the accrual basis. The sample consists of 26 shareholding industrial corporations listed in Amman Stock Exchange; models were used to test the correlation between the independent variable and dependent variables. It is concluded that there were two statistical significant relationships; the first one there was positive correlation between shareholders' equity and market value of the share, while the second between shareholders' equity and cash flaws. The study suggests that the second correlation is much more important than the first one.

(Frank & Goyal, 2009) investigated the relationship between Profits and Capital Structure The paper shows that profits positively affect debt issuances. The effects are large and statistically significant at the 1% level. For larger firms, there is a fairly clear pattern of the increasing likelihood of net debt issuance with increasing profitability. So that more profitable firms tend to issue more debt and repurchase equity. Less profitable firms tend to do the reverse. Firm size also matters. Larger firms tend to be more active in the debt markets while smaller firms tend to be relatively more active in the equity markets. More external financing is used in good times than in bad times.

(Ranga, 2012) sought to determine the role of capital on commercial bank performance in Zimbabwe. Descriptive correlation method was used in this research and the population includes senior commercial bank performance. Twenty executives were selected from each of the chosen banks and interviewed on various issues pertaining to bank capitalization and performance. This was augmented by some regression analysis to determine the magnitude of effect of capital on performance of selected banks. The banks were grouped into strata which were classified as undercapitalized, fairly capitalized and well capitalized as determined by the country's central bank's minimum capital levels of US$12.5 million for commercial banks. Findings revealed that there is a significant and positive relationship between commercial bank capitalization and its performance. The findings cannot be generalized to all financial intermediaries let alone all companies since it had narrowed down to commercial banks. The research managed to elaborate on the relationship between capital levels and bank performance as well as the importance of capital to other bank operations.

(Katerina & Monika, 2014) the study investigates empirically the liquidity of none financial companies in Poland, as measured by static measures such as the current and quick ratios and the dynamic measure of the cash conversion cycle, since the accurate measurement of liquidity and its consequences for the value of a firm is a major issue for managers and academicians. The results indicated a negative relation between: a) the cash conversion cycle and the firm's profitability, b) the size of the company and its liquidity and c) the indebtedness of the company and its liquidity. As an inference, all three measures should be used simultaneously by the firm's stakeholders, because they complement each other and they give more insights about the company's performance, helping the firm's stakeholders in making correct and rational decisions regarding the underlying company.

(Radhe & Kabindra, 2016) the objective of their study is to analyze factors of capital structure affecting the financial performance of commercial banks in Nepal. This study is based on pooled cross sectional data analysis of 19 commercial banks listed in Nepal Stock Exchange for the period of 2007/8 - 2013/2014 with 133 observations.

The sample includes all sorts of commercial banks operating in Nepal like public sector, joint venture and privately owned banks. The performance measures in terms of return on assets, earnings per share and net interest margin are selected as dependent variables. Total debt to total assets ratio, long term debt to total debt ratio, short term debt to total debt ratio, size and credit risk are taken as independent variables.

The study revealed that total debt to total assets ratio, long term debt to total assets ratio, short term debt to total assets ratio and size are negatively related to returns on assets, whereas credit risk is positively related to returns on assets. It indicates that higher the debt in capital mix lower would be return on assets. Similarly, increase in credit risk leads to an increase in returns on assets. The result also shows that the total debt to total assets ratio, long term debt to total assets ratio and short term debt to total assets ratio are negatively related to earning per share, whereas size and credit risk is positively related to earnings per share which reveals that increase in debt decreases in earnings per share.

Likewise, total debt to total assets ratio, long term debt to total assets ratio and short term debt to total assets ratio are negatively related to net interest margin which indicates higher the debt in capital mix lower would be net interest margin. The result shows that there is positive relationship between bank size and net interest margin which reveals that increase in bank size will increase the net interest margin. The beta coefficients for total debt to total assets ratio, long term debt to total assets ratio and short term debt to total assets ratio were negative, while beta coefficients were positive for size and credit risk. However, the coefficients were significant for size and credit risk only at 5 percent level of significance. The study concludes size and credit risk are the major factors affecting the financial performance of commercial banks in the context of Nepal.

6. Research Design

The community of the study represent all Jordanian industrial corporations (JIC) listed in Amman Stock Exchange for the period from 2011 to 2015.The sample of the study consists of 72 corporations, eight have been excluded due to financial difficulties and suspended from dealing in the Stock Market; While (19) of them were listed in the First Market, (33) corporations listed in the Second Market and the other (12) were listed in the Third Market. The corporations have to meet the following conditions to be included:

1. The corporation shouldn't have been merged during the study period.
2. The corporation shouldn't be suspended for any reason.
3. The financial data should be available during the period (2011-2015).

6.1 Data Analysis

Financial data of Jordanian industrial corporations(JIC) had been analyzed using multiple linear regression of cross sectional and time series data using statistical analysis program E-views.

6.2 Primary Statistical Tests

The primary statistical test has been done to insure that multicollinearity correlation doesn't exist between independent variables.

6.2.1 Multicollinearity Test

In general, if the correlation coefficient between independent variables more than (80%) it suggests problem of multicollinearity. Table (1) presents that the highest correlation is between size and productivity which is (0.60). It is noticeable that the correlations between other independent variables less than (0.60), this means that there isn't any problem of multicollinearity correlations between independent variables and the dependent variable (Insert Table 1).

6.2.2 Autocorrelation

Autocorrelation is the connection between random errors calculated from the regression model. Autocorrelation is done by Durbin-Watson test (D-W) , its compared with two values taken from the table at level of significance (α), the numbers of observation (n) and the number of variables (k).The are two values; minimum value (d_l), and maximum value (d_u). If (D-W) is greater than (d_u) this means that there isn't problem of autocorrelation, but if it's less than that there is a problem of autocorrelation, and if (D-W) between (d_l) and (d_u) indifferent decision within this area (Montgomery *et al*, 2001).Table (2) presents the result of this test. It is noticed that (D-W) values for the variables are greater than (d_u), therefore the study's hypothesis doesn't have any problem of autocorrelation (Insert Table 2).

Table (3) illustrates the dependent variable and the independent variables and their contractions (Insert Table 3)

6.3 Analysis and Testing Hypotheses

The first six (1-6) hypotheses had been tested by multiple regressions equation which was described in the model of the study, and the data had been analyzed using statistical analysis program (E-views)for the period from 2011 to 2015.

$ROS = a + \beta_1$ Debt ratio $+ \beta_2$ Liquidity ratio $+ \beta_3$ Institutional Inv. $+ \beta_4$Cor. age $+ \beta_5$Productivity $+ \beta_6$ Cor. size $+e$.

Table (4) presents the results of regression equation by using dependent variable Return on Sales (ROS) as a measurement of Corporation's Profitability:

1. The results of regression equation show that there is a positive on Corporation's Profitability and it's statistically significance.
2. The results show that there is a positive impact of Institutional Investor on Corporation's Profitability and it's statistically significance.
3. The statistical analysis shows that there is a negative impact of Debt Ratio on Corporation's Profitability and it's statistically significance.
4. The statistical analysis shows that there is a negative impact of Liquidity Ratio on Corporation's Profitability, but the correlation wasn't statistically significance
5. The analysis shows that there is a positive impact of Corporation's age on Corporation's Profitability and it's statistically significance.
6. The analysis shows that there is a positive impact of productivity on Corporation's Profitability and it's statistically significance.

The analysis using regression equation shows high-explanatory value, where the determination coefficient(R-squared), and the adjusted determination coefficient (Adjusted R-squared) were 69.13%, and 67.38% respectively. This confirms that the Corporation's Profitability measured by Return on Sales (ROS) depend on Corporation's Size, Institutional Investor, Corporation's age, Debt Ratio, Liquidity Ratio and Productivity (Insert Table 4).

The following six hypotheses (7-12) had been tested by multiple regressions equation:

$EPS = a + \beta_1$ Debt ratio $+ \beta_2$ Liquidity ratio $+ \beta_3$ Institutional Inv. $+ \beta_4$Cor. age $+ \beta_5$Productivity $+ \beta_6$ Cor. size $+e$.

Table (5) presents the results of regression equation by using dependent variable Earnings per Share (EPS) as a measurement of Corporation's Profitability, the result shows:
1. The results of regression equation show that there is a positive impact of Corporation's Size on Corporation's Profitability and it's statistically significance.
2. The results show that there is a positive impact of Institutional Investor on Corporation's Profitability and it's statistically significance.
3. The statistical analysis shows that there is a negative impact of Debt Ratio on Corporation's Profitability and it's statistically significance
4. The statistical analysis shows that there is a negative impact of Liquidity Ratio on Corporation's Profitability, but the impact wasn't statistically significance
5. The analysis shows that there is a positive impact of Corporation's age on Corporation's Profitability and it's statistically significance (Insert Table 5).
6. The analysis shows that there is a positive impact of productivity on Corporation's Profitability and it's statistically significance.

The analysis shows high explanatory value, where the determination coefficient(R-squared), and the adjusted determination coefficient(Adjusted R-squared) were 68.29%, and 66.68%respectively.This confirms that the Corporation's Profitability measured by Earning Per Share (EPS) depend on Corporation's Size, Institutional Investor, Corporation's age and Productivity.

7. Results

This study confirms that:

1. There is positive impact of the flowing independent variables; Corporation's Size, the percentage shares of Institutional Investor, Corporation's age, and Productivity on Corporation's Profitability measured by Return on Sales (ROS) and Earnings per Share (EPS).These factors have positive effect on Corporation's Profitability. Which means that Corporation's Profitability depend on the flowing characteristics; Corporation's Size, Corporation's age, the percentage shares of Institutional Investor, and Productivity which means that if these variables increases the Corporation's Profitability will also increase.

These results oppose the first, second, third, fourth, seventh, eighth, ninth and tenth hypotheses of the study, so these hypotheses will be rejected and the substitute hypotheses will be accepted which state that there is positive impact of Corporation's Size, the percentage shares of Institutional Investor, Corporation's age, and Productivity on Corporation's Profitability.

2. There is negative impact of Debt Ratios on Corporation's Profitability measured by Return on Sales (ROS) and Earnings per Share (EPS), which means that this variable has negative impact on Corporation's Profitability. If Corporation's debt increases the Corporation will suffer from paying the interest and repaying the principals.
This result oppose the fifth and eleventh hypotheses of the study, so these hypotheses will be rejected and the substitute hypotheses will be accepted which state that there is a negative impact of Debt Ratio son Corporation's Profitability.
3. There is a negative impact of Liquidity Ratio son Corporation's Profitability measured by Return on Sales (ROS)and Earnings per Share (EPS), but the impact of Liquidity Ratios wasn't statistically significant at a= 0.05. This means when liquidity increase the corporation's profitability decreases, because the excess of liquidity means that the corporation doesn't invest funds efficiently and effectively to achieve maximum profits.
This result oppose the six and twelfth hypotheses of the study, so these hypotheses will be rejected and the substitute hypotheses will be accepted which state that there is a negative impact of Liquidity Ratio on Corporation's Profitability, but it wasn't statistically significant at a = 0.05.

7.1 Conclusions and Implications

To improve Corporation's Profitability Jordanian Industrial Corporations (JIC) should:

(1) Increase the amount of production by the exploitation of idle capacity or increase production capacities to achieve Max Corporation's profitability.
(2) Invest the excess of liquidity in economically viable investments by diversifying its investments.
(3) Take into consideration the cost of debit on Corporation's Profitability when making a decision to finance the corporations with debt because it should pay the interest and repaying the principals.

7.2 Recommendations

After discussing the results of statistical analysis for this study, the recommendation can be stated as follows:

1. Jordanian Industrial Corporations (JIC) should increase the amount of production through the exploitation of idle capacity or increase production capacities to achieve Max Corporation's profitability because the study found that there is positive impact of Productivity on Corporation's profitability.
2. Jordanian Industrial Corporations (JIC) should develop new strategies to increase the number of Institutional Investor because the study finds a positive impact of Institutional Investor on corporation's profitability.
3. Jordanian Industrial Corporations (JIC) should take into consideration the cost of debit on Corporation's Profitability when making a decision to finance the corporations with debt because it should pay the interest and repaying the principals.
4. Jordanian Industrial Corporations (JIC) should invest the excess of liquidity in economically viable investments by diversifying its investments.

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Appendix

Figure 1

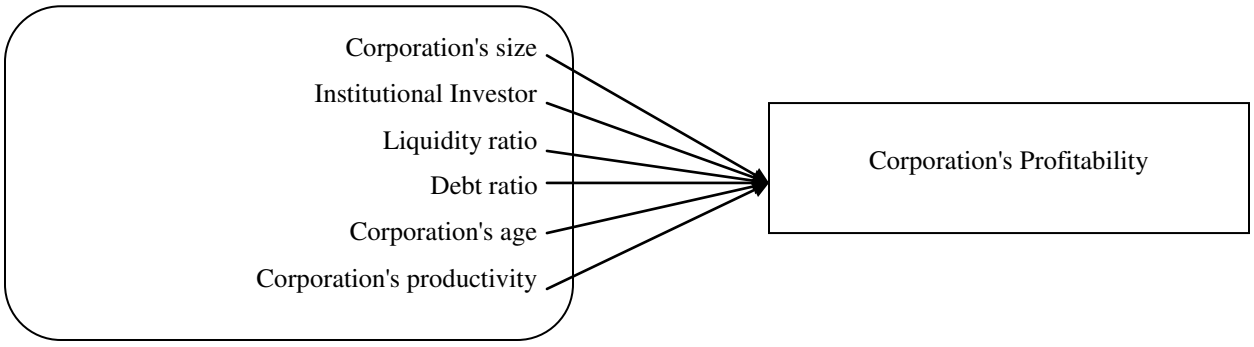

Figure 1: Independent variables as a function of Corporation's Profitability

Table 1: Multicollinearity Tests

Correlations Matrix

Covariance Analysis: Ordinary						
Sample: 2011 2015						
Included observations: 320						
Correlation						
Probability	**Corporation's Size**	**Institutional Inv.**	**Debit Ratio**	**Corporation's age**	**Liquidity Ratio**	**Productivity**
Corporation's Size	**1.00**					
Institutional Investor	**0.31**	**1.00**				
	0.00	**-----**				
Debit Ratio	**0.05**	**0.14**	**1.00**			
	0.32	**0.00**	**-----**			
Corporation's age	**0.30**	**0.05**	**0.02**	**1.000**		
	0.00	**0.22**	**0.50**	**-----**		
Liquidity Ratio	**0.02**	**0.03**	**0.35**	**0.06**	**1.00**	
	0.48	**0.45**	**0.00**	**0.17**	**-----**	
Productivity	**0.60**	**0.28**	**0.06**	**0.31**	**0.01**	**1.00**
	0.00	**0.00**	**0.12**	**0.00**	**0.42**	**-----**

Table 2: **Autocorrelation**

hypothesis	D-W	d_l	d_u	Results
H01	1.898	1.675	1.863	No autocorrelation
H02	1.875	1.675	1.863	No autocorrelation

Table 3: **Study Variables and their contractions**

No.	**Dependent variable** **Corporation's Profitability measured by:**	contractions
1	Return On Sales	ROS
2	Earnings per Share	EPS
Independent variables		
1	Corporation's size	Cor. size
2	Institutional investor	Institutional inv.
3	Debt ratio	Debt ratio
4	Corporation's age	Comp. age
5	Liquidity ratio	Liquidity ratio
6	productivity	productivity

Table: 4

The results of the regression equation

Dependent Variable: ROS
Method: Panel EGLS (Cross-section weights)
Periods included: 5
Cross-sections included: 64
Total panel (unbalanced) observations: 320
White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Corporation's Size	4.8139	3.3635	1.4338	0.0423
Institutional Investor	36.529	18.805	1.7557	0.0498
Debt Ratio	-46.59	14.682	1.3112	0.0457
Corporation's age	1.7230	0.8652	1.8632	0.0435
Liquidity Ratio	-69.31	11.784	-2.180	0.0597
Productivity	66.556	11.760	1.0776	0.0332
C	70.234	14.820	1.2811	0.2008
R-squared	0.6913			
Adjusted R-squared	0.6738			
F-statistic	0.7150			
Prob. (F-statistic)	0.0000			
Durbin-Watson stat	1.8980			

Table: 5

The results of the regression equation

Dependent Variable: EPS
Method: Panel EGLS (Cross-section weights)
Periods included: 5
Cross-sections included: 64
Total panel (unbalanced) observations: 320
White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Corporation's Size	3.5012	2.1236	1.6483	0.0412
Institutional Investor	48.737	16.110	2.2042	0.0280
Debt Ratio	-97.47	10.388	-2.045	0.0414
Corporation's age	1.6305	0.5698	2.6932	0.0497
Liquidity Ratio	-63.55	9.6970	-2.140	0.0629
Productivity	90.501	10.310	2.2451	0.0253
C (Constant)	95.829	10.667	1.8913	0.0592
R-squared	0.68 29			
Adjusted R-squared	0.66 68			
F-statistic	68.2421			
Prob.	0.0000			
Durbin-Watson stat	1. 8750			

Supplement No. 1: Jordanian industrial Corporations Listed in First Market

No.	Corporation's Name	Market	Corporation's Name (Arabic)
1	THE ARAB PESTICIDES & VETERINARY DRUGS MFG. CO.	1	العربية لصناعة المبيدات والأدوية البيطرية
2	ARABIAN STEEL PIPES MANUFACTURING	1	العربية لصناعة المواسير المعدنية
3	GENERAL INVESTMENT	1	الاستثمارات العامة
4	UNIVERSAL MODERN INDUSTRIES	1	العالمية الحديثة للزيوت النباتية
5	THE ARAB INTERNATIONAL FOOD FACTORIES	1	المصانع العربية الدولية للأغذية والاستثمار
6	ARAB ALUMINIUM INDUSTRY /ARAL	1	العربية لصناعة الألمنيوم / آرال
7	JORDAN PHOSPHATE MINES	1	مناجم الفوسفات الأردنية
8	THE ARAB POTASH	1	البوتاس العربية
9	DAR AL DAWA DEVELOPMENT & INVESTMENT	1	دار الدواء للتنمية والاستثمار
10	HAYAT PHARMACEUTICAL INDUSTRIES CO.	1	الحياة للصناعات الدوائية
11	THE JORDAN WORSTED MILLS	1	مصانع الأجواخ الأردنية
12	AL-EQBAL INVESTMENT COMPANY PLC	1	الإقبال للاستثمار
13	UNION TOBACCO & CIGARETTE INDUSTRIES	1	مصانع الاتحاد لإنتاج التبغ والسجائر
14	THE INDUSTRIAL COMMERCIAL & AGRICULTURAL	1	الصناعية التجارية الزراعية / الإنتاج
15	NORTHERN CEMENT CO.	1	إسمنت الشمالية
16	READY MIX CONCRTE AND CONSTRUCTION SUPPLIES	1	الباطون الجاهز والتوريدات الأردنية
17	NATIONAL ALUMINIUM INDUSTRIAL	1	الوطنية لصناعات الألمنيوم
18	AL-EKBAL PRINTING AND PACKAGING	1	الإقبال للطباعة والتغليف
19	CENTURY INVESTMENT GROUP	1	مجموعة العصر للاستثمار

Supplement No. 2: Jordanian industrial Corporations Listed in Second Market

No.	Corporation's Name	Market	Corporation's Name (Arabic)
1	JORDAN WOOD INDUSTRIES / JWICO	2	الأردنية للصناعات الخشبية / جوايكو
2	THE JORDAN CEMENT FACTORIES	2	مصانع الاسمنت الأردنية
3	JORDAN STEEL	2	حديد الأردن
4	THE JORDANIAN PHARMACEUTICAL MANUFACTURING	2	الأردنية لإنتاج الأدوية
5	PREMIER BUSINESS AND PROJECTS CO.LTD	2	المتصدرة للأعمال والمشاريع
6	CHEMICAL INDUSTRIES JORDAN	2	الصناعات الكيماوية الأردنية
7	UNIVERSAL CHEMICAL INDUSTRIES	2	العالمية للصناعات الكيماوية
8	ASSAS FOR CONCRETE PRODUCTS CO. LTD	2	أساس للصناعات الخرسانية
9	NATIONAL CHLORINE INDUSTRIES	2	الوطنية لصناعة الكلورين
10	JORDAN INDUSTRIAL RESOURCES	2	الموارد الصناعية الأردنية
11	COMPREHENSIVE MULTIPLE PROJECTS COMPANY	2	المتكاملة للمشاريع المتعددة
12	INTERMEDIATE PETROCHEMICALS INDUSTRIES CO. LTD	2	الصناعات البتروكيماوية الوسيطة
13	NATIONAL CABLE & WIRE MANUFACTURING	2	الوطنية لصناعة الكوابل والأسلاك الكهربائية
14	ARAB ELECTRICAL INDUSTRIES	2	العربية للصناعات الكهربائية
15	UNITED CABLE INDUSTRIES	2	مصانع الكابلات المتحدة
16	THE JORDAN PIPES MANUFACTURING	2	الأردنية لصناعة الأنابيب
17	SINIORA FOOD INDUSTRIES PLC	2	سنيورة للصناعات الغذائية
18	AL-QUDS READY MIX	2	القدس للصناعات الخرسانية
19	JORDAN POULTRY PROCESSING & MARKETING	2	الأردنية لتجهيز وتسويق الدواجن ومنتجاتها
20	JORDAN DAIRY	2	الألبان الأردنية
21	NATIONAL POULTRY	2	الوطنية للدواجن
22	JORDAN VEGETABLE OIL INDUSTRIES	2	مصانع الزيوت النباتية الأردنية
23	GENERAL MINING COMPANY PLC	2	العامة للتعدين
24	NATIONAL STEEL INDUSTRY	2	الوطنية لصناعة الصلب
25	TRAVERTINE COMPANY LTD	2	شركة الترا فرتين
26	UNITED IRON & STEEL MANUFACTURING CO.P.L.C	2	المتحدة لصناعة الحديد والصلب
27	JORDAN PAPER & CARDBOARD FACTORIES	2	مصانع الورق والكرتون الأردنية
28	ARAB CENTER FOR PHARM.&CHEMICALS	2	المركز العربي للصناعات الدوائية
29	PHILADELPHIA PAMACEEUTICALS	2	فيلادلفيا لصناعة الأدوية
30	AKARY FOR INDUSTRIES AND REAL ESTATE INVESTMENTS	2	عقاري للصناعات والاستثمارات العقارية
31	EL-ZAY READY WEAR MANUFACTURING	2	الزي لصناعة الألبسة الجاهزة
32	ARAB WEAVERS UNION COMPANY	2	اتحاد النساجون العرب
33	INVESTMENTS & INTEGRATED INDUSTRIES CO. PLC (HOLDING CO)	2	الاستثمارات والصناعات المتكاملة

Supplement No. 3: Jordanian industrial Corporations Listed in Third Market

No.	Corporation's Name	Market	Corporation's Name (Arabic)
1	MIDDLE EAST SPECIALIZED CABLES COMPANY /MESC_JORDAN PLC	3	الشرق الأوسط للكابلات المتخصصة / مسك_الأردن
2	ALADDIN INDUSTRIES/ RUM	3	رم علاء الدين للصناعات الهندسية
3	AL-QARIA FOOD & VEGETABLE OIL INDUSTRIES	3	القرية للصناعات الغذائية والزيوت النباتية
4	JORDAN CERAMIC INDUSTRIES	3	مصانع الخزف الأردنية
5	INTERNATIONAL SILICA INDUSTRIAL	3	الدولية لصناعات السيليكا
6	ARAB COMPANY FOR INVESTMENTS PROJECTS	3	العربية للمشاريع الاستثمارية
7	MIDDLE EAST PHARMA. & CHMICAL IND. & MEDICAL APPLIANCES	3	الشرق الأوسط للصناعات الدوائية والكيماوية والمستلزمات الطبية
8	JORDAN CLOTHING COMPANY P.L.C	3	الألبسة الأردنية
9	NUTRI DAR	3	دار الغذاء
10	FIRST NATIONAL VEGETABLE OIL INDUSTRIES CO.	3	الوطنية الأولى لصناعة وتكرير الزيوت النباتية
11	JORDAN COMPANY FOR ELCRICITY AND OIL SHAL	3	الوطنية لإنتاج النفط والطاقة الكهربائية من الصخر الزيتي
12	PEARL- SANITARY PAPER CONVERTING	3	اللؤلؤة لصناعة الورق الصحي

Supplement No. 4: Corporations delisted during the year 2015

No.	Corporation's Name	De-listing date
1	**ARAB REAL ESTATE DEVELOPMENT**	**9/7/2015**
2	**UNITED ARAB INVESTORS**	**9/7/2015**
3	**THE INVESTORS & EASTERN ARAB FOR INDUSTRIAL& REAL ESTATE INV.**	**9/7/2015**
4	**DARWISH AL-KHALILI & SONS**	**1/10/2015**
5	**INTERNATIONAL CERAMIC INDUSTRIES**	**1/10/2015**
6	**RUM ALADDIN INDUSTRIES**	**3/11/2015**
7	**AL-JANUOB FILTERS MANUFACTURING**	**1/12/2015**
8	**UNITED GROUP HOLDINGS**	**6/12/2015**