

# The Effect of Cost Leadership Strategy On ROA and Future Performance of Accepted Companies in Tehran Stock Exchange

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## Abstract

This study empirically investigates the effect of Cost Leadership Strategy on ROA and future performance. The research data is collected from 45 firms in the Tehran Security Exchange (TSE) during 2009-2013. The statistical technique is used to examine the assumption of regressions model. To test the assumptions, three variables the ratio of sale to assets, the ratio of sale to capital expenditure and the ratio of staff to assets replace as alternative variables a cost leadership strategy were considered. In order to examine the hypotheses, data is collected from the annual reports of the companies using official bulletins of the Tehran stock exchange, mainly, through Novin software, Tadbir Pardaz software, and stock sites such as [www.rdis.ir](http://www.rdis.ir). The results indicated that in the firms with cost leadership strategy, there were positive relationships between the ratio of sale to capital expenditure with percent of growth in sales. The results also suggested that there were negative relationships between the ratio of sale to assets and the ratio of staff to assets with ROA and Long-term financial performance and Short-term economic performance.

**Keywords:** Cost Leadership Strategy, ROA, future performance, The Tehran Security Exchange

## Introduction

The purpose of joint stock companies and their managers is maximizing the value of equity and on the other hand it is maximizing the value of the company and its stock. The maximizing of the company's value is required to use the financial resources and optimal strategy by managers and their correct performances. Also, in the international trade environment, Logistics management plays a key role in the organizations. Logistics is the integration of materials management and distribution (Rushton et al., 2010).

The leading industrial power has been shifted from the United States, Japan and Germany to the emerging new economic force (BRIC), referring to the countries of Brazil, Russia, India, and China. After the financial crisis in 2007, the recession has created a need for the companies' CEO: How to survive in the market with limited resources and competitive business environment? Companies are cautiously making any new move. Should they cut down operational cost and squeeze the budget for Research and Development? Or bearing short term financial pressure but making tremendous investment during the recession, in order to establish a solid foundation of value creation?

One of the main objectives of every firm is to achieve and maintain the competitive advantage. The companies are trying hard to allocate the limited resources efficiently and stay ahead of their competitors. Company keeps starting the competitive battle for the potential competitive position (Richard, 1985). Around the world, many successful international companies from different industry seems employs different strategies upon to their own company goal, market situation and local market situation. However, the underlying mode of operation, the characters and path to success to all the companies is fundamentally the same. Companies achieve competitive advantage through innovation (Porter, 1980).

Competitive strategies are employed by firms within a particular industry. The strategies adopted are expected to relate to performance of the companies. Long term strategy should derive from a firm's attempt to seek a competitive advantage based on one of three generic strategies (Grant, 2002). Low cost leadership depends on some fairly unique capabilities of a firm to achieve and sustain their low-cost position within the industry of operation.

Company success is, from the managerial point of view, affected by both its external industrial structure and internal resources (Alfredo, 1998). Besides the structure of business environment, significant change that took place in the social, political and cultural environment also has the impact on company's performance. New business environment requires firms to be flexible and adaptable and to place great responsibility in the hands of a more highly skilled workforce. With the emergency of internet and fast interaction among different parties, every single decision may lead to tremendous effect to future financial performance. This increases pressure to the managers since they cannot control the external factors, which means their strategies decisions should balance the effect of resources allocation, industrial changes and company's development goals.

The purpose of this study is to investigate The effect of Cost Leadership Strategy on ROA and future performance of accepted companies in Tehran stock exchange.

### Literature Review

#### • Cost leadership strategy

Most firms are seeking a sustainable competitive advantage; the porter's generic strategies just can be guide for firms to define the strategy direction. It is as simple as that--"the most profitable competitor in any industry sector tends to be the lowest-cost producer or the supplier providing a product with the greatest perceived differentiated values (Christopher, 2011).

The purpose of this strategy is the company's low-cost products offers in an industry. Cost leadership strategy takes place through experience, investment in production facilities, conservation and careful monitoring on the total operating costs (through programs such as reducing the size and quality management) and the reason for applying the strategy of cost leadership is to obtain the advantage by reducing the economic costs among its competitors (Barney, 2002). The existing literature contains some discussions of why the relationship between leverage and performance depends on a firm's choice of strategy. Firms pursuing a strategy of cost leadership will benefit more from the use of leverage in terms of the increased managerial efficiency which corresponds to be monitored by lenders. According to Jensen (1986), monitoring by lenders also limits managers' opportunistic behaviors by reducing the resources available for discretionary spending. Hence, Jensen (1986) proposed that the control function of debt is more important for companies that strive to be efficient (Jermias, 2008). Accordingly, Porter (1985) suggested that cost leadership firms need to control costs tightly, refrain from incurring too many expenses from innovation or marketing, and cut prices when selling their products.

Porter (1985) said that, by applying the business strategy of cost-leadership may help a firm to gain "a low cost position" which offers a firm a defence against competitors. And because the lower costs indicate that the firm can still earn returns while its competitors may break down the profit margin. Moreover, the low-cost position helping the firm against powerful buyers who usually A low-cost position defends the firm against powerful buyers because buyers can exert power only to drive down prices to the level of the next most efficient competitor. Low cost provides a defiance against powerful suppliers by providing more flexibility to cope with input cost increases. The factors that lead to a low-cost position usually also provide substantial entry barriers in terms of scale economies or cost advantages. Finally, a low-cost position usually places the firm in a favorable position vis-à-vis substitutes relative to its competitors in the industry." (Porter, 1988)

#### • Cost-leadership & financial performance

According to what the Palepu & Healy say, a firm may produce a relative low profit margin by adopting the strategy of cost leadership (Palepu & Healy, 2008).

Cost leadership strategy helps firms to produce the standard, high-volume product or service at the most competitive price to customers. By emphasizing on a cost-leadership strategy is kindly to create higher financial performance for firms competing in the emerging economies, such as China, India, Brazil, etc, as firms can gain a relative advantage because of their lower costs in lab our recourse and manufacture( Aulakh 2000). Furthermore, from the customers' point of view, the strategy of cost leadership catches the most charming issue (lower price) in emerging economies, offering the products or service to those people with low level of disposable income( Caroline 2008).

Lahtinen & Toppinen (2006) in their report, found out the cost-leadership indicators, statically, explain better on the short-term financial performance, than value added creation, which has affection on longer-term financial performance and turnover growth in the future. They conclude that, cost-efficiency is a prerequisite for the business, and the latest worldwide economic recession is just the best example to confirm the validity. Meanwhile, the value-added creation is a necessity to support the economic sustainability of the business.

Valipour & Birjandi (2012) if the company's strategy is based on cost leadership strategy, with increase in financial leverage and Dividend payments; the performance will be increased. The financial leverage multiplication strategy variable has inversely relationship with company's performance.

### Research Hypotheses

Considering that the basic aim of this study is to analysis the effect of Cost Leadership Strategy on ROA and future performance, the research hypotheses are classified in three groups as follow:

- **The first group of hypotheses: The companies that used the ratio of sales to assets as an alternative variable of cost leadership strategy firm**

H1: There is a significant relationship between cost leadership strategy and rate of return on assets.

- **The second group of hypotheses: The companies that used the ratio of sale to capital expenditure as an alternative variable of cost leadership strategy firm**

H1: There is a significant relationship between cost leadership strategy and Long-term financial performance of the company.

H2: There is a significant relationship between cost leadership strategy and Short-term economic performance of the company.

- **The third group of hypotheses: The companies that used the ratio of staff to assets as an alternative variable of cost leadership strategy firm**

H1: There is a significant relationship between cost leadership strategy and percent of growth in sales.

#### Variables Definitions

##### Dependent variables:

- **Rate of return on assets:** is a measure of performance measurement. Has the ability to company in creating interest in relation to the total amount invested by the company to measure. Also an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage. Sometimes this is referred to as "return on investment".

The formula for return on assets is:

$$ROA = \frac{\text{Net Income}}{\text{Average Total Assets}}$$

- **Sales growth rate:** benchmark in to measure the rate of change is increasing sales growth. In other words, represents a growing percentage of the sale.

##### Independent variables:

To test the assumptions, three variables the ratio of sale to assets, the ratio of sale to capital expenditure and the ratio of staff to assets replace as alternative variables a cost leadership strategy(Independent variable) were considered.

Independent variables of this study are calculated:

- **Ratio of sale to assets:** Asset turnover is a [financial ratio](#) that measures the efficiency of a company's use of its [assets](#) in generating sales revenue or sales income to the company. Companies with low profit margins tend to have high asset turnover, while those with high profit margins have low asset turnover. Companies in the retail industry tend to have a very high turnover ratio due mainly to cutthroat and competitive pricing.

$$\text{Asset Turnover} = \frac{\text{Net Sales Revenue}}{\text{Average Total Assets}}$$

- **Ratio of sale to capital expenditure:** A ratio that measures a company's ability to acquire long term assets using sales revenue. The sales to capital expenditures ratio will often fluctuate as businesses go through cycles of large and small capital expenditures.

is calculated as:

Total sales revenue / {Net property, plant and equipment (Ending) - Net property, plant and equipment (Beginning) + Net intangible assets (Ending) - Net intangible assets (Beginning) + Depreciation and amortization for the Year}

- **Ratio of staff to assets :**Is the ratio of the total number of employees to total assets.

##### Methods of Data Analysis

In this study, the regressions model are used for data analysis. Initial data was inserted in Excel spreadsheet and SPSS software was applied to analyze the data statistically. Also Rahavard Novin software, Tadbir Pardaz software, stock organization library and stock sites such as [www.rdis.ir](http://www.rdis.ir) & [www.irbourse.com](http://www.irbourse.com) were used.

##### Research Method and Regression Model

Considering that the aim of this study is to examine the effect of Cost Leadership Strategy on ROA and future performance that as, and attention to three groups of variables and assumptions about the research mentioned in the same way it was prior to the model, and the overall study group for each of the following

research was decisive.

First of all variables in the model study in a regression model tested general form it is as: follows

In equation (1) the effect of imposing a cost leadership strategy on firm performance is investigated. Also the ratio of sales to assets as an alternative variable of cost leadership strategy firm.

**In the Model 2:**

$$ROA_{i,t} = \beta_0 + \beta_1 Efficiency_{i,t} + r_{i,t} \quad (2)$$

In equation (2) the ability of companies to maintain ROA performance in the future based on the strategy used in period t will be reviewed. Also the ratio of sale to capital expenditure as an alternative variable of cost leadership strategy firm

**In the Model 3:**

$$Sales\ Growth_{i,t+j} = \alpha_0 + \alpha_1 Efficiency_{i,t} + s_{i,t} \quad (3)$$

In equation (3) the effect of cost leadership strategy on sales growth, will be reviewed. Also the ratio of staff to assets as an alternative variable of cost leadership strategy firm.

**Sample Selection**

The sample was chosen from the firms listed on the Tehran stock exchange (TSE), from 2003 to 2010, using the following criteria:

- 1). Firms were listed in TSE during 2009-2013.
- 2). Data was available for all the years under the study.
- 3). The companies didn't have changed the fiscal year for the period studied.
- 4). Banks, Insurance and Investment firms were not considered in this study.

The data used in the analysis were collected from the annual reports of the official bulletins of the Tehran stock exchange. The final sample contains 45 firms.

**Data Analysis**

Pearson Correlation Coefficient and Regression model were used to analyze data.

Ho= Data is normal

H1= Data is abnormal

**Table (1):** One-sample Kolmogorov-Smirnov Test

		<b>DIV</b>
<b>N</b>		<b>225</b>
<b>Normal parameters<sup>a,b</sup></b>	<b>Mean</b>	<b>.8178</b>
	<b>Std. Deviation</b>	<b>.38689</b>
<b>Most Extreme Differences</b>	<b>Absolute</b>	<b>.074</b>
	<b>Positive</b>	<b>.074</b>
	<b>Negative</b>	<b>-.070</b>
<b>Kolmogorov-Smirnov Z</b>		<b>1.212</b>
<b>Asymp. Sig. (2-tailed)</b>		<b>.106</b>

a. Test distribution is normal.

b. Calculated from data.

Following the table (2), Sig = 0.106 > 0.05. Thus results show that data is normal.

**Testing Results of hypothesis:**

- **companies that used the ratio of sales to assets as an alternative variable of cost leadership strategy firm**

**Table (2):** Variables Entered

Model	Variables Entered	Adjusted R Square	Durbin-Watson	Method
1	Cost leadership strategy	0.351	1.714	Enter

Under the Tables (2) are considered, the results are statistically Enter. This test can be improved by using the logistic regression model and the independent variable, the regression model can be determined. The results indicate that the ratio of sales to assets as an alternative variable cost leadership strategy firm whose impact on the rate of return on assets is reviewed companies, entered into the model. Thus, the new model is as follows:

$$ROA_{i,t} = \alpha_0 + \alpha_1 Efficiency_{i,t} + r_{i,t}$$

**T-test to assess the significance of partial regression coefficients**

Using t-test to assess significant coefficients explains. If desired confidence level  $\alpha$  value is smaller than the absolute value of the potential, Coefficient in the model is proved. Thus, according to Table( 3) Regression line equation of the first model is as follows:

$$ROA_{i,t} = 0/133 - 0/001 Efficiency_{i,t} + r_{i,t}$$

**Table (3) :**Coefficients of model( 1)

Model4	Unstandardized Coefficients		Standardized Coefficients	t	Sig	VIF
	B	Stl. Erro	Beta			
Constant	0.133	.010		12.942	0.000	
Cost leadership strategy	-0.001	0.002	-0.057	-.848	0.000	1/031

As well as variables reflecting the relationships in the model are considered. The ratio of sales to assets as an alternative variable cost leadership strategy the company has an negative relationship with the rate of return on assets of the company. Meanwhile, based on Table (2) the results of tests, suggest that, Three independent variables of the study have a significant relationship with the firm's payout ratio ( $F = @. /000$ ), which together offer a 35% ( $AdjR^2 = 0.351$ ) Explains the behavior of the dependent variable.

- **The companies that used the ratio of sale to capital expenditure as an alternative variable of cost leadership strategy firm**

**Table (4):**Variables Entered

Model	Variables Entered	Adjusted R Square	Durbin-Watson	Method
1	Cost leadership strategy	0.382	1.852	Enter

Under the Tables (4) are considered, the results are statistically Enter. This test can be improved by using the logistic regression model and the independent variable, the regression model can be determined. The results indicate that the ratio of sale to capital expenditure as an alternative variable cost leadership strategy firm whose impact on the rate of return on assets is reviewed companies, entered into the model. Thus, the new model is as follows:

$$ROA_{i,t} = \beta_0 + \beta_1 Efficiency_{i,t} + r_{i,t}$$

**T-test to assess the significance of partial regression coefficients**

Using t-test to assess significant coefficients explains. If desired confidence level  $\alpha$  value is smaller than the absolute value of the potential, Coefficient in the model is proved. Thus, according to Table( 5) Regression line equation of the first model is as follows:

$$ROA_{i,t} = 0/131 - 4/343 Efficiency_{i,t} + r_{i,t}$$

**Table (5) :**Coefficients of model( 2)

Model4	Unstandardized Coefficients		Standardized Coefficients	t	Sig	VIF
	B	Stl. Erro	Beta			
Constant	0.131	.010		12.736	0.000	
Cost leadership strategy	-4.343	0.000	-0.118	-1.749	0.000	1/032

As well as variables reflecting the relationships in the model are considered. The ratio of sale to capital expenditure as an alternative variable cost leadership strategy the company has an negative relationship with the rate of return on assets of the company. Meanwhile, based on Table (4) the results of tests, suggest that, Three independent variables of the study have a significant relationship with the firm's payout ratio ( $F = @. /000$ ), which together offer a 38% ( $AdjR^2 = 0.382$ ) Explains the behavior of the dependent variable.

**The third group of hypotheses: The companies that used the ratio of staff to assets as an alternative variable of cost leadership strategy firm**

**Table (6):**Variables Entered

Model	Variables Entered	Adjusted R Square	Durbin-Watson	Method
1	Cost leadership strategy	0.324	1.652	Enter

Under the Tables (6) are considered, the results are statistically Enter. This test can be improved by using the logistic regression model and the independent variable, the regression model can be determined. The results indicate that the ratio of staff to assets as an alternative variable cost leadership strategy firm whose impact on the rate of return on assets is reviewed companies, entered into the model. Thus, the new model is as follows:

$$Sales\ Growth_{i,t+j} = \alpha_0 + \alpha_1 Efficiency_{i,t} + s_{i,t}$$

**T-test to assess the significance of partial regression coefficients**

Using t-test to assess significant coefficients explains. If desired confidence level  $\alpha$  value is smaller than the absolute value of the potential, Coefficient in the model is proved. Thus, according to Table( 7) Regression line equation of the first model is as follows:

$$Sales\ Growth_{i,t+j} = 0/940 + 14/59 Efficiency_{i,t} + s$$

**Table (7) :**Coefficients of model( 3)

Model4	Unstandardized Coefficients		Standardized Coefficients	t	Sig	VIF
	B	Stl. Erro	Beta			
Constant	0.940	1.197		0.785	0.000	
Cost leadership strategy	14.59	0.002	0.050	0.744	0.000	1/045

As well as variables reflecting the relationships in the model are considered. The ratio of staff to assets as an alternative variable cost leadership strategy the company has an positive and significant relationship with the rate of return on assets of the company. Meanwhile, based on Table (6) the results of tests, suggest that, Three independent variables of the study have a significant relationship with the firm's payout ratio ( $F = @. /000$ ), which together offer a 32% ( $AdjR^2 = 0.324$ ) Explains the behavior of the dependent variable.

**Conclusion**

This study investigates the effect of Cost Leadership Strategy on ROA and future performance of accepted companies in Tehran stock exchange. In this regard, three variables the ratio of sale to assets, the ratio of sale to capital expenditure and the ratio of staff to assets replace as alternative variables a cost leadership strategy were considered. According to the results of statistical models to test the research, the first model, The ratio of sales to assets as an alternative variable cost leadership strategy the company has an negative relationship with the rate of return on assets of the company, So if the company can use the cost leadership strategy, expected rate of return on assets as a measure of firm performance decreases. In the second model, the ratio of sale to capital expenditure as an alternative variable cost leadership strategy the company has an negative relationship with the ratio of sale to capital expenditure of the company, So if the company can use the cost leadership strategy, expected Rate of return on assets as a measure of future economic performance and financial companies reduced. And finally, the third model, the ratio of staff to assets as an alternative variable cost leadership strategy the company has an positive and significant relationship with the rate of return on assets of the company, So if the company can use the cost leadership strategy, expected Sales growth increases.

Also, comparing the results of the first model and the second point is that, when you choose a cost leadership strategy as a business strategy firm performance decreases. Such a result is consistent with the results of the study Jermias (2008), who investigated " The relative influence of competitive intensity and business strategy on the relationship between financial leverage and performance", He concluded that if the company chooses a cost leadership strategy as the company's business strategy firm performance is negative.

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