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## AN EMPIRICAL STUDY: EFFECT OF COMMODITY SUPPLY MANAGEMENT AND FIRM PERFORMANCE DURING THE LIFE CYCLE STAGES OF CORPORATION

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**Fariba Habibi Kilak**  
*Department of Accounting,  
Sanandaj Branch, Islamic Azad  
University, Sanandaj, Iran*

**Omid Mahmoudi Khoshroo \***  
*Assistant Professor of Accounting,  
Department of Accounting,  
Sanandaj Branch, Islamic Azad  
University, Sanandaj, Iran.  
\*Corresponding Author*

**Abstract:** Working capital is to manage assets and current debts of company. One of the most important items of working capital is commodity supply which is so important for managers. In this research, it was tried to discuss relationship with company performance. The purpose of this study is investigating the relationship between Commodity supply management and corporate performance during life cycle of company Companies listed in Tehran Stock exchange during the period of time 6 years , 2010- 2015 has been analysed. This study in terms of purpose is applied research. It locates on descriptive-correlative research from manner of inferential on hypothesis and in order to test models, combined regression and panel data have been used and in order to test hypothesis, multivariable linear regression has been used as combined (year-company). The finding showed that Commodity supply has effect on company performance also the effect of Commodity supply on company performance is different during life cycle of company.

**Keywords:** Commodity supply management, Firm performance, life cycle of corporation, financial leverage  
Introduction

## 1. INTRODUCTION

Commodity supply forms majority section of investment and resources consumption and it is very important from price and as result, it influences on profitability of companies significantly. Commodity supply influences on company performance by different methods and it has special placement and Causes Company tries to maintain majority of Commodity supply which is pertinent to operational management to financial decision. Maintenance of Commodity supply caused companies can improve production planning, minimize production costs or lacking goods and reduce intermediary and purchasing costs by whole purchasing.

## 2. RESEARCH PROBLEM

### 3.

On time production system is one of the most advanced planning systems which is located on top of pyramid of new planning and control systems. Today, because of economic and legal limitations and complexities of the markets, optimal use of available resources and recognize and respond to customer' needs, it was converted to unavoidable case and organization forced to maintain their share in market by delamination traditional structures and methods. Just in time production system which was applied in Toyota Company by Taichi Ono for the first time is one of the systems which was attracted very soon by Japanese Companies and as for equality of culture, it was performed in many companies. By starting century 20th, and evolution of industries and economy, some important developments occurred in using financial rates. First, the accountants and investors noticed that one cannot rely on financial rates only and needs collection of financial rates to investment and analysis. Third event is to use in advance financial rates for companies in order to predicate financial problems like bankruptcy and power of repayment of debts. Operation management experienced continues innovations in production process. In time purchasing means to purchase materials or goods when it needs for production or sales. Just in time production is based on demand and manufacturer company produces a part when needs in production line.

Chandler (1962) was the first person who showed that organization strategies and decisions are different during different cycles. As result, discussion relationship between Commodity supply management and performance can be interesting subject from life cycle point of view, but the study shall be considered in Elside and Vaba (2016), they found that the relation between two variables is different. This relationship is negative in formation and evolution of company and is positive in drop and positive growth. According to it, the main aim is to

survival and confide on financial supply. In this method, following presentation and development of product and vast investment, risk is so much but, fewer results obtained. In growth period, there is less concern for survival and risk of company and potential interest is on growth and activities of risk, in the evolution period, rate of increment growth is reduced but demand and supply are stable and share of market is increased but Commodity supply is reduced to control costs and performance. And thus, share of market is increased and it concentrates on profit. But Commodity supply is reduced to control costs and restore performance. In the time of drop, company is following variety of product or presents one or some products not to reduce share of market as result, in order to enhance growth of sales, Commodity supply is increased and because of much costs, performance is reduced.

## 4. RESEARCH HYPOTHESES

Commodity supply influences on company performance

Effect of Commodity supply is different on company performance during life cycle.

## 5. RESEARCH FINDINGS

Summary of descriptive statistics pertain to variables after screening and delete data are on table 1.

Table 1, results of descriptive statistics

Variable	Yield of owners	Commodity supply	Company size	Financial leverage
Mean	0/887012	/698 1557	20/13575	83555 0/5
Median	0/890012	/000 1448	17/80550	77551 0/9
Maximum	1/321751	/000 6378	58/58700	71746 6/4
Minimum	0/416885	/0000 251	7/894922	00416 0/4
Deviance	0/116137	/1752 654	8/911312	84231 0/3
Skewness	- 0/279852	/661602 1	2/349410	05732 4/7
Kurtosis	4/005525	/58627	8/603756	/15730

		10		22
Total	575/6710	10109 0/46	13068/10	/2754 542
Total deviance	8/740127	E+2/77 08	51458/64	/7501 459

Discuss Collinearity between independent variables: Collinear means relation between independent variables in model as if  $E(X1, X1) = Cov(X1, X1)$  is opposite zero. In order to recognize collinear, there are different methods including if collinear is on model, coefficient of determination is estimated and number of variables is less. Of course, it shall be noticed that collinear doesn't violate classic hypothesis and the estimators shall be compatible as for collinear but in this manner, coefficient of determination shall be high deviance. As result, this caused number of significant variables is reduced. In this study, in order to discuss collinear relation, Pearson correlation coefficient has been used when there is not strong correlation, between independent variables (less than 0/7) and shows collinear relation.

Table 3, results of collinear

Variable	Commodity supply	Company size	Financial leverage
Commodity supply	1/000000	/013456 0	/013108 0
Company size	0/013456	/000000 1	/033613 0
Financial leverage	0/013108	/033613 0	/000000 1

As indicated by above table, all coefficients are less than 0/7 and non-correlation hypothesis is accepted. Test of Hypothesis  
As for the results, test of model hypothesis is discussed.

#### 4.1. Result of first hypothesis of model

Table 4: Regression

Regression Coefficient	991 0/406	Variance Average for dependent variable	5975 3/90
Adjusted regression coefficient	989 0/208	Deviance of dependent variable	3497 4/42
Regression deviance	060 0/113	Residual squares	8646 1/01

F	955 450/7	Durbin Watson	5322 1/71
Prob	000 0/000		

As indicated by above table, regression coefficient is equal to 0/99 and adjusted regression coefficient is 0/98 as if 98% of changes for variable are 3 and Durbin-Watson statistics is more than 1/5 and significant level is 0/000.

#### 4.2. The results of Second Hypothesis

Table 5: Results of Regression for companies are growing

Regression Coefficient	0/997597	Variance Mean for dependent variable	612227 5/
Adjusted regression coefficient	0/996961	Deviance of dependent variable	402673 4/
Regression deviance	0/029974	Residual squares	169806 0/
F	1569/204	Durbin Watson	560050 1/
Prob	0/000000		

Table 6: Results of Regression for mature companies

Regression Coefficient	960688 0/	Variance Mean for dependent variable	421345 2/
Adjusted regression coefficient	950270 0/	Deviance of dependent variable	390458 2/
Regression deviance	076130 0/	Residual squares	159160 1/
F	/21738 92	Durbin Watson	390959 1/
Prob	000000 0/		

Table 7: Results of Regression for companies are dropping

Regression Coefficient	0/059770	Variance Mean for dependent variable	0/903471
Adjusted regression	0/041090	Deviance of	0/091239

coefficient		dependent variable	
Regression deviance	0/089345	Residual squares	- 1/935252
F	3/199669	Durbin Watson	0/935458
Prob	0/025132		

As indicated, total significant level is less than 0/05 for all three models in life cycle. Therefore, regression models are interpreted. But since Durbin-Watson statistics for companies are dropping and evolution are less than 1/5 and significant level for companies is 0/05 (0/1116), but for companies are growing, Durbin-Watson is more than 1/5 and significant level is less than 0/05, thus, researcher's hypothesis is confirmed on effect of Commodity supply on company performance in confidence level 95% during life cycle of company.

## 6. CONCLUSION

### 5.1. Results of first hypothesis

Commodity supply influences on company performance

As for results, variable coefficient for positive Commodity supply is 0/000127 and significant level 0/0000 and confirms hypothesis on significant relation between Commodity supply and performance in confidence level 95%, thus first hypothesis is confirmed.

This research findings are confirm to researches of Tomas and Zhang (2001), Basu and Wang (2011), Elside (2016) and Omrani (2009).

### 5.2. Results of first hypothesis

Effect of Commodity supply is different on company performance during life cycle

According to the obtained results because of total significant level is less than 0/05 for all three models in life cycle. Therefore, regression models are interpreted. But since Durbin-Watson statistics for companies are dropping and evolution are less than 1/5 and significant level for companies is 0/05 (0/1116), but for companies are growing, Durbin-Watson is more than 1/5 and significant level is less than 0/05, thus, researcher's hypothesis is confirmed on effect of Commodity supply on company performance in confidence level 95% during life cycle of company. This research findings are confirm to researches of Tomas and Zhang (2001), Basu and Wang (2011), Elside (2016) and Omrani (2009).

## 6. SUGESSTIONS

### 6.1. Suggestions derived from first hypothesis

To manage Commodity supply is different during life cycle of company and the managers shall manage different situations of Commodity supply and it is not equal to manage Goods supply. In this regard, it is advised that managers and experts to predicate number of Goods supply, profits and future sales during different life cycles to evaluate more information to reduce demand in market and make decision with more information. Thus, it is so suitable companies aware from changes in Commodity supply and also, Commodity supply shall be different during life cycle. For example, Basu and Wang (2011) in their research proved that the companies which maintain their Commodity supply in low level have a weak performance.

### 6.2. Suggestions derived from second hypothesis

It is advised that the managers discuss the factors like macro-economic factors and special environment, changes in receivable accounting, changes in capital, changes in profit margin, changes in administrative costs and profit quality, because the factors can enhance the relation between changes of Commodity supply and company performance.

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