

The Effects of Economic Sanctions on Profit Management in Companies Accepted in Securities Stock Exchange

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Abstract

In this study, the effective factors in profit management in companies accepted in the securities stock exchange, especially the effect of the figurative variable of the economic sanctions on profit management have been investigated. This study has been conducted based on experimental research design and statistical indexes of Regression Tableau Data have been used to analyze the data. Based on the research results with significant level of five percent, factors like the growth index and the company size have a direct relationship with profit management. However, economic sanctions are considered as a substitute for war and using violent force and have reverse relationship with profit management.

Keywords: Profit Management, Company Size, Economic Sanctions, Debt Ratio

1. Introduction

Economic ties comprise all types of economic relations including commercial and financial relations. Different countries make use of limited economic sanctions for their political intentions against target countries, but they have typically little effect. Today, most countries in the world are highly willing to attract foreign investments because of not enough internal resources for investment. Foreign investment is usually done in two forms: joint stock investment (indirect) and direct foreign investment. Purchasing bonds and company stocks in the stock exchange and purchasing trust funds in foreign banks are among the types of

stock investments in which the foreign investor does not have a direct role in managing the production unit and they also have no financial responsibility. The most important characteristic of joint stock investment is its instability. In other words, by selling their securities and stocks, foreign investors can transfer their investment to their countries or a third country at any moment. Therefore, in this study the effect of economic sanctions on profit management will be investigated.

In sum, it can be stated that investment is considered to be the driving force for economic growth and development in all the theories and patterns of economic growth. Accordingly, taking steps to attract enough investment to provide financial resources for the economic designs is one of the most important concerns for the economic decision makers in every society. If the present sanctions continue, for numerous reasons, the main effects of these sanctions will be inflation in the imported goods in the country which will increase the use of foreign exchange and inflation, but in return it is beneficial to domestic manufacturers who have undergone loss under the pressure of imports over the last three years.

2. Theoretical bases and research background

In the present study, parameters like company size, ownership structure, change in company's performance and predicting the growth of the future profits have been investigated as the effective factors in profit management. Here, the studies relevant to each of these parameters are explained briefly.

2.1. Company Size

Moses (1987) believes that the more the company size is, the more motivation the company manager will have for profit management. Because as companies become larger, managers' responsibility increases toward more beneficiaries. Biti et al. (2002) concluded that larger companies use more profit management than smaller companies. Mutsomoto (2002), Barton and Simco (2002) and Franckle et al. (2002) believe that if the company size increases, the likelihood to artificially achieve a predetermined index of profit will increase.

2.2. Economic Sanctions

The term economic sanctions means civilian measures negatively affecting the transfer of goods, services and investments to a specific country and their intention is to penalize or punish or force that country to adjust itself to the political goals of the sanction-imposing country or to show disapproval of the sanction-imposing country of the actions and behavior of that country. Thus, attention to the political and economic relations between Iran and the USA and investigating the effects of economic sanctions on the index of profit management is of great significance with regard to its influence on investors' decision-making in Iran.

Profit Management

The philosophy of profit management is benefiting from the flexibility of the standard methods and accepted principles of accounting. Research shows that companies' managers intentionally doctor the reported profits using the selection of their own specific accounting policies and changing the accounting estimates and committed items to reach their intentions (Miller and John, 402, 2001). Financial analysts expect that companies will reach the predictions made and there will be no contradictions, which is more probable for the

companies which are more reliable. Financial analysts and investors will be very unhappy with the difference between the predicted figures and the real ones (Cowling Wood, 2001).

These contradictions are used more with regard to profit management. In negative contradiction, profit owners consider profit management cheating while in positive contradiction they consider profit management to be a problem-free action in accordance with the management's discretion (Fridson and Alvarez, 11: 2002). "While most people think that smoothing out is a misuse of flexibility in reporting, but in our opinion, wise managers who intend to increase their companies' value, take some measures to increase the value of their companies by obeying a framework of legal commitments and accounting." (Kirschenheiter and Melomend, 2002). Contrarily, if the data on the financial lists is changed to be detrimental to profit owners, it is considered as management cheating toward personal intentions.

The definition of profit management: Sheper (92:1989): "profit management is the intentional meddling in the process of foreign financial reporting with the aim of earning profit." Hilly and Vehlen (368: 1999): "profit management occurs when managers use their personal judgments in financial reporting and manipulate transactions structure to change financial reporting. This is done either to deceive some of the profit owners about the company's economic performance or to influence the results of the contracts which are made only if they have personal profit."

Although these definitions are acceptable to a great extent, their functional application is a little difficult because the management's will and intention do not provide any eye witnesses. In a recent study, Bourfield and Komsky (2002), 10-year-old time sequence data was used to identify the presence and to determine the companies' average growth rate and the profits from the subsidiaries of these companies were also used to ensure profit management. The results of this study showed that smoothing out is done a little, though the justifiability of the experiment was not very high as well.

In an article called the effect of one-way sanctions of the USA on the US trade economy and international markets of energy, Behrouzifar 1383 stated that economic sanctions are the means of achieving political goals and intentions. The sanctions imposed on the target countries, while having direct effects on their economy, have some effects on the world economy and even the sanction-imposing country itself, as well. Therefore, in addition to dissatisfying its allies, the USA has jeopardized the security of energy supply and has suffered great losses in the form of export reduction and losing profitable markets and the opportunity to invest in the rich resources of these countries.

In another article called "the sanctions against South Africa: what did they do?" Lowee (1999) has investigated the economic sanctions imposed on South Africa in mid 1980s to force them end Apartheid regime. This study concludes that in the case of South Africa, sanctions should not be considered the only main, effective factor in changing the government.

Kim (2011) has studied the way that direct foreign investment affects economic sanctions in an article called " Assets repression? Direct foreign investment and making use of economic sanctions". The results of this study show that the effect of direct foreign investment depends on the form and especially the manner of direct foreign investment entry. Almost in every business job and occupation, unions are against economic sanctions and companies are often in agreement on using economic relations to reach foreign policy goals.

Barney et al. (1976) maintain that smoothing out is the means by which management achieves the expected profit in the framework of common accounting principles. The definition they

suggest is as follows: "smoothing out the profit comprises the intentional reduction of profit fluctuations to a level that seems normal to the company."

3. Research hypotheses

Based on the theoretical bases, current situation and research literature four hypotheses are presented as follows:

Hypothesis 1: Company size is effective in profit management.

Hypothesis 2: Debt ratio is effective in profit management.

Hypothesis 3: Economic sanctions are effective in profit management.

Hypothesis 4: growth index is effective in profit management.

4. Statistical population and samples

The population used in this study included the companies with accepted membership in securities stock exchange and this membership continued until the end of 1390.

5. Research model

Dependent variables

The dependent variable in this study is profit management which is calculated as follows:

$$NDA_{it} = \alpha_1 \left(\frac{1}{A_{it-1}} \right) + \alpha_2 \left(\frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} \right) + \alpha_3 \left(\frac{PPE_{it}}{A_{it-1}} \right) + \varepsilon_{it}$$

To calculate profit management equation (1), which is based on Jones' adapted model (1991), is used. In a model designed to investigate profit management in commercial units, Jones assumed that the involuntary committed items are constant during time.

where NDA_{it} is the involuntary committed items of company i in the current year (t),

ΔREV_{it} is the change in the company i revenue in the current year (t) relative to last year (t-1),

A_{it-1} is all the assets of company i in year t-1,

PPE_{it} is the gross properties, machinery and equipment of company i in year t,

$\alpha_3, \alpha_2, \alpha_1$ are specific parameters of the company,

And ΔREC_{it} is the change in received accounts of company i in the current year (t) relative to last year (t-1)

An evaluation of the current committed items is used as a criterion for profit management. The first stage of the calculation is related to the calculation of the change in the current assets (ΔSTD), the change in the cash ($\Delta CASH$), the change in the current account of long-term debts (ΔSTD) and the change in the current debts (ΔCL) in year t relative to year t-1 for each company i of the selected sample. Then all of the committed items (TA_{it}) in year t for each company i is calculated using equation (2).

$$TA_{it} = (\Delta CA_{it} - \Delta CASH_{it}) - (\Delta CL_{it} - \Delta STD_{it}) - DEP_{it}$$

Then specific parameters of the sample companies ($\alpha_3, \alpha_2, \alpha_1$) is evaluated using equation (3) for each company i in year t.

$$\frac{TA_{it}}{A_{it-1}} = \alpha_1 \left(\frac{1}{A_{it-1}} \right) + \alpha_2 \left(\frac{\Delta REV_{it}}{A_{it-1}} \right) + \alpha_3 \left(\frac{PPE_{it}}{A_{it-1}} \right) + \varepsilon_{it}$$

Where TA_{it} is the sum of all the committed items of company i in year t,

A_{it-1} is the total assets of company i in year t-1,

$\alpha_3, \alpha_2, \alpha_1$ is the estimation of OLS from specific parameters of the company,

$$DA_{it} = \frac{TA_{it}}{A_{it-1}} - NDA_{it}$$

ΔREV_{it} is the revenue of company i in year t after deducting the revenue of year t-1,

PPE_{it} is the gross properties, machinery and equipment of company i in year t.

Then involuntary committed items (NDA) of company i in year t is calculated using equation (1). If involuntary committed items (NDA) are deducted from the total committed items (TA), using equation (4) the voluntary committed items (DA) will be found.

Where DA_{it} is the voluntary committed items of company i in year t,

TA_{it} is the sum of committed items of company i in year t,

A_{it-1} is total assets of company i in year t-1, and

NDA_{it} is involuntary committed items of company i in year t.

Control Variables

In order to distinguish the effect of tax evasion on profit management from the effect of other variables, a set of control variables have been used. These variables include:

Company size ($SIZE_{it}$) which equals the natural logarithm of the whole sale of the company (REV_{it}) which is calculated from equation (6).

$$SIZE_{it} = \ln(REV_{it})$$

Debt ratio ($DEBT_{it}$) which equals the total debts ratio (L_{it}) to the total assets (A_{it}) of company i in year t which is calculated using equation (7).

$$DEBT_{it} = \frac{L_{it}}{A_{it}}$$

Growth rate (GROW) which equals the ratio of value of stock market to clerical value of capital owners' salary.

which in the whole model used in this study is as follows:

$$EM = \alpha_0 + \alpha_1 Dum + \alpha_2 Size_{it} + \alpha_3 DEBT_{it} + \alpha_4 GROW_{it} + \alpha_5 EM_{t-1} + \epsilon$$

5.1. Pattern Estimation

This pattern is tested using yoyoz software. For selection, the estimation method which is based on tableau data or combined data method, F limer statistic has been used. F limer statistic showed 2.24 with zero likelihood (probability) which confirms the method of tableau data and therefore with regard to this statistic and the test of tableau method data is acceptable. To decide whether to use constand effects method or accidental effects method, Husman test is used (Baltaji, 2005). The number of Husman test is 123.06 with zero likelihood which confirms the method of constant effects.

The method of estimating minimum generalized squares (GLS) is used in tableau data. Weighing in this study has been done based on the companies Cross-section (weights) and another statistic which is noteworthy is the Kai du Wald statistic in which the whole regression is meaningful (significant) considering the value of this statistic with zero likelihood. The LR test is the variance dissimilarity test and has a Chi 2 distribution. Zero assumption is based on similarity variance and the opposite assumption is based on dissimilarity variance. The estimated pattern in this study is as follows:

The results are as follows:

Redundant Fixed Effects Tests
Equation: EQ01
Test cross-section fixed effects

Prob.	d.f.	Statistic	Effects Test
0.0000	(91,271)	2.249994	Cross-section F

Correlated Random Effects - Hausman Test
Equation: EQ01
Test cross-section random effects

Prob.	Chi-Sq. d.f.	Chi-Sq. Statistic	Test Summary
0.0000	5	123.062129	Cross-section random

Table (2-4): estimating the research pattern by tableau data method

Dependent Variable: DA
Method: Panel EGLS (Cross-section weights)
Sample (adjusted): 1385 1388
Periods included: 4
Cross-sections included: 92
Total panel (balanced) observations: 368
Linear estimation after one-step weighting matrix
Period weights (PCSE) standard errors & covariance (d.f. corrected)

Prob.	t-Statistic	Std. Error	Coefficient
0.0001	4.066023	0.042234	0.171723 C
0.0946	1.677568	0.002921	0.004900 SIZE
			-
0.0000	-5.704822	0.026272	0.149877 DEBT
0.0644	1.856962	0.002380	0.004420 GROW
			-
0.0139	-2.477019	0.046163	0.114346 Dum
0.0000	8.118760	0.048484	0.393630 DA(-1)

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

0.005840	Mean dependent var	0.442169	R-squared
0.126915	S.D. dependent var	0.244561	Adjusted R-squared
3.301281	Sum squared resid	0.110371	S.E. of regression
2.335755	Durbin-Watson stat	2.237608	F-statistic
		0.000000	Prob(F-statistic)

Unweighted Statistics

0.011693	Mean dependent var	0.328297	R-squared
1.967254	Durbin-Watson stat	3.419732	Sum squared resid

With regard to the coefficient, a good ratio is obvious and the variables used in it show the explanatory power of this model to be 44% which is a good figure considering that the method used in this study is tableau data. Dorbin Wastson also indicates lack of self-correlation and shows 2.33. The F statistic in this ratio as well, rejects that coefficients equal zero. With regard to the likelihood the coefficients show the effectiveness and meaningfulness (significance) of the variables used in this study. The effect of figurative sanction variable on profit management is negative and meaningful (significant) and generally such sanctions lead to the reduction of stock owners' investment. The growth variable which is calculated from the ratio of the value of stock market to clerical value of capital owners' salary also leads to increase in profit management. Debt ratio which is obtained from the ratio of total debts (L_{it}) to total assets (A_{it}) of company i in year t shows a negative and meaningful (significant) effect on profit management. The company size which equals the natural logarithm of the whole sales shows a positive and meaningful (significant) effect on profit management in companies investigated in this study.

6. Conclusion

Profit is one of the most important indexes of accounting which has always been significant for different purposes like evaluation of the companies' stocks and management performance and so on. Until several recent years, most of the studies conducted on the effect of accounting profit on the price or effectiveness of the stocks, had not paid much attention to profit quality. But in recent years, following the bankruptcy of some major companies in the world, the financial researchers and analysts shifted their focus from profit quantity to its quality. Due to the importance of the effect of some regulations needed to achieve the desired profit quality, most countries have made efforts to provide such regulations. Among these regulations is the presence of an appropriate guideline system in economic companies and agencies which have been reinforced and improved by many countries. Likewise, knowing its significance, the securities and stock exchange department in Iran has been considering approving a bylaw in this regard whose execution can mean an improvement in the companies' management and financial reporting quality.

In general, it can be stated that economic sanctions can result in the inflation of intermediary and imported goods and an increase in the production costs and on the other hand, lead to losing some export markets and sources of foreign exchange. Finally, by increasing the risk of investment, these sanctions will decrease the expected and available profit of the agencies.

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