

## Investigating the Relationship between Weaknesses in Internal Control and Abnormal Production Costs of Companies Listed in Tehran Stock Exchange

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**Abstract:** Part of the Sarbanes–Oxley Act is to disclose weaknesses in the corporate internal control so that investors can use them to make the right decisions. Similarly, many analysts believe that real profit management can be a criterion for measuring the manipulation of a company's actual activities. Be a company. This study aims to examine the relationship between weakness in internal control and manipulation of the actual activities of companies listed on the Tehran Stock Exchange. In this study, weakness in internal control is an independent variable that is measured based on the model of Leonard et al. and manipulation of the actual activities of the company as a dependent variable that is measured based on Cohen's ministry model. To achieve the goal of this research, 94 companies listed on the Tehran Stock Exchange have been selected as a statistical sample of the research by systematic removal in the period 2010-2015 and they were examined using panel data. The results of this study revealed that there is a negative and significant relationship between weakness in internal control and abnormal production costs.

**Keywords:** Internal control, abnormal cost, Tehran Stock Exchange

### 1. Introduction

Generally, studies show that corporate earnings management or accruals can be modeled as an indicator of a company's actual performance. Gunny (2010, 855) states that managers adopt scheduling or structuring operations, investments, or financial transactions to influence accounting system outputs. New research has shown that accruals management techniques are used or substituted in favor of actual business transactions in a way that maintains or realizes the firm's performance.

Chan et al. (2008) found that for firms that reported weaknesses in internal control, there were many positive and absolute ratios of discretionary accruals compared to firms that did not report weaknesses in internal control. To prove this argument, through several observations, the relationship between weakness in internal control and the use of real activities has been investigated.

Weaknesses in internal control through problems related to misrecognition of profits, lack of segregation of duties, scheduling problems surrounding the end of the reporting period, and non-compliance with accounting policies (Ge and McVay, 2005), particularly regarding inventory, fair valuation of investments, and retirement pension plans are defined. Ge and McVay (2005) explain at least one example of a weakness in the annual internal control of companies in the archives of the Securities and Exchange Commission. Even this explanation made it clear that the Sarbanes–Oxley Act is effective in the internal control of companies.

While studying internal control auditing, regulators have recently debated whether auditors have the suitable experience to assess weaknesses in internal controls. Munsif et al. (2011) state that, after correcting the observed weaknesses in internal control despite reporting quality discretionary accruals companies, pay large audits for auditing for at least four years.

Furthermore, Ge and McVay (2005) indicate that the increase in internal control weakness is related to the lack of a classification of categories such as fixed assets account, and accounting policies. Likewise, the review of the Securities and Exchange Commission (2011) classifies indicators that increase internal control weaknesses, including unusual transaction control issues, accounting citations, policies or procedures, and the number and quality of audits. The planning of these functions proposes that actual management activities may be a hallmark of weakness in internal control.

Consequently, the main aim of the current study is to answer the basic question that what is the relationship between weakness in internal control and abnormal production costs of companies listed on the Tehran Stock Exchange?

### 2. Theoretical foundations of research

#### 2.1. Internal control

To define internal controls and their objectives and components (COSO), there are two traditional approaches. American standards are generally defined based on the COSO approach. From a corporate management perspective, internal controls are a tool to ensure the achievement of organizational goals. Nonetheless from the auditors' point of view, internal controls act as an information production system, and auditors evaluate internal control systems to ensure the reliability of the products of this system, which from their point of view are

accounting reports and financial statements. The higher the adequacy and quality of a factory and the less flawed the process, its products will most likely be of good quality. The same is true of the internal control system as a manufacturing plant. Then, the internal control system can also be considered as one of the audit evidence and any significant defect in it is considered as a limitation in the auditors' review (McNally, 2013)

## 2.2. Internal Audit

The International Association of Internal Auditors defines internal auditing as “a reassuring activity and independent and realistic consulting that is done to create value and improve the operations of the organization. Via a systematic approach, internal auditing helps the organization to achieve its goals and improve effective risk management processes, controls, and corporate governance.

The Institute of Internal Auditors (2001), to determine their role in units that do not have a defined risk management process, has also guided internal auditors. Practical advice indicates that although risk management is a key management responsibility, internal auditors can assist the organization in identifying, evaluating, and implementing risk management and controls to address those risks.

## 2.3. Weakness in internal control

Economic units must have an effective internal control system to attain short-term and long-term goals and to accomplish missions and visions, to maintain financial capacity and profitability, to deal with unexpected events, and to be accountable to the respondents (capital owners, government, etc.). Internal control is not a specific event or situation, but a set of sequential and pervasive actions that permeate all of the organization's activities. These actions take place within the scope of an organization's operations and uninterrupted. They exist in an all-encompassing and inseparable way in the path that manages and promotes the management of the organization (Sheri, 2007).

The Securities and Exchange Commission considers the implementation of Section 404 of the Sarbanes–Oxley Act to require an internal control framework. Usually, the board of directors is responsible for this framework and it should consist of five components. Managers of institutions and organizations pay a lot of attention to internal control systems because managers know very well that in the absence of an effective internal control system, the main mission of the company, maintaining profitability and minimizing unexpected events is very difficult and control system is the tool that causes it is probable for them to be more confident in accounting figures and information and to base the mentioned numbers and information on their decisions and also to assure them that the correct financial and administrative system and methods are fully implemented within their institution (Javid et al., 2015). Capital owners and other stakeholders in economic units think that internal controls are the means to achieve the goals of the economic unit (Hasas Yeganeh and Malekshah Results, 2006)

Important weaknesses in internal control can provide users with information about weaknesses and how management works, but in our country, there is currently no report entitled Internal Control Weaknesses Report. Though, after the approval of Article 35 of the Tehran Stock Exchange Law, the management is required to prepare a report on internal control as well as the design and implementation of an internal control report.

## 2.4. Profit management and activity manipulation

Corporate management seeks to smooth profits to show their company is stable, and by prioritizing and delaying the registration of items, they hide the changes in profits during financial periods. Experts agree, permitting diverse methods in accounting standards to allow managers to use each method according to their interests, although researchers believe that in the efficient markets, managers cannot mislead the capital market by smoothing profits. In any case, by disclosing more information, the management's power in smoothing profits is minimized, and it allows users of financial information to make informed decisions without having to pay more for information disclosure.

## 2.5. The relationship between weakness in internal control and manipulation of real activities

Manipulation of actual activities involves the manipulation of actual operations to increase short-term income and cash flows relative to the cost of future earnings. On the other hand, accruals-based earnings management naturally clarifies the final annual adjustments for using reported earnings. It is difficult for others to detect the manipulation of real activities. In particular, it is difficult for investors to detect the manipulation of real activities. Presumably, the manipulation of real activities occurs when accounting operations are under security control. This fact can be seen in the post- Sarbanes–Oxley era. Internal controls over financial reporting (ICOFR) should naturally reveal weaknesses in the firm's internal control. Only in a few cases can weakness in internal control possibly prevent the accountant from publishing an inadequate audit report. Research by Skaife et al. (2013) reveals that weakness in internal control is associated with high domestic trade.

## 3. Method

This research in terms of the method is casual correlation and in terms of purpose is applied. Likewise, in terms of epistemology, the current research is empirical, its reasoning system is inductive, and in terms of the type of study, it is field-library utilizing post-event historical information (i.e., the use of past information).

The study population is companies listed on the Tehran Stock Exchange, which includes all classes of listed companies (37 categories).

In the current research, the systematic elimination method for sampling is used, the criteria applied for sample selection are as follows:

1. The company must have been listed on the Tehran Stock Exchange before 2010 until the end of the fiscal year 2015.
2. The transactions of these companies should not have been interrupted for more than 6 months during the years 2010-2015 in the stock exchange.
3. To observe the uniformity of reporting dates and eliminate seasonal effects, their financial period should end at the end of the solar year.
4. Companies should not be part of banks and financial institutions (investment companies, financial intermediation, holding, and leasing), because the structures of strategic principles and financial disclosures are different in them.
5. Necessary access to their financial statements is possible so that the information of research variables can be extracted.

By applying the above restrictions, 94 companies listed on the Tehran Stock Exchange have been selected as an example of this research.

### 3.1. Research Hypothesis

There is a relationship between weakness in internal control of companies and abnormal production costs of companies listed on the Tehran Stock Exchange.

### 3.2. Research variables and the way of measuring them

#### Independent variable:

In the current study, the weakness in the internal control of companies is an independent variable that is defined as follows:

Leonard et al. (2016) propose a regression model (1) to calculate the weakness in internal control:

$$ICW_{i,t} = \beta_0 + \beta_1 * Frim. Age_{i,t} + \beta_2 * Frim. Size_{i,t} + \beta_3 * Ocf_{i,t} + \beta_4 * Audit_{i,t}$$

Relation (1)

#### Dependent variable:

In this study, the activities manipulation is the dependent variable that is defined as operational:

#### Abnormal production costs

Abnormal production costs are calculated through Relation (2) and the remainder of the regression model is considered as a measure of abnormal production costs.

$$RPROD_{i,t} = \frac{PROD_{i,t}}{TA_{i,t-1}} = \beta_1 * \frac{1}{TA_{i,t-1}} + \beta_2 * \frac{Sales_{i,t}}{TA_{i,t-1}} + \beta_3 * \frac{\Delta Sales_{i,t}}{TA_{i,t-1}} + \beta_4 * \frac{\Delta Sales_{i,t-1}}{TA_{i,t-1}} + \varepsilon_{i,t}$$

Relation (2)

The larger the size of  $RPROD_{i,t}$ , the more manipulative the actual activities of the company will be.

#### Control variables

The variables of capital expenditures and net operating assets can control the behavior of the variable of real activities manipulation, and according to Hajiha (2010), the variable of company leverage can better control the variable of weakness in internal control.

**Capital Expenditure:** Equivalent to a change in fixed assets

**Net operating assets:** It is obtained by deducting operating liabilities from operating assets, and operating assets are obtained by deducting cash and short-term investments from total assets, and operating debts are obtained by deducting debt beneficiaries from total liabilities. And operating debt is obtained by deducting the interest-bearing debt from the total debt.

**Leverage:** It is equal to the outside of the division of total debt over total assets.

Lastly, to do calculations and prepare data and information required for research and also their analysis, descriptive statistics such as mean and standard deviation and inferential statistics including multiple regression in Excel software version (2003) and Spss (version 16) and EViews (version 8) and MINITAB.16 are used

#### 4. Results

##### 4.1. Descriptive Statistics

**Table 1.** Descriptive analysis of source variables (research findings)

Variable	Sign	Min.	Max.	Mean	SD
Internal control weakness	ICW	14.000	48.000	33.090	6.181
Company age	AGE	4.000	84.000	35.100	16.008
Company size	SIZE	10.484	18.585	13.393	1.377
Return on assets	ROA	-0.302	0.634	0.153	0.117
Operating cash flow	CFO	-2.000	1.000	0.315	1.1916
Audit firm size	AUDIT	1.000	4.000	1.930	0.889
Capital expenditure	COPEX	389824.700	16487337.000	790.000	1390731.000
Net operating assets	NOV	112331.5	12713374	-2517746.000	813769.400
Debt leverage	LEVE	0.593	0.977	0.041	0.197

Table 1 reveals the descriptive statistics of factors affecting the weakness in internal control of companies based on Leonard et al.'s (2016) Views. This table indicates that the highest score of the weakness index in internal control is 48 and the lowest score of this index is 14 and its mean is equal to 33.090 which indicates the fact that the weakness index in the internal control of the research sample companies is higher than the average of 22.5, which was calculated in the third chapter.

Likewise, this table reveals that the average age of companies is equal to 35.100, which is also smaller than its average, i.e.  $84-4.2=40$ .

For the variable of company size, it can be indicated that the average assets of companies is  $e^{13.393}$ . Similarly, the average return on company assets shows that an average of 153% of company assets can be converted into cash.

Moreover, regarding the fact that there are different methods for calculating operating cash flow, according to the operational definition in this study, it was determined that the operating cash flow is 315 million rials.

Finally, for the size of the auditing firm, it can be mentioned that the sample companies are more inclined to use auditing firms with lower ratings because the average rating of the auditing firm is equal to 1.930, which is higher than the average of 1.5. It is necessary to mention that from the point of view of the stock exchange organization, the best rank for auditing institutions is the first rank and the worst rank is the fourth rank.

On the other hand, Table 1 shows that the average capital expenditure that shows changes in fixed assets is equal to 389824.700 million rials, and the average net operating assets which show the difference between current debt and current assets is equal to 5.112331. Finally, the average debt leverage is 0.593, which shows that approximately 60% of the assets of companies are debt.

##### 4.2. Normalization by the second data root method

The results of Kolmogorov–Smirnov test as well as the Shapiro-Wilk test show that because the significance level of all research variables is less than 0.05, none of the research variables have a normal distribution. Normalization methods are used to normalize the distribution of data. Table 2 presents the results of data normalization by the second data root method.

**Table 2.** Results of normalization by the second root method (source findings)

Variable	Sign	Kolmogorov–Smirnov test		Shapiro-Wilk test	
		Stat	Sig. level	Stat	Sig. level
Abnormal cash flow	RCFO	0.066	0.000	0.963	0.000

Abnormal cost of production	RPROD	0.316	0.000	0.560	0.000
Abnormal change in inventory	RINV	0.102	0.000	0.935	0.000
Index of manipulation of real activities	EORAM	0.068	0.000	0.967	0.000
Index of weakness in internal control	ICW	0.058	0.000	0.985	0.000
Capital expenditure	COPEX	0.244	0.000	0.598	0.000
Net operating assets	NOV	0.290	0.000	0.509	0.000
Debt leverage	LEVE	0.124	0.000	0.913	0.000

**4.3. Proof of weakness in internal control in companies**

Obligatory and sufficient condition to prove the existence of weakness in internal control in statistical sample companies is that the model of Leonard et al. (2016), be meaningful as follows:

$$ICW_{i,t} = \beta_0 + \beta_1 * Frim.Age_{i,t} + \beta_2 * Frim.Size_{i,t} + \beta_3 * Ocf_{i,t} + \beta_4 * Audit_{i,t}$$

Relation (3)

The results of this investigation are shown in Table 3:

**Table 3.** Results of proving the weakness in internal control of the source (research findings)

Model/Variable	Weakness in internal control	
	Coefficient	t
Intercept	(71.634)**	56.410
AGE	(-1.177)**	-22.754
SIZE	(-1.776)**	-19.542
ROA	(-21.583)**	-20.165
CFO	(-9.769)**	-9.269
AUDIT	(-2.515)**	-17.849
F-test	Stat	372.787
	Sig. level	0.000
Durbin-Watson		1.739
Coefficient of determination		0.769
Cointegration test	Kau	-10.044
	Sig. level	0.000

The results of Table 3 reveal that the statistic of Durbin-Watson is equal to 1.739, which is in the range of 1.5 to 2.5, and indicates that there is no correlation between the error components of the model. Also, the determination coefficient of this model is 0.769 and shows that 769% of the weakness in internal control is explained by the independent variables of Model 1-4, but due to the high determination coefficient, there is a fear that the results are false. The cointegration test has been used to disprove the claim that the results are false and the results of this test show that the significance level of the Kau statistic is equal to 0.000. Consequently, the claim that the results of the regression model of weakness in internal control are false is rejected. So it can be claimed that the model of weakness in internal control in sample companies in the years 2010-2015 is significant.

**4.4. Proof of the existence of manipulation of the real activities of companies**

Obligatory and sufficient condition to prove the existence of manipulation in the activities of statistical sample companies is that the model of Leonard et al. (2016), in the form of the following three models, is significant:

Abnormal production cost model:

$$RPROD_{i,t} = \frac{PROD_{i,t}}{TA_{i,t-1}} = \beta_1 * \frac{1}{TA_{i,t-1}} + \beta_2 * \frac{Sales_{i,t}}{TA_{i,t-1}} + \beta_3 * \frac{\Delta Sales_{i,t}}{TA_{i,t-1}} + \beta_4 * \frac{\Delta Sales_{i,t-1}}{TA_{i,t-1}} + \mu_{i,t}$$

Relation (4)

**Table 4.** Results of proving the existence of manipulation of real activities in source companies (research findings)

Model/Variable	Abnormal cash flow		Abnormal production costs		Abnormal changes in inventory	
	Coefficient	t	Coefficient	t	Coefficient	t
Intercept	0.057	0.372	5.422	3.374	0.260	1.757
$\frac{TA_{i,t-1}}{Sales_{i,t}}$	-29810.261	-0.931	(1.903)**	5.694	-45167.077	-1.465
$\frac{\Delta Sales_{i,t}}{TA_{i,t-1}}$	(0.164)**	20.511	(0.314)**	3.493	(0.297)**	35.806
$\frac{\Delta Sales_{i,t}}{TA_{i,t-1}}$	0.010	1.530	-0.066	-1.005	-	-
$\frac{\Delta Sales_{i,t-1}}{TA_{i,t-1}}$	-	-	1.036	2.023	-	-
F-test	statistics	417.380	23.456	938.906		
	Sig. level	0.000	0.000	0.000		
Durbin-Watson	2.037		2.018		2.352	
Determination coefficient	0.689		0.107		0.833	
Cointegration test	Kau statistics	-2.986	-3.219	-3.028		
	Sig. level	0.000	0.000	0.000		

According to Table 4, it can be seen that in all three mentioned models, the significance level of the Fisher test is less than 0.05 and as a result, all regression models of abnormal cash flow, abnormal production costs, and changes in abnormal inventory are significant. On the other hand, the Durbin-Watson statistic is in the range of 1.5 to 2.5 for all three models, which shows that the model errors are independent of each other. On the other hand, the determination coefficient for the abnormal cash flow model is 0.689, the model of abnormal production costs is equal to 0.107 and the model of change in the inventory of abnormal goods is equal to 0.833. Also, to refute the claim that the regression was false, the Kau cointegration test was used, which showed a significant level of less than 0.05 for all three models. The results obtained from regressions are not false and this test calculated with confidence from the obtained coefficients of the remaining models and used them in the research hypothesis.

In this way, the existence of manipulation of real activities is also proven as a weakness in internal control, so the main hypotheses of the research can be tested with confidence.

**4.5. Model estimation**

After doing correlation tests and examining the correlation relationships between variables, it is time to examine the causal relationships between the variables. The best estimation model should be selected from the estimation models. Table 5 describes how to estimate the model.

**Table 5.** Estimation of Test Models of Source Hypotheses (Research Findings)

Model	Durbin-Watson	Breusch–Godfrey test		Breusch–Pagan test		Chow test		Hausman Test		Estimation model
		Statistics	Sig. level	Statistics	Sig. level	Suggested	Sig. level	Statistics	Sig. level	Suggested
Sub-hypothesis 1-2	1.869	1.218	0.296	2.690	0.030	1.297	0.044	5.011	0.286	PANEL-PLS

Similarly, Based on Table 5, it can be seen that for the research hypothesis model, the value of the Durbin-Watson statistic is equal to 1.869, which is between open (2.5, 1.5) and shows that there is no correlation between the error components of the model. On the other hand, the value of the Breusch–Godfrey test statistic is equal to 1.218 and its significance level is equal to 0.296, which shows that there is no cross-sectional or periodic correlation

between the error components. On the other hand, the significance level of the Breusch–Pagan test statistic is equal to 0.030 (less than 0.05), which indicates that there is no problem of inequality of residual variance, so the one-sided ordinary least squares regression model is proposed. On the other hand, the significance level of the Chow or Limer test is equal to 0.044 (less than 0.05), which indicates that the use of the panel data method against integrated data is confirmed. Finally, because the significance level of the Hausman test is 0.286 and greater than 0.05; therefore, the use of the random effects method against the use of fixed effects is also rejected. Therefore, the best estimation model for the research hypothesis is to use a regression model of ordinary least squares using panel data.

**4.6. Data durability test**

Before examining the results of tests of research hypotheses by regression method, it must first be ensured that the data is durable. Otherwise, the research regression will suffer from false regression. For this purpose, the Im, Pesaran, and Shin, Augmented Dicky Fuller and tests were modified and the Philips Pron tests were used, the results of which are shown in Table (6).

**Table 6.** Results of durability test of variables (research findings)

Sign	Im, Pesaran, and Shin		Augmented Dicky Fuller		Philips Pron	
	Statistic	Sig. level	Statistic	Sig. level	Statistic	Sig. level
RCFO	-13.507	0.000	124.666	0.000	18.421	0.000
RPROD	-12.878	0.000	118.137	0.000	18.421	0.000
RINV	-13.598	0.000	125.524	0.000	18.4207	0.000
EORAM	-12.383	0.000	112.829	0.000	18.421	0.000
ICW	-14.669	0.000	135.934	0.000	18.421	0.000
COPEX	-25.271	0.000	173.748	0.000	173.655	0.000
NOV	-24.733	0.000	174.620	0.000	174.606	0.000
LEVE	-26.678	0.000	169.844	0.000	169.454	0.000

According to Table (6), the statistical significance level of Im, Pesaran, and Shin, Augmented Dicky Fuller and Philips Pron is less than 0.05 for all variables. Therefore, the null hypothesis regarding the durability of the variables is rejected and the research variables are assumed to be durable. Therefore, multiple regression tests can be used with confidence.

**4.7. Research Hypothesis Test Results**

The regression model (6) is used to test the research hypothesis.

$$RPROD_{i,t} = \beta_0 + \beta_1 * ICW_{i,t} + \beta_2 * COPEX_{i,t} + \beta_3 * LEVE_{i,t} + \beta_4 * NOA_{i,t} + \epsilon_{i,t}$$

Relation (5)

To confirm the hypothesis, regression model 5 must be significant, and secondly, the ICW<sub>i,t</sub> variables be significant in the above regression model. As previously inferred from the model estimation section, the ordinary least squares regression method with panel data should be used to estimate the hypothesis model. Table 7 shows the results of testing the research hypothesis.

**Table 7.** Results of the source research hypothesis test (research findings)

Dependent variable: Abnormal production costs					
Dependent variable symbol: RROD					
Number of views: 564					
Estimation model type: PANEL-PLS					
Regression model:					
$RPROD_{i,t} = \beta_0 + \beta_1 * ICW_{i,t} + \beta_2 * COPEX_{i,t} + \beta_3 * LEVE_{i,t} + \beta_4 * NOA_{i,t} + \epsilon_{i,t}$					
Variable	Sign	Coefficient	t	Sig. level	Relationship type
Intercept	C	0.137	1.356	0.176	Meaningless

Index of weakness in internal control	ICW	-0.006	-2.291	0.022	Reverse
Capital expenditure	COPEX	0.000	-5.102	0.000	Direct
Net operating assets	NOV	0.000	-0.079	0.937	Meaningless
Debt leverage	LEVE	0.113	1.348	0.178	Meaningless
F-test	Value	1.804	Durbin- Watson	2.271	
	Sig. level	0.000			
	R <sup>2</sup>	0.122			
Cointegration test	Kau	-2.445			
	Sig. level.	0.000			

According to Table 7, it can be seen that the significance level of Fisher statistic (0.000) is less than the accepted error level (5%) and the whole regression model is significant. On the other hand, the ICW variable is also significant in the 4-6 model because its significance level is equal to 0.000, which is less than the accepted error level. Consequently, it can be concluded that the variable of weakness in internal control has a significant relationship with the variable of abnormal production costs. Likewise, the statistic of Durbin-Watson is equal to 2.271, which shows that its value has increased and improved compared to the original panel after using the integrated data method. On the other hand, the value of -0.006 for the beta coefficient of the size of the weakness variable in internal control is evidence that by increasing one unit of weakness in internal control, we will see a decrease of 0.006 units in the unusual production costs of companies. The value of 0.122 for the determination coefficient also shows that the independent variables of the regression model explain only 12.2% of the dependent variable. Though, regarding the fact that the determination coefficient shows a low numerical value, there is a fear that the selected regression model is false. Consequently, a collective test has been performed to reject the claim that the regression results are false, and the results of this test show that the significance level of this statistic (0.000) is less than 0.05. so the claim that the regression results are false and the obtained results are assumed to be reliable. So, the relationship between weakness in internal control and abnormal costs is proven. Therefore, it can be concluded that the sub-hypothesis 1-2 is confirmed.

### 5. Conclusion:

In the current study, a comprehensive analysis of the relationship between weakness in internal control and manipulation of real activities was done in companies listed on the Tehran Stock Exchange includes 6 years based on financial statements between 2010 and 2015 (94 companies). In this study, weakness in internal control with the help of the idea of Leonard et al. (2016) and manipulation of real activities based on the three models of Cohen Zarowin (2010) which Leonard et al. (2016) also used.

The results of the research hypothesis that the relationship between weakness in internal control as an independent variable and abnormal production costs as a dependent variable by considering control variables (capital expenditures, net operating assets, and debt leverage) have been explained and evaluated for the test period.

Based on the results, it can be said that in the test period; the research hypothesis with the model test includes [weakness in internal control with abnormal production costs], the model of this hypothesis at the level of 95% confidence is meaningful and reliable. In this study, by testing this model, a negative and significant relationship was found between the independent variable of weakness in internal control and the dependent variable of abnormal production costs.

Based on the findings of this study and according to the findings of the research hypothesis, it was found that there is a negative and significant relationship between weakness in internal control and abnormal production costs in companies listed on the Tehran Stock Exchange. So, stakeholders, shareholders, and investors are encouraged to keep this in mind.

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