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Research Article

The Role of Intellectual Capital Components on the Quality of Internal Control and Financial Restatements in Iran

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Abstract

In the present study, we examined the impact of firms' intellectual capital components on the quality of internal control and financial restatements in Iran.

Data obtained from the audit reports and financial statements of 116 companies listed on the Tehran Stock Exchange over the period 2012 to 2016.

The hypotheses testing results showed that none of the human, structural, and communicational capital coefficients have a significant relationship with the quality of internal control and financial restatements. Our findings could indicate that firms consider little value to human resources and its management during the examination period. Our study results do not deny the importance of human resources in implementing the internal control process.

The study outcomes may benefit the impact of intellectual capital on internal control and restatement in developing countries.

Keywords: intellectual capital, quality of internal control, financial restatements.

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1. Introduction

Intellectual capital is one of the important factors in firm efficiency, which is a proportion of the necessary resources required for the success of a knowledge-based economy (Ujwary-Gil, 2012). Implementing effective internal control in firms could provide reasonable confidence (not absolute) about the ability to trust management's financial information and protect shareholders' equity and financial creditors. By insisting on intellectual capital, a considerable difference is evident between traditional and modern economies, which inclines the firms toward competitive advantages. According to resource theory, organizations' human resource is the only infrequent source, which could not be copied easily by the rivals (Chen, Liaw & Lee, 2003) and result in a sustainable competitive advantage. The presence of an efficient and positive intellectual capital, which is a combination of human, structural, and communicational capital, could elevate firms' efficiency and step up the equity value (Barnes and McClure, 2009). The complexity of operations in firms and the subsequent changes in the world economy have led to a better understanding of the difference between traditional performance monitoring solutions and modern organizational ethical approaches (e.g., staff self-control). Senior managers are more flexible about using intellectual capital to plan operational activities (Datta, Guthrie & Wright, 2005). In addition, intellectual capitals contribute significantly to operational costs and could affect the processes of firms' internal control and net profit (D'Aquila & Houmes, 2014). Thus, to achieve the goals of an economic enterprise and the effectiveness of operation is the main objective of effective controls is proportionate with the managerial needs in the field (Hoitash, Hoitash & Bedard, 2008). Strong human capital and structure control prevent people from different levels from abuse of invisible behaviors. Previous research studies revealed that the more the weaknesses in internal control of resources exist, the more the exploitation from the part of management happens (Cheng, Dhaliwal & Zhang, 2013). Moreover, firms' managers with lower quality of financial reporting are more inclined to their organizational resources (Biddle et al., 2009; Garcia-Teruel et al., 2009; Huang & Zhang, 2011; Cheng et al., 2013). Therefore, there is a relationship between firms' resource allocation (for example, allocation of intellectual capital) and financial reporting quality (Qi, Li, Zhou & Sun, 2016). Thus, this paper focused on a connection between intellectual capital allocation, financial reporting quality, and the restated financial statements. The related literature considered the impact of SOX legislation before and after implementing internal control and the board characteristics' impact on disclosure of internal control weaknesses (Zhang et al., 2007; Lin et al., 2011). In addition, a comprehensive review carried out on the Board and CEOs' characteristics including, experience, independence, expertise, and the impact of workflow management on the quality of internal controls (Srinivasan, 2005; Johnstone et al., 2011; Hoitash et al., 2009; Haynes & Hillman, 2010; Chen Lin et al., 2014). However, none of the studies has studied the role of strategy, communicational network within firms, knowledge, ability, and the culture of all organizational employees.

In contrast, these are considered as the main elements of firm intellectual capital. Thus, given the prominent role of intellectual capital in creating value for the firm, studying the relationship between the organization's intellectual capital in improving internal controls and the restatement of financial statements is useful and relevant. Also, intellectual capital is a full-fledged issue (Cuganesan, Boedker, and Guthrie, 2007). Researchers have taken an interest in discussion on how to use intellectual capital accounts qualitatively and quantitatively (Dumay,2009; Dumay&Roslender,2013; Rooney &Dummay,2015).

2. Literature and Hypotheses Development

2.1. Intellectual capital

From the experts' perspective, intellectual capital consists of three components: human, structural, and communicational. The human capital of an organization involves skill, expertise, problem-solving ability, and leadership styles (Brooking, 1996). Human capital, as the basis of intellectual capital, results in improved performance, and creates profits for the firm (Chen et al.,2004). The most important human capital indicators are the professional qualifications of key employees, education, experience, and careful distribution of responsibilities (Rodov & Leliaert, 2002). Structural capital includes databases and organizational charts and instruction to implement the processes, strategies, and executive programs (Roos et al., 1997). Communicational capital knows marketing channels and relationships with customers, which are the decisive factors in reflecting intellectual capital in its business performance (Chen et al. 2004). Recent changes in the global economy, the complexity of firms' operations, dynamic and competitive environment make further understanding for managers of industrial units about the difference between traditional solutions of monitoring performance and new value-approaches in organizations (e.g., staff self-control). By using the intellectual capital, management has greater flexibility to make strategic planning and operational activities of the organization. Intellectual capital is a combination of tangible and intangible assets, and it has a direct effect on those unseen financial statements, which can improve the firm's financial performance. Therefore, intellectual capital has become one of all organizations' main priorities (Green, 2007; Cohen & Kaimenakis, 2007). Conducted research studies in this field have proved that investing in human resources is necessary to attract and develop the organizations' knowledge and skills (Yellen, 1984; Titman and Wessels, 1988; Laffont & Tirole, 1988).

During his research, Wickramasinghe (2015) proved that organizations need to involve their human resources more and expand their capabilities to improve their services and products. He revealed in his research that human resources directly impact the quality of services provided by companies.

Thomas (2003) investigated the effect of the use of intellectual capital information by stock analysts. He concluded that those who only considered annual reports based on decision-making had lower average income and profit predictions than analysts who considered annual reports information and intellectual capitals.

Barnes and McClure (2009) reported that almost half of Australia’s economy is related to intellectual capital. They also stated that higher growth of investment was in structural capital. They showed that positive and efficient intellectual capital could increase firms' productivity and efficiency and enhance a firm's equity value.

Coram (2010) showed that using financial information with non-financial performance indicators related to resource allocation strategies such as intellectual capital positively affects estimating investors' and analysts' stock price.

Maditinos et al. (2010) studied the impact of intellectual capital on market value, and firms' financial performance was under investigation using 96 Greek firms' data. Their results indicated a significant relationship between human capital and returned on earning (ROE). However, there was no relationship between other intellectual capital components and other financial performance (ROA and GR).

Ting and Lean (2009) examined the role of intellectual capital on firms’ financial performance from 1999 to 2007. Results illustrated that intellectual capital is positively related to the profitability of the enterprise.

Guo et al. (2016) noted that employment policies and relationships between staff play a vital role in improving internal control. They showed that paying more attention to employees' benefits and motivating them are two effective factors to reduce human capital

errors. It could lead to an increase in the effectiveness of internal control and restatement of financial statements.

2.2. Internal control

Internal control is a process influenced by the Board of Directors, management, other employees of the enterprise, procedures, and policies which are designed to establish acceptable confidence to achieve organizational goals related to reporting, operations, and compliance(COSO, 2013; Lawrence, Minutti-Meza, and Vyas, 2014). Improving the quality of firms' financial reporting, identifying points of weakness in the controlling process, and well-timed correction are other basic objectives that make firms use the internal control process (Qi, Li, Zhou & Sun, 2016). Doyle et al. (2007) showed that weak points of internal control decrease financial statements' quality. Qi, Li, Zhou & Sun (2016) declared that effective internal control over financial reporting creates order in the capital market. Therefore, it would reduce agency problems. They also demonstrated a high quality of financial reporting impairs managers' ability to misuse firms' resources. Gao&Jia (2015) studied the impact of internal control weakness on financial reporting and protection of firms' resources. They stated that the firms' resources with weak internal control are less valuable to investors. They have also shown that the consequences of a negative assessment of firms' internal control are largely related to the financial reporting process. Annual reports of firms with weak internal control are less valuable to investors. Researches (Hochberg et al., 2006; Ashbaugh-Skaife et al., 2008; Petrovits et al., 2011) also confirmed the existence of strong controls could lead to understandable, exact, and accurate financial reporting. This is crucial for investors and users and draws up their confidence in the reports presented. According to the research results conducted by the Association of Chartered Accountants of America, internal control weakness is the most important reason for fraudulent financial reporting.

Eldridge, van Iwaarden, van der Wiele, & Williams (2013) Stated and developing a comprehensive quality management approach, accountants and economists have also studied the process of financial control. Still, MCS's use, which involves simultaneous attention to human, physical, and financial resources, makes the work process be managed better in the condition of uncertainty.

The human resources of each firm are the executives of controlling processes.

Ge&Mcvay (2005) and Doyle et al. (2007) showed a lack of qualified staff with technical expertise in Generally Accepted Accounting Principles. Securities and Exchange Commission are the common causes that make firms internal controls ineffective. Firms' commitments to attract, develop, retain, and maintain qualified human resources in support of organizational goals are the basic principle of the internal control framework. Therefore, human resources are the key elements of the internal environment (D'Aquila & Houmes, 2014). Researches in the field of restatement of financial statements have also proved that human errors and lack of skills and expertise in the application of accepted accounting principles are other reasons to restate financial statements (Hennes, Leone, and Miller, 2008; Acito, Burks, and Johnson 2009; Usvyatsky 2013). Accordingly, we raise the first hypothesis of the study as follows:

H_1: There is a significant relationship between a firm human capital coefficient of efficiency and the quality of internal controls and financial restatement.

The control environment is a set of standards, processes, and guidelines that provide a basis for internal controls across an organization (COSO[1], 2013). The control environment has a comprehensive effect on the entire system of internal control.

[1] -Committee Of Sponsoring Organizations of the Treadway Commission (COSO)

Information and communications are other components of the internal control framework. Internal and external communications are sources of information. External communications are useful in the process of internal control in two ways. First, it provides access to relevant external information. Second, it is related to the provision of information for outsiders and responds to their requests and expectations (D'Aquila, Jill. M. 2013). They also relate the structural capital of a series of guidelines to implement processes. Executive programs are also included in the existing knowledge of communicational channels. The second and third hypotheses in this study are as follows:

H_2: There is a significant relationship between a firm structural capital coefficient of efficiency and the quality of internal controls and financial restatement.

H_3: There is a significant relationship between a firm communicational capital coefficient of efficiency and the quality of internal controls and financial restatements.

3. Research Methodology

The present study aims to survey the effect of intellectual capital components on companies listed on the Tehran Stock Exchange. Given that, this project is practical and is considered as a dynamic panel regression study. The study is carried out throughout 2012-2016, and the statistical population is all companies listed on the Tehran Stock Exchange. Companies should have presented their financial statements, audit reports, and the required information to the stock exchange period under review regarding the study's time. To have a unified procedure and sample, companies under study did not change their fiscal year. Concerning the inflationary condition in Iran and its impact on companies' financial policies, the desired companies should have no trading interval for more than three months (have continuous capital market activity). Hence, given the mentioned terms, a total of 116 companies were selected for the study. Rahavard-e- Novin Software was used to gather the required data and financial information of variables from the financial statements and audit reports, which were available on the Codal Website (www.codal.ir) the supervision of the Tehran Stock Exchange.

3.1. Variables

3.1.1. Dependent variable- the status of internal control

The number of weaknesses of internal control is the dependent variable of the study. To measure the number of internal control weaknesses, reports of dependent auditors and authorized inspectors of companies available in the comprehensive information system for publishers of securities (Codal), under the supervision of the Tehran Stock Exchange, were used. The Maximum reported weakness cases in the auditor's report were about lack and inappropriateness of cost calculation system, lack of sufficient insurance coverage for fixed properties, and lack of proper warehouse and not regulating the laws of the Tehran Stock Exchange.

3.1.2. Independent variable- Intellectual capital and its components

In this study, independent variables include intellectual capital and its components: Human, structural and communicational capital, which is calculated based on the Pulic model (2000). Pulic raised the measurement model of intellectual capital in 1997. He developed the model in 1998 and completed it in 2000. According to this model, value-added resulting from resources of the current year is calculated based on the following relation**:**

$$VA=OP+EC+D+A \quad (1)$$

OP=Operating profit of the present year

EC=Labor costs in the current year

D= The cost of depreciation of fixed assets in the current year

A=Cost of intangible assets amortization in the current year

Pulic introduced criteria for measuring intellectual capital under three criteria: the value-added coefficient of structural, communicational, and human capital.

$VAIC_i = HCE_i + SCE_i + CEE_i$

$VAIC_i$: Value-added coefficient of the intellectual capital of firm i

HCE_i: Human capital efficiency coefficient of firm i

SCE_i: Structural capital efficiency coefficient of firm i

CEE_i: communicational capital efficiency coefficient of firm i

Salary is one of the indicators of firms' human capital, so human capital efficiency is calculated as follows, which shows that for every Riyal (Iranian currency) spent for the staff, how much value-added will be achieved in Riyals.

$$HCEi = \frac{VA}{HC}$$

Where human capital includes direct labor, indirect labor, and salary of sales sectors, marketing, and administration. Pulic stated there is an inverse proportional relationship between salary and structural capital. In this model, structural capital is calculated as the difference between the values added minus human capital.

$SCE_i = 1-(HC/VA)$

The efficiency coefficient of communicational capital is calculated as follows:

$$CEEi = \frac{VA}{CE}$$

Where CE is the book value of the net assets of the firm.

3.1.3. Control variables

Based on previous research (Ge&McVay, 2005; Ashbaugh et al., 2007; Doyle et al., 2007), some control variables documented that they relate to internal control weaknesses entered the model. These control variables include 1.The complexity of operations (Presence of external parts) 2. Organizational changes (Integration and combination) 3. Indicators of resource limitation (loss, the logarithm of the market value) 4) accounting tools to measure risk (Sales growth, inventory). Control variables related to firm status include size and financial leverage. The larger the firm's size, the more objective guidelines and procedures will produce, and the accounting errors will be reduced to a minimum, while this is not possible in small firms with limited financial resources. Therefore, more errors are expected to be found in the presentation of accounting information in these firms (Guthrie & Abhayawansa, 2016). Changing accounting figures is one way that managers use to report firm status in a better situation. High financial leverage is a sign of financial problems and pressures—control variables associated with firms' managerial factors, including management tenure and change management. Senior managers have a prominent role in the enterprise; therefore, they can ignore internal controls and influence financial reporting (Moore, 2007)

3.2. Research models

The model used in this study comes from studies of (Guo et al., 2016 and Morris, 2011):

Model (1)

$$\text{Count-Weak}_{it} = \gamma_{0+} \gamma_1 HCE_{it} + \gamma_2 \text{ERS}_{it} + \gamma_3 \text{Foreign}_{it} + \gamma_4 M\&A_{it} + \gamma_5 Loss_{it} + \gamma_6 Salegrw_{it} + \gamma_7 Invtat_{it} + \gamma_8 \text{Log age}_{it} + \gamma_{10} \text{Lev}_{it} + \gamma_{11} MDUR_{it} + \gamma_{12} MCH_{it} + \text{Size}_{it} + \varepsilon_{i,t}$$

The variables used in the above model:

A number of internal control weaknesses reported.

Count-Weak $_{it:}$ Auditing of firms

$HCE_{it:}$ Calculated human capital efficiency coefficient of firm i following Pulic model (2000) in year t.

ERS $_{it:}$ Control variable equals one if the firm i restates its financial statements in year t.

Foreign $_{it:}$ Control variable equals 1 if the firm has the non-zero conversion of foreign exchange, otherwise equals zero (benchmark of operations complexity).

M &A_{it}: Control variable equals 1 if the firm is reported in the acquisition of the cash flow statement; otherwise, it equals zero.

$Loss_{it:}$ Control variable equals 1 if the firm is unprofitable; otherwise equals zero.

$Salegrw_{it:}$ Percentage of changes in sales of firm i in year t.

$Invtat_{it}$: Ratio of inventory to total assets of firm i in year t.

$LogMKTV_{it:}$ The natural logarithm of the market value of capital of firm i in the year t.

Log $age_{it:}$ The natural logarithm of the number of years that firm has been a member of the Tehran Stock Exchange.

Lev $_{it:}$ Financial leverage of firm i in year t.

$MDUR_{it:}$ The period of management tenure of firm i equals the number of years of chief executive officer tenure in this capacity.

MCH_{it}: Management change without a change of CEO over the previous year equals1 otherwise equals zero.

Size $_{it}$: The natural logarithm of the stock market value of firm i in the year t

Model (2)

Count-Weak $_{it}$= γ_{0+} $\gamma_1 SCE_{it}$ + γ_2 ERS $_{it}$+ γ_3 Foreign $_{it}$+ γ_4 M &A_{it}+ $\gamma_5 Loss_{it}$ + $\gamma_6 Salegrw_{it}$+ $\gamma_7 Invtat_{it}$+ $\gamma_8 LogMKTV_{it}$ + γ_9 Log age_{it} +γ_{10} Lev $_{it}$+ $\gamma_{11} MDUR_{it}$+ $\gamma_{12} MCH_{it}$+ γ_{13} Size $_{it}$ +$\varepsilon_{i,t}$

Model (3)

Count-Weak $_{it}$= γ_{0+} $\gamma_1 CEE_{i\ t}$ + γ_2 ERS $_{it}$+ γ_3 Foreign $_{it}$+ γ_4 M &A_{it}+ $\gamma_5 Loss_{it}$ + $\gamma_6 Salegrw_{it}$+ $\gamma_7 Invtat_{it}$+ $\gamma_8 LogMKTV_{it}$ + γ_9 Log age_{it}+γ_{10} Lev $_{it}$+ $\gamma_{11} MDUR_{it}$+ $\gamma_{12} MCH_{it}$+ γ_{13} Size $_{it}$ +$\varepsilon_{i,t}$

4. Empirical Results

4.1. Descriptive statistics of variables

Table 1 shows the descriptive statistics of the study variables. As can be seen, the structural capital coefficient, which includes organizational charts, instructions to implement processes, and administrative programs, has allocated the minimum average in intellectual capital components. The greatest number of internal control weaknesses is related to a firm that has been unprofitable during the whole period of examination. Management has changed three times during the investigation.

4.2. Validity of research variables

Prior to hypotheses testing, the static structure of research variables was checked by Haderi tests to prevent well-dressed false regressions—the results of this study presented in Table 2. A significant level of independent, dependent, and control variables of the mentioned test is smaller than 0.05, which indicates static variables were used in the study and reject the null hypothesis of this test (variables have unit root (they are non-viable).

Table 1: Descriptive statistics of research variables

Variable	Mean	Median	Maximum	Minimum	Std. Dev.
SCE	0.5738	0.685	7.44	-8.94	1.91
HCE	3.206	2.695	10.5	-1.17	2.66
CEE	1.3208	0.935	4.27	0.000	1.05
VAIC	5.1016	4.565	14.85	-8.78	3.92
ERS	0.14	0.000	1.000	0.000	0.35
Count-Weak	5.54	5.000	18.000	0.000	4.16
M & A	0.26	0.000	1.000	0.000	0.44
SIZE	8.5148	8.475	10.74	6.6	1.02
Foreign	0.34	0.000	1.000	0.000	0.48
Log age	1.108	1.04	1.58	0.78	0.22
MDUR	1.6	1.000	4.000	1.000	0.83
MCH	0.54	1.000	1.000	0.000	0.50
loss	0.12	0.000	1.000	0.000	0.33
INVTAT	0.2454	0.23	0.51	0.07	0.09
Salegrw	0.21	0.15	2.5	-0.33	0.39
Lev	2.6474	1.575	41.74	0.63	5.70

Table 2: Test result of research variables validity

Variables	Hadri Z-stat		Variables	Hadri Z-stat	
	Statistic	Prob.		Statistic	Prob.
SCE	6.93	0.000	Log age	7.45	0.000
HCE	3.43	0.000	MDUR	4.53	0.000
CEE	4.43	0.000	MCH	2.44	0.007
VAIC	4.58	0.000	loss	2.04	0.021
ERS	2.1	0.012	INVTAT	5.1	0.000
Count-Weak	5.01	0.000	Salegrw	3.35	0.000
M & A	3.1	0.000	Lev	7.05	0.000
SIZE	4.1	0.000			
Foreign	3.302	0.000			

4.3. Test of selecting a suitable pattern for the regression model

To select a suitable pattern for a regression model, prior to hypotheses testing, we examined the panel type of data by using the Chow test, and we examined the fixed or random-effects model by using the Hausman test. In Table 3, the Chow test's significance level and the result of the test of used models data were provided. Given that the random effects approach is the null hypothesis in the Hausman test and considering the significance level obtained from models one to four shown in Table 4, this table's results are as follows.

Table 3: Results of the Chow test

Result	Sig.	statistics	Chow test
Panel data	0.0082	3.26	Model 1
Panel data	0.009	0.18	Model2
Panel data	0.0028	3.9	Model3

Table 4: Results of the Hausman model

Result	Significance level	Chi-squared Standard deviation	Chi-squared statistics	Summary of the Hausman test
Using random effects approach	1.000	13.000	0.000	Model1
Using random effects approach	1.000	13.000	0.000	Model2
Using a random-effects approach	1.000	13.000	0.000	Model3

4.4. Test results of research first hypothesis

Table 5 displays the results of the research first hypotheses testing. It investigates the relationship between a firm human capital coefficient of efficiency and the quality of internal controls and restatement of financial statements. The significance level of count-weak is equal to 0.23, and the variable of restatement of financial statements is equal to 0.24, which is greater than 0.05, which means the absence of a significant relationship between a firm human capital coefficient of efficiency and the quality of internal control and the restatement of financial statements of a firm. Durbin-Watson statistic is also equal to 1.94, close to 2, which shows that erroneous sentences lack autocorrelation. The level of significance for F statistic also shows that the model is significant statistically.

Table 5: Test results of research first hypothesis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Count-Weak	-0.109459	0.091408	-1.197473	0.2389
ERS	1.067742	0.897177	1.190113	0.2418
FOREIGN	0.855399	0.767147	1.115039	0.2722
INVTAT	-6.890292	3.928423	-1.753959	0.0879
LEV	-0.006418	0.047074	-0.136336	0.8923
LOGAGE	1.866508	2.072108	0.900777	0.3737
LOGMKTV	1.868204	0.983333	1.899868	0.0655
LOSS	-0.585595	1.248729	-0.468953	0.6419
MCH	-0.582342	0.892910	-0.652185	0.5184
MDUR	0.419166	0.534358	0.784431	0.4379
SALEGRW	-0.247056	0.779100	-0.317104	0.7530
M & A	0.221360	0.729996	0.303234	0.7635
SIZE	0.480715	0.420640	1.142818	0.2607
R-squared	0.413058	Mean dependent var		1.794982
Adjusted R-squared	0.201107	S.D. dependent var		1.829402
S.E. of regression	1.635135	Sum squared resid		96.25196
F-statistic	1.948834	Durbin-Watson stat		1.947236
Prob(F-statistic)	0.057026			

$$\text{Count-Weak}_{it} = \gamma_{0+} \gamma_1 HCE_{it} + \gamma_2 \text{ ERS}_{it} + \gamma_3 \text{ Foreign}_{it} + \gamma_4 \text{ M \&A}_{it} + \gamma_5 Loss_{it} + \gamma_6 \text{ Salegrw}_{it} + \gamma_7 Invtat_{it} + \gamma_8 LogMKTV_{it} + \gamma_9 \text{ Log age}_{it} + \gamma_{10} \text{ Lev}_{it} + \gamma_{11} MDUR_{it} + \gamma_{12} MCH_{it} + \text{Size}_{it} + \varepsilon_{i,t}$$

4.5. Test results of research second hypothesis

The research second hypothesis's test result examines the relationship between a firm

structural capital coefficient of efficiency and the quality of internal controls and the restatement of each firm's financial statements. The significance level of Count-Weak and ESR is equal to 0.56 and 0.608 that is greater than 0.05 and represents the rejection of the second hypothesis and indicates that there is no relationship between structural capital and the quality of internal control and the restatement of financial statements.

Table 6: Test results of research second hypothesis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Count-Weak	0.059216	0.103094	0.574386	0.5693
ERS	-0.599246	1.157987	-0.517489	0.6080
FOREIGN	-0.198205	0.812265	-0.244016	0.8086
INVTAT	-3.289509	3.890274	-0.845573	0.4034
LEV	0.015205	0.060195	0.252593	0.8020
LOGAGE	1.722185	1.866782	0.922542	0.3624
LOGMKTV	-0.380805	1.250807	-0.304448	0.7625
LOSS	-0.227547	1.492945	-0.152415	0.8797
MCH	-0.267892	1.136204	-0.235778	0.8149
MDUR	0.425357	0.689494	0.616912	0.5412
SALEGRW	-0.448887	0.914335	-0.490943	0.6264
M & A	0.406799	0.868594	0.468342	0.6424
SIZE	0.169841	0.459751	0.369419	0.7140
R-squared	0.117546	Mean dependent var		0.573800
Adjusted R-squared	-0.201118	S.D. dependent var		1.905527
S.E. of regression	2.088372	Sum squared resid		157.0068
F-statistic	0.368870	Durbin-Watson stat		2.060614
Prob(F-statistic)	0.971463			

$$\text{Count-Weak}_{it} = \gamma_{0+} \gamma_1 SCE_{it} + \gamma_2 \text{ ERS}_{it} + \gamma_3 \text{ Foreign}_{it} + \gamma_4 M\&A_{it} + \gamma_5 Loss_{it} + \gamma_6 Salegrw_{it} + \gamma_7 Invtat_{it} + \gamma_8 LogMKTV_{it} + \gamma_9 \text{ Log age}_{it} + \gamma_{10} \text{ Lev}_{it} + \gamma_{11} MDUR_{it} + \gamma_{12} MCH_{it} + \gamma_{13} \text{ Size}_{it} + \varepsilon_{i,t}$$

Table 7: Test results of research third hypothesis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Count-Weak	-0.031967	0.040834	-0.782850	0.4388
ERS	0.235037	0.391904	0.599732	0.5524
FOREIGN	0.556448	0.344145	1.616902	0.1146
INVTAT	1.374331	1.805947	0.761003	0.4516
LEV	-0.025044	0.020564	-1.217869	0.2312
LOGAGE	-1.288054	0.973099	-1.323662	0.1940
LOGMKTV	0.886026	0.432554	2.048358	0.0479
LOSS	0.185004	0.552876	0.334621	0.7399
MCH	-0.630838	0.390522	-1.615371	0.1150
MDUR	0.057899	0.233439	0.248025	0.8055
SALEGRW	0.231837	0.346573	0.668941	0.5078
M & A	-0.614477	0.321488	-1.911350	0.0639
SIZE	0.065214	0.188888	0.345252	0.7319
R-squared	0.419771	Mean dependent var		0.666027
Adjusted R-squared	0.210243	S.D. dependent var		0.788029
S.E. of regression	0.700307	Sum squared resid		17.65550
F-statistic	2.003417	Durbin-Watson stat		1.328772
Prob(F-statistic)	0.049975			

$$\text{Count-Weak}_{it} = \gamma_{0+} \gamma_1 CEE_{i\,t} + \gamma_2 \text{ ERS}_{it} + \gamma_3 \text{ Foreign}_{it} + \gamma_4 M\&A_{it} + \gamma_5 Loss_{it} + \gamma_6 Salegrw_{it} + \gamma_7 Invtat_{it} + \gamma_8 LogMKTV_{it} + \gamma_9 \text{ Log age}_{it} + \gamma_{10} \text{ Lev}_{it} + \gamma_{11} MDUR_{it} + \gamma_{12} MCH_{it} + \gamma_{13} \text{ Size}_{it} + \varepsilon_{i,t}$$

4.6. Test results of research third hypothesis

Table 7 shows the third research hypothesis's test results, showing the relationship between communicational capital and internal control quality and financial statements' restatement. Count-Weak and ERS variables' significance level is equal to 0.43 and 0.55, which is greater than 0.05 and indicates no significant relationship between sample variables.

5. Discussion and Conclusion

The current study attempts to figure out the impact of a firm's intellectual capital components on internal control quality and accurate and reliable financial reporting. Different firms have different internal controls based on different situations (Ji et al., 2015). Managers, supervisors, and other personnel in each firm are responsible for implementing internal control processes. Intellectual capital is an important factor in evaluating firms' performance and is one of the organizational factors that play a major role in implementing managers' objectives. Lack of qualified staff is one of the factors that make internal controls ineffective. Organizational structures, guidelines, and communications are components of any firm for a controlled environment and have a pervasive effect on the internal control structure. Therefore, in the present project, we examined whether different degrees of coefficients of intellectual, human, structural, communicational capital components could affect the quality of internal controls and restatement of financial reports. Given that, we calculated the coefficient of efficiency of intellectual capital components of 116 firms listed on the Tehran Stock Exchange over the period from 2010 to 2014 and according to the Pulic model (2000) and we considered the number of weaknesses in the audit reports of firms as the measures of the internal quality control. The statistical analysis of collected data using dynamic panel regression showed no significant relationship between human, structural, and Communicational capital of each firm and the quality of internal control and the restatement of financial statements.

Such a result is in contrast with that of Guo et al. (2016), who indicated that setting appropriate policies for human resources could affect the internal control and financial restatements. Moreover, in contrast with Acito, Burks, and Johnson (2009), Usvyatsky (2013) stated that human errors are an influential factor in financial restatements. We found no significant relationship between human, structural. Communicational capital and financial restatements and the quality of firms' internal controls and our findings substantiate a gap between theory and practice. In contrast to the previous studies, like Becker & Gerhart (1996) and Asiaei and Jusoh (2015), where human and intellectual capital has a positive relationship with firm performance, we concluded an inverse result, and this could be due to different situations in developing countries, including Iran. Inconsistent economic issues and lack of transparent financial and non-financial information are two different situations in such countries. The presence of peculiar economic conditions in Iran and the imposed sanctions within the recent decade have caused the firms not to regulate a fixed framework for their policies. Within that framework, they have no significant relationship between intellectual capital and internal control of firms. Such a finding is important because intellectual capital has gained importance in the economic reform plan of Iran.

We herein acknowledge that no significant relationship has been established between intellectual capital components, internal control quality, and financial restatement during the study. However, since according to the studies of the American Institute of Certified Public Accountants, the essential reason for the fraudulent financial report is the weakness

of internal control and human resources of those who implement the process of internal control, we could not ignore the significant role of human resources and organizational structure of firms on the quality of internal control. As Guo et al. (2016) expressed, we should be cautious about analyzing issues related to human resources and intellectual capitals. The behavior and performance of human resources are entangled with many other causal relations.

Accordingly, concerning the obtained results, we highly recommend that a combination of financial and non-financial models be used for measuring intellectual capital. Given the significance of intellectual capital concerning investors' decision-making, we recommend future researchers design a model for intellectual capital information in financial statements and their additional notes.

Lack of detailed information in additional notes by some firms or distorted financial statements on the Tehran Stock Exchange website was among the study's main limitations.

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