The Effect of Disclosure of Intellectual Capital Components on the Market Price of Shares in Jordanian Industrial Companies: An Empirical Study

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ABSTRACT

This study aims to identify the effect of the disclosure of intellectual capital on the market value of shares in Jordanian commercial banks by shedding light on the level of disclosure of intellectual, human, structural and relational capital on the market value of the share. The study community shall be composed of all the Jordanian industrial companies and public shares traded in the Amman Stock Exchange during the study period (2013–2016). To achieve the objectives of the study, the researcher collected secondary data through reference to previous studies, books and administrative research on the subject of disclosure, as well as specialized journals. The researcher used the statistical program (SPSS) to analyze the data. The study reached the most important results which showed that the general trend in the 4 years (2013–2016) was towards increasing the level of disclosure of the components of intellectual capital. This indicates the continuous increase by the industrial companies at the level of disclosure, However, this level was below the required threshold, not exceeding in all years (56.0%). There is also a relative increase in the level of disclosure of structural capital and interest relative to the disclosure of human capital, which may be seen as a decline in the interest of companies in the development of their human resources compared to the structural aspect and relations with other parties. The study recommended that companies' managements should monitor the changes in their share prices, trading volume and how investors evaluate the company's shares, in order to confirm the achievement of the most important objectives of financial management. Disclosure of intellectual capital components, and companies based on reference comparisons with international companies, to reach full disclosure of all items that measure the components of intellectual capital.

Keywords: Accounting Disclosure, Intellectual Capital, Market Price Per Share
JEL Classifications: M41, O34

1. INTRODUCTION

Intellectual capital is one of the relatively modern concepts that have become increasingly relevant in terms of concept and measurement. Intellectual capital is a constantly evolving and constantly changing concept due to the surrounding environment. Many companies face real problems in measuring, evaluating and disclosing intellectual capital, especially those companies, including industrial ones, which rely on quantitative physical indicators of measurement, for example measuring costs, profits, sales, market share, physical assets and material obligations. The importance of measurement and disclosure is particularly important when the merger or acquisition occurs. The question of the accuracy of the value of the intellectual capital of the merged or acquired companies will lead to a precise determination of the value of the new shares for the owners of the new companies. The error in the measurement and valuation process leads to a defect in the shares and the new values of their shares. Financial Markets In this sense, economic companies spend a lot of money in developing intellectual capital to keep pace with technological development. However, the traditional financial statements do not fulfill the disclosure of the true cost of intellectual capital in its various elements. In addition, the financial position reflects the fact that the cost of intellectual capital will be disclosed in the financial statements of the joint stock companies in Jordan Stock Exchange. Therefore, this study will attempt to demonstrate the impact of the disclosure of the components of intellectual capital (human capital, structural capital, and Relational capital) on the market price of shares in Jordanian industrial companies.

2. METHODOLOGY AND DATA

2.1. The Problem of the Study and Its Questions

Intellectual capital is one of the concepts that coincided with the great progress in the industries and the development of knowledge acquisition tools. Access to knowledge has become one of the most important elements of the survival and continuity of modern organizations in order to enable them to cope with developments and changes in the competitive business environment. Many organizations are concerned with their human resources, access to modern technologies, and building close relationships with customers and suppliers. Companies have also sought to increase the level of disclosure of their accounting information to users of this information in the company's decision making processes. which may affect in increasing their investments in those companies, leading eventually to increase the market value of its name on the local and global level, and this can formulate questions of the study problem as follows:

- The main question H0: Is there a statistically significant effect at the level of $(0.05 \geq \alpha)$ significance for the disclosure of the components of intellectual capital (human capital, structural capital, and relational capital) on the market price of shares in Jordanian industrial companies?
- Question 1: Is there a statistically significant effect at the level of significance $(0.05 \geq \alpha)$ for the disclosure of human capital components on the market price of shares in Jordanian industrial companies?
- Question 2: Is there a statistically significant effect at the level of $(0.05 \geq \alpha)$ significance of the disclosure of structural capital components on the market price of shares in Jordanian industrial companies?
- Question 3: Is there a statistically significant effect at the level of $(0.05 \geq \alpha)$ significance of the disclosure of the components of the capital on the market share price of the contributing Jordanian industrial public companies.

2.2. Hypotheses of the Study

Based on the questions of the study problem, the hypotheses of the study crystallize as follows:

- The main hypothesis H0: There is no statistically significant effect at the level of $(0.05 \geq \alpha)$ significance for the disclosure of intellectual capital components (human capital, structural capital, and capital) on the market price of shares in Jordanian industrial companies.
- The first hypothesis H01: There is no statistically significant effect at the level of $(0.05 \geq \alpha)$ significance of the disclosure of the components of human capital on the market price of shares in the Jordanian industrial companies.
- The second hypothesis H02: There is no statistically significant effect at the level of $(0.05 \geq \alpha)$ significance of the disclosure of structural capital components on the market price of shares in the Jordanian industrial companies.
- The third hypothesis H03: There is no statistically significant effect at the level of significance $(0.05 \geq \alpha)$ for the disclosure of the components of the capital on the market price of shares in the Jordanian industrial companies public share.

2.3. The Importance of the Study

The importance of the study is through the introduction of a very important subject which is the disclosure of the intellectual capital represented by the knowledge, experience and qualifications of the brand and the Jordanian industrial companies, with the disclosure of the effect of the disclosure of the exclusion of this important resource in raising the market value of the shares of those industrial companies at the local and global levels.

2.4. Objectives of the Study

2.4.1. The study aims to

- Highlight the level of disclosure of intellectual capital (human intellectual, structural, relations) in Jordanian industrial companies.
- Study the potential impact of the level of disclosure of intellectual capital (intellectual, structural, relationships) on the market value of shares in Jordanian industrial companies.

2.5. Methodology of the Study

The study is based on the analytical descriptive method, which is based on the existence of sufficient information about a specific phenomenon or topic during a specific period or time periods, in order to obtain practical results, which were interpreted in an objective manner and in accordance with the actual data of the phenomenon. To the logical results supporting the hypotheses contained in the study, the quantitative approach was also used to the study and analysis of data in order to answer the questions of the study.

2.6. The Society of the Study and Its Sample

The study society is represented in all the Jordanian industrial companies and public shares traded in the financial market during the period of study (2013–2016), while the study included industrial companies that meet the following conditions: (1) To be listed in the financial market during the study period, and has not been liquidated. (2) That its shares are traded during the study period, and have not been suspended from trading. (3) The necessary data on the variables of the study are available during that period.

Therefore, the sample of the study was limited to (47) industrial public shareholding companies, which the above conditions apply to.

2.7. Sources of Data Collection

The following sources were used:
1. Secondary sources: The sources were Arab and foreign available from previous studies and researches, publications and books, which were obtained from libraries and the Internet.
2. Initial sources: The financial lists and annual reports and public information for industrial companies, shared and published on the website of the ASE and corporate websites.

To measure the level of disclosure of the intellectual capital components, a set of items for the three intellectual capital components (human capital, structural capital and relational capital) were identified with a view to determine the level of

disclosure of each of them by giving the number (1) for disclosure in annual reports And the number (0) for the disclosure that was not received, and then collect the disclosures for each company in the specified year and divided the total number of disclosures to reach the disclosure ratio of intellectual capital components of the company; the disclosure index was formulated as follows:

Disclosure ratio=Number of items disclosed/total number of items*100%.

The following is a list of the disclosure items adopted by the study and the components of intellectual capital, which were selected based on previous studies that dealt with the disclosure of the components of intellectual capital, including: (Li et al., 2012; Indra, 2011; Nielsen and Madsen, 2009; Beattie and Thomson, 2007).

A. The terms of the disclosure of human capital, including: Staff experience, employee skills, level of education, level of productivity, training programs, benefits of workers, age of workers, public safety and social participation of employees.

B. Structured capital disclosure items, including: patents, trademark, organizational structure, information systems, technology support, intranet, management method, research and development.

C. The terms of the disclosure of the prime capital, including: Relationship with customers, relationship with suppliers, relationship with investors, relations with the outside community, privileges, distribution channels and market share.

2.8. Statistical Processing

EVEWS software was used to process raw data. The following statistical measures were used:

1. Percentages, frequencies, computational and standard deviations, in order to describe the variables of the study.
2. Model-specific tests of multiple linear correlation test, self-correlation test, time series stability test (root unit existence).
3. Analysis of multiple linear regression to test the hypothesis of the main study, and the hypotheses that branch out.

3. LITERATURE REVIEW

Zaman et al. (2015) examine the relationship between transparency, disclosure and corporate performance and highlight the importance, role and impact of institutional governance on the performance of the Pakistani banking sector. The study concluded that there is a positive relationship between the financial performance of the Pakistani banking sector and transparency and disclosure. The study recommended the need to activate and implement transparency and disclosure policies to reduce information disparities, improve institutional governance and improve performance of the banking sector in Pakistan. This study indicates that the minimum disclosure level in companies should be higher than the level determined by the legislator in order to achieve the desired benefits of disclosure.

Arsalan and Zaman (2015) examine the performance of intellectual capital in the gas and petroleum sector in Pakistan between 2007 and 2011 and its impact on the financial returns of companies.

The study employed the (VaICIT) to measure the performance of intellectual capital and its components (HCEit, SCEit and CEEit) And its impact on financial performance (ROEit, ROIit and EPSit). The study is based on the collection of data from the Pakistani oil and gas sector between 2007 and 2011 of the special reports on the Karachi Stock Exchange. The VAICit ™ model was used to measure the performance of intellectual capital and its impact on corporate returns (ROEit, ROIit, EPSit). This was verified using the random impact measurement model. The study, based on the Hausmann test, showed that the null hypothesis was accepted, as ui is not bound by regression, meaning that random coefficient is preferred at the expense of the constant-influencing variable in all the studies proposed here. The study reveals that value added is an important criterion for measuring the performance of intellectual capital and has an important and positive relationship with the profitability of the company (EPSit), while HCEit and SCEit have a positive relationship with the financial performance of the company (ROEit and ROIit) respectively. The study explores the depth of the strong relationship between intellectual capital performance and its contribution to the calculation of value-added performance, with HCEit and SCEit having the core process of driving the financial performance of the Pakistan gas and petroleum sector compared to existing data.

Haji (2015) aimed at verifying the role of the Audit Committee's standards in providing non-financial information and disclosing the impact of intellectual capital in ensuring the quality of corporate reporting. The study was conducted in Malaysia, and the descriptive analytical method was used. The sample was composed of the leading Malaysian companies based on market value during the period 2008–2010. The results of the study showed that the standards of the internal audit committee have a positive role in providing the basic information needed by companies to enhance their market value. The most important of these information is the internal and external capital and intellectual capital, and how the intellectual capital has a clear impact on the quality of audit operations and financial reports Provided to companies that can take the necessary measures and development of their performance. The study recommended the need to strengthen the role of internal auditing standards in Malaysian companies through the improvement of intellectual capital.

Ghasempour and Yusof (2014) investigate the quality of voluntary disclosure of intellectual capital, knowledge assets and human resources on the company's assessment. The Tehran Stock Exchange from 2005 to 2012. The sample of the study was in 320 companies listed on the Tehran Stock Exchange since 2002. This study was based on the deductive approach in the collection of data and the testing of hypotheses The study concluded that the optional disclosure of intellectual capital and human resources had a moral and positive affect on the value of the company within 1 year.

Lipunga (2014) aims to conduct an extended assessment of the levels of intellectual capital in the securities companies listed on the stock exchange in Malawi over a period of 5 years (2008–2012) using the market value method. The importance of this study stems from the extent to which these companies rely on intellectual capital as the real source for the creation of knowledge, wealth,

and thus enhancing its competitiveness. The study society is formed of 15 securities companies listed in Malawi. The researcher excluded two of these companies, thus the study sample became 13 companies. The researcher also collected data related to these companies through the reports issued by the Stock Exchange of Malawi. The study concluded that the value of intellectual capital decreased significantly during the period 2008–2012, Long term for these companies and the economy as a whole.

3.1. Theoretical Aspect of the Study

3.1.1. Definition of intellectual capital

The concept of intellectual capital has been linked to the elements possessed by the human element working in the companies, represented by all the human minds that possesses the knowledge, skills, abilities and experiences that serve the company and achieve its objectives in achieving excellence and creativity and giving it a competitive advantage (Abd, 2009). And achieving its financial objectives of reducing costs and increasing market share (Saleh, 2009)(Karabay, 2011). Intellectual capital includes all the resources in the company that work to increase the value of the company, by increasing the efficiency and merit of intellectual assets therein.

But we find that (Gogan and Doran, 2014) are continuing skills and knowledge of employees that are unique and are not possessed by any other institution and increase their competitive advantage.

(Kavida and Sivakouar, 2009) note that there is no definition of general acceptance of intellectual capital, but rather terms used interchangeably because they represent intangible assets for future benefits. The statement states that economists call it capital of knowledge, and management experts refer to it as capital Thought, and accountants call it intangible capital.

Analyzing the former concepts of intellectual capital, the researcher finds that there are several things related to the nature of intellectual capital: it is one of the company's intangible assets, most of which lies in the human mind of the human element working in the company, and feeds on the knowledge, By giving them the ability to innovate (Gruian, 2011), as well as processes and organizational structures and relationships with customers. As such, it is considered a renewable element. The greater the capacity, competencies, creative and innovative skills of individuals and their representation on the ground, the greater the value and importance of this asset (Karabay, 2011).

3.1.2. Concept of disclosure

Disclosure is the advertisement of a thing or a prospectus, or reporting on a particular subject. This may be directed at a specific segment of the community. The disclosure may be educational, direct or mandatory depending on the nature of the disclosure and the issuing entity.

As for accounting, there are different definitions of disclosure, depending on the different views on the concept of disclosure and the different interests of parties related to the economic unit, so it is difficult to provide a general and unified concept of disclosure that includes providing the level of disclosure that achieves each

party's full purpose. The following is a review of some familiarity with the concept of disclosure from the point of view of some writers and researchers:

Hendrickson defined it as a "presentation of important information to investors, creditors and other beneficiaries in a manner that allows predictability of the project's ability to make future profits and its ability to meet its obligations. The amount of information to be disclosed does not depend on the reader's experience, for full disclosure, adequate disclosure and fair disclosure (Saleh and Hassan, 2013).

Chandra also defined the disclosure as "a measure through which the economic unit communicates with the outside world" (Salem, 2008).

Al-Shirazi pointed out that the disclosure "stipulates that financial reports should be included in all necessary and important information to give users of these reports a clear and correct picture of the accounting unit" (Al-Ghazawi, 2010). In the opinion of (Jing et al., 2012), disclosure is "communicating the information to the beneficiaries in order to clarify the financial situation of the entity without misleading in a way that allows to rely on that information in decision making, as well as linking the degree of disclosure and reducing the uncertainty of the beneficiaries through the publication. All economic information related to the project whether quantitative information or other information helps investors to make their decisions.

3.1.3. The importance of accounting disclosure

The importance of accounting disclosure is as follows: (Magabih, 2014).

1. Accounting disclosure helps the interested public understand the nature of the company's activity, policy and performance in relation to environmental and ethical standards.
2. Accounting disclosure is a powerful tool for influencing corporate behavior and protecting investors.
3. Accounting disclosure mainly helps to attract capital and maintain confidence in capital markets.
4. Accounting disclosure serves an important issue of how to present, communicate and organize the accounting information of the various parties in a manner that is understandable, in an appropriate manner, which increases the value and usefulness of this information to its users.
5. Accounting disclosure protects investors in the market against illegal practices, such as leaking secrets or using in-house information that is not available to the user public for abnormal profits.
6. The provision of transparency and accounting disclosure lead to enhance the confidence of dealers in the market and raise the level of efficiency of the market in its true sense.
7. The disclosure helps to achieve the efficiency of the exploitation and efficiency of allocating the economic resources available at the level of the company (micro level) and therefore at the national level of the national economy.

3.1.4. Factors affecting accounting disclosure

There are several key factors that affect accounting disclosure. These factors can be divided into environmental factors related to the community in which the financial reports are prepared,

financial disclosures to be disclosed and factors relating to the entity itself, as follows:

1. Environmental factors: Environmental factors play an important role in the development of accounting concepts and practices. If these factors differ among different science countries, it is expected that the accounting concepts and practices applied will also be different (Samira, 2014).
Environmental factors including legal systems, sources of external financing, taxation systems, representation by professional accounting bodies, inflation, economic and political events are used to help explain differences in accounting practices, and culture is an environmental factor affecting accounting practices. The country leads to joint accounting that in turn affects accounting systems.

2. Factors related to information: The degree of disclosure is affected by information, especially in terms of the availability of reliability in this information, as well as the verifiability, comparability and cost - benefit comparison (information economy), and the cost of information determines the level of disclosure available in the financial reports.

3. Factors related to the company: There are several factors related to the company, such as:
   A. The size of the company: There is a relationship between the size of the company and the degree of disclosure in the financial statements and lists, because the cost of information is of little importance in large companies compared to small companies (Ziyud and Issa, 2011).
   B. Number of shareholders: There is a direct relationship between the number of shareholders and the degree of disclosure, on the basis that increasing the number of shareholders leads to an increase in the degree of disclosure.
   C. Registration of the company in the stock market: This factor has a direct impact on the increase of disclosure because of the conditions put by those markets.

4. External auditor: The external auditor assesses the degree of disclosure when auditing the company's accounts to determine the extent of its compliance with the rules, rules, principles, accounting policies, standards and professional rules imposed by the profession's constitution.

5. Other factors: The most important of which are domestic legislation and laws, professional committees, accounting and auditing committees responsible for the development of stock market standards, costs and methods of disclosure, and the nature of companies.

3.1.5. Market value

Maximizing the wealth of owners and shareholders within the company (maximizing profit) is the primary objective of the company's management, by maximizing the market value of the stock and achieving the expected returns sought by any investor. It is necessary for the Company to achieve sufficient profits and revenues to cover operational expenses and ensure an adequate return on capital invested by the operators.

Where market value is used as a tool to attract investment and increase the number of investors in the company, because it is the point of decision by the investor existing or expected, and the most reliable indicator of the performance of the company, and helps the company to plan its management and achieve the

highest level of competition in the market, Share prices which in turn lead to profit. Market value is therefore defined as "the price of a stock traded in the financial markets during the interaction of supply and demand forces, which is affected by the surrounding economic, social and social environment" (Kapoor et al., 2009).

While (Ross et al., 2002) define it as "the benchmark used to measure the performance of firms and their development at the end of the period after reaching their value by averaging their shares multiplied by the total number of shares listed, or the number of shares acquired multiplied by their prices.

Therefore, companies rely on many sources of finance, and stocks are the most important and most important of these sources, as it is a title to ownership of the carrier and there are several values to know its value (Hirschey and Nofsinger, 2010).

1. Market value: The market value of the company's performance, the value at which the stock is sold in a given period of time, may be greater or smaller than its book value or nominal value.
2. Book value: This value does not affect the market price per share, which is the share of the net assets of the company.
3. Fair value: It is the real value of the stock.
4. Nominal value: The value of the share when issued, which is written on the share coupon.
5. The real value: The ratio of the investor or the holder of the share of the profits, and the difference between the nominal value of the share and its market value.

3.1.5.1. Market value is influenced by three types of financial decisions (Das, 2013)

1. Financing decisions: These decisions are part of planning to achieve the required balance between the capital owned and the borrowing capital, and financing for the activities of the company.
2. Investment decisions: Investment decisions are related to the investment of capital in fixed assets and current assets. Investment in long-term fixed assets to ensure a longer period of survival of funds, either investments in the assets traded for the current yield forecast, and some investment decisions in the management of Ras Working money and public budget.
3. Distribution decisions: These decisions determine how to manage profits in addition to distributions. The investment decision is linked to future profits and distributions. The capital structure is affected by its cost and the distribution of profits by the company's share capital.

3.1.6. The relationship between the disclosure of intellectual capital and the market value of companies

Financial disclosure and reporting affect intellectual capital in real estate investment decisions through the ability of investors to extract information about the innovation efforts of the economic unit, the quality of human capital it possesses and the level of customer satisfaction enjoyed by the economic unit, as well as the image of the economic unit on its ability to create value. Thus, reporting on intellectual capital and financial information facilitates investment decision making (Saleh and Hassan, 2013). Empirical studies show the increasing importance of financial

reporting on intellectual capital Lies competitive economic unit and its value in the era of knowledge economy. The importance of knowledge-based resources has increased, yet most of these resources are not reported in the traditional balance sheet. This has created an information gap within the markets, although a number of economic units call for voluntary disclosure of these resources and intangible assets to close this gap.

Significant efforts have been made to discuss the improvement of financial statements to include the financial reporting of intellectual capital in order to rationalize investment decisions and financial reporting of intellectual capital in order to rationalize decisions and investors by achieving the following benefits (Ghafili, 2006):

1. For the managers of the economic units and the different companies through:
   - Informing investors of the value of intellectual capital owned by the economic unit and companies.
   - Statement of the type of intellectual capital owned by the economic unit and companies.
   - Giving value to the intellectual capital owned by the economic unit and companies.
2. To clarify the link between intellectual capital and various commercial activities for investors: Through:
   - Obtaining information on economic unity and companies on how to create growth through intellectual capital.
   - Obtain sufficient real contributions to predict the percentage of profits to the sales received by the economic unit and companies that have intellectual capital.
   - Ability to improve the process of estimating the proportion of risk to investment income in the economic unit and companies that have intellectual capital.
   - To be able to understand better the nature of the activity of the economic unit and the company
   - Increase the predictability and decrease the speed of change in the activity of the economic unit and companies.

4. EMPIRICAL RESULTS AND DISCUSSION

4.1. Statistical Analysis of the Study

4.1.1. View and discuss results

This section shows the descriptive statistics of the study variables, in terms of the percentage of disclosure of the components of intellectual capital, market price of shares, total assets and indebtedness of industrial companies listed on the Amman Stock Exchange until the end of 2016.

First: Dependent variable: Market price

Table 1 shows that the general arithmetic average of the market share price reached (2.486) JD, with a standard deviation of JD (3.978). The largest value was (28.050) JD while the smallest value was (0.170) JD. The difference between the maximum values indicates that there is a significant difference in the market valuation of company prices.these differenses appeared according to many factors, including internal and external ones, related to the company, and the efficiency of the financial market.

Second: Independent variables: Disclosure of the components of intellectual capital. The total disclosure ratio for each component of intellectual capital was presented during the period (2013–2016), as follows:

Table 2 shows that the general arithmetic mean of the percentage of disclosure of intellectual capital reached 42.3%, with a standard deviation (12.7%), the largest (73.9%), the smallest (26.1%), The difference may be due to differences in companies' interest in investing in intellectual capital, and hence the differing disclosure. It may also be due to the difficulty of measurement and tracking of many companies to disclose data Specific intellectual capital. The general average of the ratio of the disclosure of human capital (40.0%), by standard deviation (13.9%), reached the highest (75.0%), while the smallest (25.0%). Where attention to investment in the human element, in terms of training, expenditure, skills and options, qualifications, and others. The general average of the ratio of the disclosure of structural capital (43.5%), by standard deviation (11.6%), and the largest (75.0%), while the smallest value (25.0%), the values indicate that there is a difference between companies in terms of Interest in investment patents, technology, information systems, organizational structure, and others. The general average of the ratio of the disclosure of the prime capital (43.7%), the standard deviation (14.3%), the largest value (71.4%), while the smallest value (28.6%), the values indicate that there is a difference between companies from Where the interest in disclosing the relationship with customers and suppliers, investors, the community, and other parties.

The mean averages for the disclosure of the components of intellectual capital, according to years, were also presented during the period (2013–2016), as follows:

Table 3 shows that the general trend in the 4 years (2013–2016) was towards increasing the level of disclosure of the components of intellectual capital. This indicates the continuous increase of the industrial companies in the level of disclosure. However, this level was below the required level and did not exceed in all years (56.0%). We note that there is a relative increase in the level of disclosure of structural capital and interest relative to the disclosure of human capital, which may be seen as a decline in the interest of companies in the development of their human resources compared to the structural aspect and relations with other parties.

Third: Control variables: size of the company (total assets) and debt ratio.

Table 4 shows that the general account average of total assets reached 77.9 million JD, with a standard deviation of 213.0 million JD. The largest value of (1,211.5) million JD, the minimum value

Table 1: Descriptive statistics of the stock market price during the period (2013–2016)

The measure (JD)	The price of the market share
The arithmetic mean	2.486
Standard deviation	3.978
The upper value	28.05
Minimum value	0.17

Table 2: Descriptive statistics on the percentage of disclosure of intellectual capital components during the period (2013–2016)

The scale %	Disclosure of human capital	Disclosure of structural capital	Disclosure of relational capital	Disclosure of intellectual capital
Arithmetic mean	40	43.5	43.7	42.3
standard deviation	13.9	11.6	14.3	12.7
maximum value	75	75	71.4	73.9
Minimum value	25	25	28.6	26.1

(0.4) million JD, The difference between the maximum values shows the large variation in the sizes of industrial companies, which may be due to the different industries, operations, the company's ability to provide resources, and the volume of business.

The general average of the debt ratio was 32.0%, with a standard deviation of (19.2%), the largest (80.5%) and the smallest (0.4%). The values indicate a difference between the companies in terms of financing policies, And the extent to which companies rely on external sources to finance their assets.

4.1.2. Test the suitability of the form

In order to answer the questions of the study problem and the hypothesis test, the appropriate statistical tools were used for the study by finding the financial values of the variables of the study and according to the years of study. The annual data for the Jordanian industrial companies were collected for the period 2013–2016.

4.1.2.1. Multicollinarity tests

This phenomenon indicates that there is an almost complete linear correlation between two or more variables, which amplifies the value of the R^2 and makes it larger than its actual value. Therefore, the linear correlation coefficient and the variance coefficient of variance coefficient were calculated for each variable being tested. The outcomes were as following:

Table 5 shows that the value of the correlation coefficient between the disclosure of intellectual capital components was all higher than 0.80. This may indicate a high correlation between independent variables. Linear correlation coefficient values above 0.80 may be considered an indicator of existence Linear correlation. Therefore, it is not possible to say that the study sample is free from the problem of linear high correlation (Guajarati, 2004. p. 359). To confirm the previous result, the variance inflation factor (VIF) was used between independent variables to ensure that there was no linear correlation between them.

Table 6 shows that the value of the variable variance inflation coefficient (LCL) is close to (10) at the variable (disclosure of relational capital) and the value of the coefficient at variable (disclosure of human capital) is relatively high (7.915). It is clear that it is not possible to confirm the absence of data from the phenomenon of multiple linear correlation. To eliminate this phenomenon, the first differences were taken for all variables of the study model.

4.1.3. Stability test for the study variables (stationary test)

The stability of the time series indicates the stability of each mean and the variation of the string values over time. The Covariance between two time periods is dependent only on the lag time lag,

Table 3: Distribution of the percentage of disclosure of intellectual capital components by year

The dimension (%)	2013	2014	2015	2016	Total
Disclosure of human capital (%)	31.40	34.00	42.60	52.10	40.00
Disclosure of structural capital (%)	38.00	38.60	46.00	51.30	43.50
Disclosure of Relational Capital (%)	35.60	36.20	47.10	55.90	43.70
Disclosure of intellectual capital (%)	35.00	36.30	45.10	53.00	42.30

Table 4: Descriptive statistics of the control variables during the period (2013–2016)

The scale	Total assets (JD)	Debt ratio %
Arithmetic mean	77,935,506	32
Standard deviation	213,019,113	19.2
Maximum value	1,211,466,000	80.5
Minimum value	394,795	0.4

not on the real time at which heterogeneity is measured, and the Unit Root test is applied to ensure that Levin-Lin-Chu (LLC) tested the hypothesis of whether the variables contain the unit root and its suitability for the time data of the data panel, and if these variables contain the root of the unit The differences have to be taken to make them static, as many strings Time may not be static, but give high values for (t, F, R^2) and this leads to the wrong interpretation and misleading results, so you must make a unit root test to examine the stillness of the time series.

The decision rule for the LLC test is the existence of the unit root (i.e., the time series instability) if the significance level of the calculated test value is >0.05, and the results were as follows:

Table 7 shows the results of the stability test for data on the study variables using the LLC test. It is clear that the time series data for all variables of the study model were stable over time at the level, because the probability values (P-value) of the above variables did not exceed 5%.

4.1.4. Autocorrelation autocorrelation test

Self-correlation is defined as the relationship between successive random errors calculated from the regression model estimated in the least squares method and the existence of some standard problems, which can not be mentioned here. The test is performed using the Durbin-Watson test, which symbolizes it DW and compare it with two values extracted from the table of this test at the level of significance α, the number of observations n and the number of variables k, and these values are denoted by dl (minimum) and du

Table 5: The correlation matrix for the independent variables

Variable	Disclosure of human capital	Disclosure of structural capital	Disclosure of relational capital	Company size	Debt ratio
Disclosure of human capital	1				
Disclosure of structural capital	0.835*	1			
Disclosure of relational capital	0.931*	0.871*	1		
Company size	0.250*	0.255*	0.211*	1	
Debt ratio	0.07	0.086	0.02	0.132	1

*At a significance level of 0.05

Table 6: Multivariate test results between independent variables

Variable	VIF
Disclosure of human capital	7.915
Disclosure of structural capital	4.376
Disclosure of relational capital	9.967
Company size	1.127
Debt ratio	1.072

VIF: Variance inflation factor

(upper limit) If the value of DW is greater than du it indicates no problem Self-association, if it is A DW value less than dl indicates the existence of a self-binding problem. The test fails to determine the existence of the auto-correlation phenomenon. If a DW value is between the two values, then another test is taken. The correlogram test, (the one-time series of one bank), where a self-correlation is determined if the test value (Q-stat) is <0.05, and shows the results of this test for all hypotheses:

Note from Table 8 that it is possible to confirm the absence of the phenomenon of self-correlation, and in all hypotheses where both tests proved the absence of the phenomenon (Guajarati, 2004).

4.1.5. Testing hypotheses

The sample of the study is from the annual financial statements of the Jordanian industrial companies for the period 2013–2016. The data for these companies were collected for the said period annually. Therefore, the data of the study are time series data (cross-sectional time series). Therefore, the appropriate model for measuring the relationship between the variables is the pooled data regression), and after confirming the adequacy of the data for the study model, as well as describing the variables of the study, and we will present this part of the study test hypotheses.

The main hypothesis H0: There is no statistically significant effect at the level of (0.05 α) significance for the disclosure of intellectual capital components (human capital, structural capital, and capital) on the market price of shares in Jordanian industrial companies.

In order to test hypotheses derived from the main hypothesis, multiple regression analysis was used, and the results were as follows:

First hypothesis H01: There is no statistically significant effect at the level of ($0.05 \geq \alpha$) significance of the disclosure of the components of human capital on the market price of shares in the Jordanian industrial companies.

Table 9 shows the significant effect of the independent variables on the market share price (F = 13.077) and the level of significance (Sig F = 0.000) which is <0.05. This confirms the significance of the model, 0.222) indicated that 22.2% of the variance in market share price can be explained by the variation in the independent variables combined, with any other factors remaining constant.

The regression coefficients indicated that the value of (B = 0.936) to the effect of (disclosure of human capital), a significant effect, where the value of t is (2.916) and the level of significance (Sig = 0.004), as indicated by the value of (B = 1.077) (B = −1,637), which is indicative of the effect of (debt ratio), which is a significant effect, Where the t value is (−4.787) and the significance level (Sig = 0.000) (Table 10).

We therefore reject the first hypothesis, and accept the alternative which states that:

"There is a statistically significant effect at the level of significance ($0.05 \geq \alpha$) for the disclosure of human capital components on the market price of shares in Jordanian industrial companies."

The second hypothesis H02: There is no statistically significant effect at the level of (0.05α) significance of the disclosure of structural capital components on the market price of shares in the Jordanian industrial companies.

Table 11 shows the significant effect of the independent variables on the market share price, where the value of F = 12.405 and the level of significance (Sig F = 0.000) is <0.05. This confirms the significance of the model, 0.214) indicated that 21.4% of the variance in market share price can be explained by the variation in the independent variables combined, with any other factors remaining constant.

The regression coefficients indicated that the value of (B = 0.152) to the effect of (disclosure of structural capital), a significant effect, where the value of t is (3.477) and the level of significance (Sig = 0.001), as the value of (B = 1.148) indicated the effect of (size of the company), a significant effect, where the value of t is (7.467) and the level of significance (Sig = 0.000), and the value of (B = −1.584) It refers to the impact (debt ratio), a significant effect, Where the t value is (−4.831) and the significance level (Sig = 0.000).

We therefore reject the second hypothesis, and accept the alternative which states that:

"There is a statistically significant effect at the level of ($0.05 \geq \alpha$) significance of the disclosure of structural capital components on the market price of shares in Jordanian industrial companies."

Table 7: Results of the unit root test for the study variables

The variable	The probability P value	The calculated value at the level	Result
Market price	0	−4.663	Stable at the level
Disclosure of human capital	0.001	−4.17	Stable at the level
Disclosure of structural capital	0.013	−3.375	Stable at the level
Disclosure of relational capital	0	−4.527	Stable at the level
Company size	0.018	−3.256	Stable at the level
Debt ratio	0	−6.546	Stable at the level

Table 8: Test the problem of self-correlation

Hypothesis	Calculated D-W value	dl	du	Result	q-stat test	Prob.	Result
H01	1.937	1.738	1.799	No self-correlation	0.291	0.864	No self-correlation
H01-1	1.924	1.758	1.779	No self-correlation	0.336	0.845	No self-correlation
H01-2	1.894	1.758	1.779	No self-correlation	0.424	0.809	No self-correlation
H01-3	1.872	1.758	1.779	No self-correlation	0.429	0.807	No self-correlation

Table 9: Summary and model analysis of variance ANOVA

The dependent variable	Model summary			ANOVA analysis	
	R^2 selection factor	The Modified coefficient of determination Adjusted R^2	The standard error of the model	Calculated F value	Sig (F)
Market price	0.222	0.206	1.369	13.077	0

Table 10: Regression coefficient of the effect of the disclosure of human capital on the market price of the stock

Regression coefficients				
Independent variables	Factor (B)	Standard deviation	Calculated T value	Sig (T)
Disclosure of human capital	0.936	0.321	2.916	0.004
Company size	1.077	0.091	11.857	0
Debt ratio	−1.637	0.342	−4.787	0
Fixed gradient	0.02	0.034	0.588	0.558

Table 11: Summary and model analysis of variance ANOVA

The dependent variable	Model summary			ANOVA analysis	
	The coefficient of determination R^2	The adjusted coefficient of determination the adjusted R^2	The standard error of the model	Calculated F value	Sig (F)
Market price	0.214	0.196	1.416	12.405	0

The third hypothesis H03: There is no statistically significant effect at the level of significance ($0.05 \geq \alpha$) for the disclosure of the components of the capital on the market price of shares in the Jordanian Industrial Companies public share [Table 12].

Table 13 shows the significant effect of the independent variables on the market share price (F = 12.812) and the level of significance (Sig F = 0.000) which is <0.05. This confirms the significance of the model, 0.219) indicated that 21.9% of the variance in market share price can be explained by the variation in the independent variables combined, with any other factors remaining constant.

The regression coefficients indicated that the value of (B = 0.067) to the effect of (the disclosure of the prime capital), which is insignificant, where the value of t is (1.359) and the level of significance (Sig = 0.176). The value of (B = −1.623), which is indicative of the effect of (debt ratio), is a significant effect., Where the t value is (−4.958) and the significance level (Sig = 0.000) (Table 14).

We therefore reject the third hypothesis, and accept the alternative which states that:

"There is a statistically significant effect at the level of significance ($0.05 \geq \alpha$) for the disclosure of the components of the primary capital on the market price of shares in the Jordanian industrial companies." To test the hypothesis of the main study, multiple regression analysis was used. The results were as follows:

Table 15 shows the significant effect of the independent variables on (market price) where the value of (F = 10.085) and the level of significance (Sig F = 0.000) is <0.05. This confirms the significance of the model, 0.272) indicated that 27.2% of the variance in market share price can be explained by the variation in the independent variables combined, with any other factors remaining constant.

The regression coefficients indicated that the value of (B = 2.012) to the effect of (disclosure of human capital), a significant effect, where the value of t is (5.084) and the level of significance (Sig = 0.000), and the value of (B = 0.104) (Table 16). To the effect (disclosure of structural capital), a significant effect, Where the value of t is 2.025 and the level of significance is (Sig = 0.045), the value of (B = 1.194) at the (disclosure of the prime capital), the value of t is 5.969 and the level of significance (Sig = 0.000)

Table 11: Summary and model analysis of variance ANOVA

The dependent variable	Model summary			ANOVA analysis	
	The coefficient of determination R²	The adjusted coefficient of determination the adjusted R²	The standard error of the model	Calculated F value	Sig (F)
Market price	0.214	0.196	1.416	12.405	0

Table 12: Regression coefficient for the effect of the disclosure of the structural capital on the market share price

Regression coefficients				
Independent variables	Factors (B)	Standard deviation	T calculated value	Sig (T)
Disclosure of structural capital	0.152	0.044	3.477	0.001
Company size	1.148	0.154	7.467	0
Debt ratio	−1.584	0.328	−4.831	0
Regression constant	−0.064	0.017	−3.845	0

Table 13: Summary and model analysis of variance ANOVA

The dependent variable	Model summary			ANOVA analysis	
	The coefficient of determination R²	The adjusted coefficient of determination the Adjusted R²	The standard error of the model	Calculated F value	Sig (F)
Market price	0.219	0.202	1.406	12.812	0

Table 14: Regression coefficient for the effect of the disclosure of the primary capital on the market price of the share

Regression coefficients				
Independent variables	Factors (B)	Standard deviation	T calculated value	Sig (T)
Disclosure of structural capital	0.067	0.049	1.359	0.176
Company size	1.178	0.137	8.603	0
Debt ratio	−1.623	0.327	−4.958	0
Regression constant	−0.054	0.015	−3.484	0.001

(B = 1.112) to the effect of (company size), A significant effect, where the value of t is 13.040 and the level of significance (Sig = 0.000) and the value of (B = −1.458), which indicates the effect of (debt ratio), a significant effect, where the value of t is (−5.178) and at a significant level (Sig = 0.000).

Accordingly, we reject the main hypothesis, and accept the alternative, which states that: "There is a statistically significant effect at the level of (0.05 ≥ α) significance of the disclosure of intellectual capital components (human capital, structural capital, and capital) on the market price of shares in Jordanian industrial companies".

5. CONCLUSION AND POLICY IMPLICATIONS

1. There is a difference between companies in terms of disclosure of intellectual capital to them, may be due to the differences of interests of companies to invest in intellectual capital, and therefore different disclosure, and may also be due to the difficulty of measurement and tracking of many companies to disclose specific data for Intellectual capital.
2. The general trend in the 4 years (2013–2016) was towards increasing the level of disclosure of the components of intellectual capital. This indicates the continuous increase by the industrial companies in the level of disclosure. However, this level was below the required limit, as it didn't exceed in all the years the ratio of (56.0%).
3. There is a relative increase in the level of disclosure of structural capital and interest relative to the disclosure of human capital for industrial firms. This may be seen as a decline in the interest of companies in the development of their human resources compared with the structural aspect and relations with other parties.
4. The general average of the market share price of the Jordanian industrial companies reached (2.486) JD, with a standard deviation of (3.978) JD. The largest value was 28,050) JD (while the smallest value was (0.170) JD There is a large variation in the market valuation of companies' prices, and this varies according to many factors, including internal company related, external related to the environment surrounding the company, and the efficiency of the financial market.
5. The disclosure of intellectual capital components (human capital, structural capital, and capital) to the market price of shares in Jordanian industrial companies.

5.1. Recommendations

1. Companies should monitor changes in their stock prices, trading volume, and how investors evaluate the company's shares.
2. The management of companies to develop strategic plans to increase the share of intellectual assets of the total assets of the company, and to adopt in the implementation of the plans on a clear indicator measures the development of implementation, and this is reflected in the annual reports.
3. The development of the human resource should be the top

Table 15: Summary model and analysis of variance ANOVA

The dependent variable	Model summary			ANOVA analysis	
	The coefficient of determination R²	The adjusted coefficient of determination the Adjusted R²	The standard error of the model	Calculated F value	Sig (F)
Market price	0.272	0.25	1.332	10.085	0

Table 16: Regression coefficient for the effect of the disclosure of intellectual capital components on the market share price

Regression coefficients				
Independent variables	Factors (B)	Standard deviation	T calculated value	Sig (T)
Disclosure of human capital	2.012	0.396	5.084	0
Disclosure of structural capital	0.104	0.051	2.025	0.045
Disclosure of Relational capital	1.194	0.2	5.969	0
Company size	1.112	0.085	13.04	0
Debt ratio	−1.458	0.282	−5.178	0
Fixed regression	0.026	0.018	1.436	0.153

priority in the industrial companies, because of the human element impact of supporting the operations of the company, and maintain customers, and increase the level of satisfaction.

4. Assigning an administrative unit or a specialized team to measure the items related to the components of intellectual capital, and to determine the level of development of these items and to disclose them, because they have an impact on the evaluation of the company by its customers, especially the investors.

5. Increasing the level of disclosure of the components of intellectual capital. Companies should rely on reference comparisons with international companies to reach full disclosure of all items that measure the components of intellectual capital.

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