



**THE DIRECTIONS OF CAUSALITY  
BETWEEN THE VOLUNTARY  
DISCLOSURE AND COMPANY  
PERFORMANCES AMONG LISTED  
JORDANIAN COMPANIES.**

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**ABSTRACT**

Over the last two decades, there has been globally much attention towards voluntary disclosure initiatives arising mainly due to unrelenting needs expressed by various stakeholders to be more informed of corporations. Mandatory corporate disclosure alone seems inadequate. Therefore, the study aims to evaluate the causality directions between the extent of voluntary disclosure and corporate performance amongst listed Jordanian companies at Amman Stock Exchange (ASE) for the period 2002-2011. The measurement of voluntary disclosure is based on the checklist which was selection from previous studies then refined the checklist to ensure its validity from experienced Jordanian accountants from Amman Stock Exchange (ASE). Additionally, using Granger tests in studying causality between voluntary disclosures and corporate performance, empirical results indicate that there are 26 companies having unidirectional causality, 45 companies having no directional causality and one company having bidirectional causality. This study argued that the quality of voluntary disclosure is also highly correlated with firm performance. Hence, high degree of transparency and quality of disclosure should enable sound governance and improve firm performance. Otherwise, low voluntary disclosure increases the market's difficulty in predicting firm performance.

**Keywords:** voluntary disclosure, corporate performance, causality directions, Amman Stock Exchange.

**1. Introduction**

Voluntary disclosure is deemed very important for all stakeholders; it provides them with the necessary information to reduce uncertainty and helps them to make suitable economic financial decisions (Cooke, 1989). The transparency arising from voluntary disclosure of corporate is vital for economic stability and the promotion of sustained levels of high quality

investment by corporations. This is achieved through the preparation of annual financial reports which are published by companies and are considered one of the most important sources of information to outsiders (Betosan, 1997; Lang and Lundholm, 1993). Annual reports are used as a tool to communicate both quantitative and qualitative corporate information with stakeholders or with other interested parties (Barko, Hancock and Izan, 2006). In addition, Mitton (2002) further argued that the quality of voluntary disclosure is also highly correlated with firm performance. Hence, high degree of transparency and quality of disclosure should enable sound governance and improve firm performance. Otherwise, low voluntary disclosure increases the market's difficulty in predicting firm performance (Chang, Cho and Shin, 2007). The relationship between the corporate performance and the extent of voluntary disclosure in the annual reports has been tested by various prior studies (e.g. Wallace and Naser, 1996; Ahmed and Courtis, 1999; Haniffa and Cook, 2002; Camfferman and Cooke, 2002; Chau and Gray, 2002; Akhtaruddin, 2005; Barako et al, 2006; Adelopo, 2011). However, the empirical evidence of such studies was mixed. For instance, there was a positively significant relationship between corporate performance and the extent of voluntary disclosure (e.g. Wallace and Naser, 1996; Haniffa and Cook, 2002; Camfferman and Cooke, 2002; Chau and Gray; 2002; Adelopo, 2011). In contrast, some studies found the relationship not to be statistically significant (e.g. Ahmed and Courtis, 1999; Akhtaruddin, 2005; Barako et al., 2006). Despite the evidence of mixed results, it is possible to find directions causality between the extent of voluntary disclosure and corporate performance. This directions causality can be explained by the signaling theory, where corporate performance may have the incentive to signal that they are better companies by providing more voluntary disclosure within their annual reports. The company having higher corporate performance would be due to several aspects including voluntary disclosure, resulting in high voluntary disclosure. Gordon et al. (2010) also state that voluntary disclosures in the annual report send signals to the marketplace, and these signals are expected to increase a firm's net present value and, in turn, its stock market value. Lev and Penman (1990) argue that investors perceived non-disclosure of information as bad news, therefore good-news firms have the motivations to be out from other bad firms. This means that when there is increase in corporate performance, the voluntary disclosure of these firms will increase.

Foster (1986) suggests that corporate performance have incentives to distinguish themselves from less corporate performance in order to raise capital on the best available terms by providing voluntary disclosure. In addition higher corporate performance motivates management to provide greater information because it increases investors' confidence, which in turn, increases management compensation and to support their position. Based on the above discussion, it can be hypothesized that the directions causality between corporate performance and voluntary disclosure within the annual reports. The following hypothesis was formulated as:

H<sub>1</sub>: there are different directions of causality (bidirectional, unidirectional, and neutral) between voluntary disclosure and corporate performance among listed Jordanian companies.

## **2.0 Methodology**

### **2.1 The Disclosure Index**

A main task in this type of research is to develop the voluntary disclosure index. The disclosure index is a disclosure checklist which contains a number of different disclosure items (Arvidsson, 2003). The disclosure index is used to measure the extent of voluntary disclosure, mandatory disclosure or both. The current study focuses on the extent of voluntary disclosure in the annual reports of Jordanian listed companies. As may be seen from the literature on disclosure, there is evidence that there is no agreed theoretical framework or guidelines on the number and the selection of items to be included in a disclosure index (Wallace, Naser and Mora, 1994; Bukh, Nielsen, Gormsen and Mouritsen, 2005). Thus, to form the basis for developing the voluntary disclosure index of the study, the following steps have been taken:

1. To construct the index, the author created a voluntary disclosure checklist reflecting information over and above what is required by Company Law No. 76 of 2002, IFRSs and Amman Stock Exchange listing requirements.
2. Based on the selection on previous studies (e.g. Cooke, 1989; Meek et al, 1995; Ghazali and Weetman, 2006; Akhtaruddin & Haron, 2010; Al-Shammari & Al-Sultan, 2010; Eng and Mak, 2003; Adelopo, 2011; Elsayed and Hoque, 2010; Lopes and Alencar, 2010) and applicability to the Jordanian environment. This is logical as intellectuals agree that researchers have to build on the knowledge of prior

researchers. At the end of this step, a primary list of 64 voluntary disclosure items was developed.

3. To validate the checklist, first screened, the items in our disclosure index are checked against the mandatory annual report disclosure requirements in Amman Stock Exchange to make sure that the disclosure index reflects only voluntary disclosure items. Second, two experienced Jordanian accountants from Amman Stock Exchange refined the checklist to ensure its validity. Therefore, the review and the discussions suggested some modifications. So the total number of the voluntary disclosure items was decrease from 64 to 56 items.
4. A list of 56 voluntary disclosure items was finalized. The disclosure index is divided into three main groups of voluntary disclosure. The first group the strategic information items. The second group the non-financial information items. The third group the financial information items.

The current study used the unweighted approach for scoring the disclosure index as it is considered more appropriate. The preference for using the unweighted approach is due to several reasons, stated as follows. First, to avoid the high subjectivity involved in assigning the weights of importance of items by different user groups. This is the view taken by Raffournier (1995) and Bukh et al., (2005). Second, the assumption of treating disclosure items equally will result in a lower bias than an inaccurate weighting used by the weighted approach (Raffournier, 1995). Finally, the empirical findings of the studies of Robbins and Austin (1986) and Chow and Wong-Boren (1987), found that the results produced are similar, whether the weighted or unweighted approach is used. Mathematically a voluntary disclosure index is a ratio or percentage of the actual scores achieved by a company divided by the maximum items which the company is expected to disclose (i.e.  $VD \leq 56$  items). In other words, each item scored 1 if disclosed and 0 otherwise, the scores for each item were added to derive the final score for each company and the voluntary disclosure index was calculated as the ratio of total items disclosed divided by the maximum possible score. In addition, corporate performance (CP) is measured by the return on assets (i.e. the ratio of net income to total assets (ROA)). This measurement of corporate performance has been used by prior studies (e.g. Uyar and Kiliç, 2012).

### 3.0 Results and Discussions

The current study employs the Granger (1969) test to evaluate the causality directions (bidirectional, unidirectional, and neutral) between voluntary disclosure and corporate performance. However, this test is conducted in levels (without the first differencing).

Table 3.1 shows the Granger causality results for services sector corporations. Firstly, regarding the health care services, there is a unidirectional causality from VD to CP in ABMS and CICO corporations. Also, it shows a no directional causality between VD and CP in ICMI Corporation. Secondly, the result in the educational services shows that no directional causality between VD and CP in ITSC, ZEIC and AIEI corporation. Thirdly, the Hotels and Tourism services show that there is a unidirectional causality from VD to CP in MALL, MDTR and ZARA Corporation. On the other hand, there is a unidirectional causality from CP to VD in JPTD Corporation. Also, it shows no directional causality between VD and CP in JOHT, AIHO and TAJM Corporation. Fourthly, the result of transportation services shows that there is a unidirectional causality from VD to CP in SHIP and SITT corporations. Also, it shows no directional causality between VD and CP in JETT, ALFA and TRTR corporations. Moreover, in the Media services, there is a unidirectional causality from VD to CP in JOPP corporations. Furthermore, regarding to the Utilities and Energy services, the result shows that there is a unidirectional causality from VD to CP in NAPT Corporation. Also, it shows a no directional causality between VD and CP in IREL and JOPT corporations. Finally, the result shows that there is no directional causality between VD and CP in SPTI, JDFS, JITC and ABLA corporations in commercial services.

**Table 3.1:** Granger Causality Tests for Services Sector Corporations

Symbol	Causality Directions	F-Statistic	Prob.	Decision
<i>HealthCare</i>				
ABMS	VD → CP	5.10680	0.0646	Uni- directional.
CICO	VD → CP	22.5730	0.0032	Uni- directional.
ICMI	VD — CP	0.16509 0.30133	0.6986 0.6029	No directional causality.
<i>Educational</i>				
ITSC	VD — CP	0.73368 1.42723	0.4400 0.2982	No directional causality.
ZEIC	VD — CP	0.33505 2.48468	0.5838 0.1660	No directional causality.

AIEI	VD — CP	1.04028 3.16025	0.3471 0.1258	No directional causality.
<i>Hotels and Tourism</i>				
MALL	VD → CP	5.30643	0.0608	Uni- directional.
JPTD	CP → VD	9.24171	0.0228	Uni- directional.
JOHT	VD — CP	2.11956 1.55566	0.1957 0.2588	No directional causality.
AIHO	VD — CP	2.07392 1.43886	0.1999 0.2755	No directional causality.
TAJM	VD — CP	0.05855 0.24006	0.8169 0.6416	No directional causality.
MDTR	VD → CP	5.30643	0.0608	Uni- directional.
ZARA	VD → CP	5.49074	0.0576	Uni- directional.
<i>Transportation</i>				
JETT	VD — CP	0.11458 2.23945	0.7465 0.1852	No directional causality.
ALFA	VD — CP	0.55713 1.98584	0.4836 0.2084	No directional causality.
SHIP	VD → CP	4.75020	0.0721	Uni- directional.
SITT	VD → CP	13.0586	0.0112	Uni- directional.
TRTR	VD — CP	0.12910 0.23372	0.7317 0.6459	No directional causality.
<i>Media</i>				
JOPP	VD → CP	3.79791	0.0992	Uni- directional
<i>Utilities and Energy</i>				
NAPT	VD → CP	5.65596	0.0549	Uni- directional
IREL	VD — CP	3.02951 0.04485	0.1324 0.8393	No directional causality.
JOPT	VD — CP	0.64469 0.44685	0.4670 0.5404	No directional causality.
<i>Commercial</i>				
SPTI	VD — CP	0.63372 0.03462	0.4563 0.8585	No directional causality.
JDFS	VD — CP	1.76570 1.17999	0.2322 0.3191	No directional causality.
JITC	VD — CP	0.64315 0.23493	0.4532 0.6451	No directional causality.
ABLA	VD — CP	1.06295 0.16767	0.3423 0.6964	No directional causality.

Notes: (1) → represents the unidirectional causality. (2) – shows no directional causality. (3) ↔ represents the bidirectional causality.

Source: output of Eviews 7.1 econometric software.

Table 3.2 shows the Granger causality results for industries sector corporations. Firstly, regarding to the Medical Industries, there is a no directional causality between VD and CP in

MPHA, DADI and APHC Corporation. Secondly, the result of the Chemical Industries shows that there is no directional causality between VD and CP in INOH, ICAG, INMJ, JOIR and NATC corporation. Also, it shows that there is a unidirectional causality from VD to CP in JOIC Corporation. Thirdly, under the Cardboard Industries, the result shows that there is a unidirectional causality from VD to CP in JOPC Corporation. Also, it shows a no directional causality between VD and CP in PERL and APCT Corporation. Fourthly, Table 6.8 shows that there is a unidirectional causality from VD to CP in UADI corporations in Packaging industries. Also, it shows a no directional causality between VD and CP in EKPC corporations. Moreover, the result of the Food and Beverages shows that there is a unidirectional causality from VD to CP in NDRA and JVOL corporations. Also, it shows a no directional causality between VD and CP in NATP, AMAN and JODA corporations. In addition, the Tobacco industry's result shows that there is a unidirectional causality from VD to CP in ELCO Corporation. Also, it shows a no directional causality between VD and CP in UTOB corporations. Furthermore, the result of the Mining and Extraction Industries shows that there is a unidirectional causality from VD to CP in JOST, NATA, INTI, NAST and JOCM corporations. Also, it shows a no directional causality between VD and CP in SLCA, AALU, JOPH and APOT corporations. On the other hand, there is bidirectional causality from CP to VD in JOWL Corporation. As well, the result of the Engineering and Constructing shows that there is a unidirectional causality from VD to CP in AJFM Corporation. Also, it shows a no directional causality between VD and CP in RMCC, IENG, JOPI and WOOD corporations. In addition, the Engineering and Constructing result shows that there is a unidirectional causality from VD to CP in AJFM Corporation. Also, it shows a no directional causality between VD and CP in RMCC, IENG, JOPI and WOOD corporations, Moreover, the result of the Electrical Industries shows that there is a unidirectional causality from VD to CP in JNCC, MECE and WIRE Corporation. Also, it shows a no directional causality between VD and CP in AEIN corporations. In addition, the result of the Leathers and Clothing shows that there is a no directional causality between VD and CP in ELZA, CELG, JOWM and WOOL corporations. Finally, the result of the Glass and Ceramic shows that there is a no directional causality between VD and CP in ICER corporations. Also, it shows that there is a unidirectional causality from VD to CP in JOCF Corporation.

**Table 3.2:** Granger Causality Tests for industries sector corporations

Symbol	Causality Directions	F-Statistic	Prob.	Decision
<b>Pharmaceutical and Medical Industries</b>				
MPHA	VD — CP	0.10214 0.17293	0.7601 0.6920	No directional causality.
DADI	VD — CP	1.25255 2.55721	0.3059 0.1609	No directional causality.
APHC	VD — CP	1.54891 3.22531	0.2597 0.1226	No directional causality.
<b>Chemical Industries</b>				
INOH	VD — CP	1.04861 0.02751	0.3453 0.8737	No directional causality.
ICAG	VD — CP	0.81288 1.90213	0.4020 0.2170	No directional causality.
JOIC	VD → CP	4.06026	0.0905	Uni-directional
INMJ	VD — CP	0.57197 0.33804	0.4781 0.5821	No directional causality.
NATC	VD — CP	1.77254 0.00068	0.2314 0.9800	No directional causality.
JOIR	VD — CP	0.42346 0.17429	0.5393 0.6909	No directional causality.
<b>Paper and Cardboard Industries</b>				
PERL	VD — CP	0.26395 0.53246	0.6258 0.4931	No directional causality.
APCT	VD — CP	0.23010 0.14446	0.6484 0.7170	No directional causality.
JOPC	VD → CP	7.42859	0.0344	Uni-directional
<b>Printing and Packaging</b>				
EKPC	VD — CP	0.14204 0.15742	0.7192 0.7053	No directional causality.
UADI	VD → CP	10.2150	0.0187	Uni-directional
<b>Food and Beverages</b>				
NATP	VD — CP	0.1879 0.2848	2.20751 1.37884	No directional causality.
NDRA	VD → CP	6.61571	0.0422	Uni-directional
AMAN	VD — CP	2.47771 0.79743	0.1665 0.4063	No directional causality.
JVOL	VD → CP	5.08287	0.0650	Uni-directional
JODA	VD — CP	1.32362 1.12991	0.2937 0.3287	No directional causality.
<b>Tobacco and Cigarettes</b>				
UTOB	VD — CP	2.71052 1.09237	0.1508 0.3362	No directional causality.
ELCO	VD → CP	4.37714	0.0814	Uni-directional



Mining and Extraction Industries				
JOST	VD → CP	5.42366	0.0587	Uni-directional
NATA	VD → CP	4.55384	0.0768	Uni-directional
INTI	VD → CP	7.95837	0.0303	Uni-directional
SLCA	VD — CP	0.01096 0.59750	0.9200 0.4689	No directional causality.
AALU	VD — CP	0.07542 0.06791	0.7972 0.8073	No directional causality.
NAST	VD → CP	12.2186	0.0129	Uni-directional
JOPH	VD — CP	0.53257 0.00536	0.4930 0.9440	No directional causality.
JOCM	VD → CP	7.44910	0.0342	Uni-directional
APOT	VD — CP	0.76529 0.13121	0.4153 0.7296	No directional causality.
JOWL	VD ↔ CP	4.24540 6.51980	0.0850 0.0433	Bi-directional
Engineering and Construction				
RMCC	VD — CP	0.99724 0.01039	0.3638 0.9228	No directional causality.
IENG	VD — CP	1.89303	0.1948	No directional causality.
JOPI	VD — CP	0.02522 0.00226	0.8800 0.9639	No directional causality.
AJFM	VD → CP	14.2896	0.0092	Uni-directional
WOOD	VD — CP	3.48406 0.53058	0.1112 0.4938	No directional causality.
Electrical Industries				
JNCC	VD → CP	21.8228	0.0034	Uni-directional
AEIN	VD — CP	1.04618 1.92303	0.3458 0.2148	No directional causality.
MECE	VD → CP	8.94188	0.0243	Uni-directional
WIRE	VD → CP	10.1439	0.0190	Uni-directional
Textiles, Leathers and Clothing's				
ELZA	VD — CP	0.31949 2.6608	0.5924 0.9999	No directional causality.
CELG	VD — CP	3.26814 0.20654	0.1206 0.6655	No directional causality.
JOWM	VD — CP	2.3906 0.83813	0.1730 0.3952	No directional causality.
WOOL	VD — CP	0.31949 2.60008	0.5924 0.9999	No directional causality.
Glass and Ceramic Industries				
ICER	VD — CP	0.05380 3.44706	0.8243 0.1127	No directional causality.

JOCF	VD → CP	18.4710	0.0051	Uni-directional
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Notes: (1) → represents the unidirectional causality. (2) – shows no directional causality. (3) ↔ represents the bidirectional causality.

Source: output of Eviews 7.1 econometric software.

Table 3.3 shows the Granger causality results for services and industries corporations. The result shows that, there is a unidirectional causality from VD to CP in Jordanian listed companies (e.g. services and industries sectors). This means that an increase in the voluntary disclosure within the Jordanian listed companies may lead to a case for higher corporate performance for these companies (Mitton, 2002 and Chang, Cho and Shin, 2007).

**Table 3.3:** Granger Causality Tests for services and industries corporations

Causality Directions	F-Statistic	Prob.	Decision
VD → CP	5.11540	0.0644	Uni-directional

Notes: → represents the unidirectional causality.

Source: output of Eviews 7.1 econometric software.

Table 4.4 reports the estimated results of Granger causality tests for services and industries sector corporations. The results indicate that there are 27 companies having unidirectional causality, 44 companies having no directional causality and one company having bidirectional causality.

**Table 3.4:** Summary of Granger Causality Tests for services and industries sector corporations

Causality Directions	Services Sector Corporations	for industries sector corporations	All corporations
Uni-directional	10	17	27
Bi-directional	0	1	1
No directional	16	28	44
Total of corporation	26	46	72

Table 3.4 indicates the relationships between the variables where voluntary disclosure cause corporate performance (VD→CP). This means that an increase in the voluntary disclosure may lead to a case for higher corporate performance. In addition, Mitton (2002) further argued that the quality of voluntary disclosure is also highly correlated with firm

performance. Hence, high degree of transparency and quality of disclosure should enable sound governance and improve firm performance. Otherwise, low voluntary disclosure increases the market's difficulty in predicting firm performance (Chang, Cho and Shin, 2007). Also the result shows that bi-directional causality between the voluntary disclosure and corporate performance ( $VD \leftrightarrow CP$ ). This mean increase in the voluntary disclosure may lead to a case for higher corporate performance (Mitton, 2002 and Chang, Cho and Shin, 2007) and in same time increase in the corporate performance may lead to a case for higher voluntary disclosure (Haniffa and Cook, 2002; Camfferman and Cooke, 2002; Chau and Gray; 2002; Kusumawati, 2006; Adelopo, 2011). In addition, the result shows no directional causality between voluntary disclosure and corporate performance ( $VD \text{ --- } CP$ ).

Several possible reasons can explain the non-directional causality between the voluntary disclosure and corporate performance ( $VD \text{ --- } CP$ ). First, Jordan is suffering like most countries of the world from the recent financial crisis, which is effecting in the economic and corporate performance. According to the signal theory, the management of the companies with high corporate performance try to distinguish themselves from other by disclosing inside information to signal the fact of their company's performance. Hence, the management of the companies with low corporate performance will not signal (e.g. disclose more information) because the low of corporate performance (Roos, Dragonetti and Edvinsson, 1997). In addition, Jordan with its limited resource, its import the oil and the Gas from the neighboring markets, with the rising cost of energy prices for these companies, which lead to the high cost and pricing (Addustour, 2011). Thus, the management of the Jordanian companies will not disclose more information because there will be some cost for the voluntary disclosure in any company (e.g. processing and collecting information cost (Healy and Palepu, 1993; and Eccles and Mavrincac, 1995). Second, it is also true that Jordanian listed companies are inclined not to disclose information that will damage their competitive position (Newman and Sansing, 1993). Hence, the main problem faced representatives of the Jordanian companies related to unfair competition (Addustour, 2011). Finally, in 2004, JSC imposed 365 enforcement actions mostly for lack of proper disclosure (Rosco, 2005).

#### 4.0 Conclusion and Recommendations

In fact, one of the most important issues that the policymakers, today, have to deal with discloses more information and the need for enhancement and development of voluntary disclosure to improve the corporate performance. Therefore, there is feedback Granger Causality between voluntary disclosure and corporate performance within Jordanian listed companies.

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