A Quantitative Analysis for the Correlation Between Corporate Financial and Social Performance

Wafaa Salah Mohamed
*The British University in Egypt*, wafaa.salah@bue.edu.eg

Mostafa Salama
*The British University in Egypt*, Mostafa.Salama@Bue.edu.eg

Follow this and additional works at: [https://buescholar.bue.edu.eg/bus_admin](https://buescholar.bue.edu.eg/bus_admin)

Part of the Accounting Commons

**Recommended Citation**
Salah, W., & Salama, M. A. (2016). A Quantitative analysis for the correlation between corporate financial and social performance. International Journal of Recent Contributions from Engineering, Science & IT (iJES), 4(4), 55-62. DOI: = https://10. 3991/ijes.v4i4.6551

This Article is brought to you for free and open access by the Business Administration, Economics and Political Science at BUE Scholar. It has been accepted for inclusion in Business Administration by an authorized administrator of BUE Scholar. For more information, please contact bue.scholar@gmail.com.
A Quantitative Analysis for the Correlation Between Corporate Financial and Social Performance

Wafaa Salah and Mostafa A. Salama
The British University in Egypt (BUE), Cairo, Egypt

Abstract—Recently, the corporate social performance (CSP) is not less important than the corporate financial performance (CFP). Debate still exists about the nature of the relationship between the CSP and CFP, whether it is a positive, negative or a neutral correlation. The objective of this study is to explore the relationship between corporate social responsibility (CSR) reports and CFP. The study uses the accounting-based and market-based quantitative measures to quantify the financial performance of seven organizations listed on the Egyptian Stock Exchange in 2007-2014. Then uses the information retrieval technologies to quantify the contribution of each of the three dimensions of the corporate social responsibility report (environmental, social and economic). Finally, the correlation between these two sets of variables is viewed together in a model to detect the correlations between them. This model is applied on seven firms that generate social responsibility reports. The results show a positive correlation between the Earnings per share (market-based measure) and the economical dimension in the CSR report. On the other hand, total assets and property, plant and equipment (accounting-based measure) are positively correlated to the environmental and social dimensions of the CSR reports. While there is not any significant relationship between ROA, ROE, Operating income and corporate social responsibility. This study contributes to the literature by providing more clarification of the relationship between CFP and the isolated CSR activities in a developing country.

Index Terms—Financial performance; Social performance; Machine learning.

I. INTRODUCTION

Nowadays, society practices more pressure on organizations to become more socially responsible. This results in increasing the number of organizations that start to give more importance to environmental and social disclosure (Karagiorgos, 2010) [1], along with achieving their financial goals. Organizations increase their CSR activities to improve their reputation and their company image. In return, organizations affect customer loyalty, increase sales and meet stakeholders obligations (Oh, W. and Park, S., 2015) [22]. Although CSR activities are costly, but they generate cash flows and a reputation that covers the associated costs. Socially responsible organizations have fewer risks of negative social events, bribery, paying fines for pollution and negative advertisement which cause damage to their reputation (Ozcelik et al.) [4]. KPMG International’s survey (2013) [2] reports a dramatic increase in corporate social reporting rates in the last two years. Almost 76 percent of firms in USA now report on CSR, 73 percent in Europe and 71 percent in Asia Pacific. Market transparency and sustainable products are parts of the social responsibility that attract more investors.

Corporate social responsibility (CSR) is the commitment of a business to consider social, economic and environmental requirements [5]. Corporate social Performance (CSP) is the concerns, actions, and reputations that reflect the underlying values and behaviors of CSR. There are several debates about CSR, the first debate lies on whether it provides an addition or not to the firms’ financial performance [6]. Some literature argues that CSR is costly without any benefit (Brammer et al., 2005; Lopez et al., 2007 and Jalal, 2009) [7], [8], [9]. However, others argue that CSR improve firms financial performance (Branco and Rodrigues, 2007; Burhan and Rahmani, 2012) [10], [11]. The second debate that firms must have a good financial performance before having CSR program as CSR is costly. While others argue that CSR is a long term investment activities so CSR is a before profit (Santoso, A. and Feliana, Y., 2014) [47]. CSR reporting is unenforceable and practised on a voluntary basis. This is why it is important to investigate whether CSR reporting practices increase firms’ financial performance or the enhanced financial performance improves their social disclosure. Is it worthwhile for organizations to be socially responsible? According to Beurden and Gossling (2008) [13], the answer to this question has not yet been found. Organizations are more likely to invest in environmental and social behavior if they believe that these investments enhance their financial results. Alternatively, the lack of a positive relationship between CSP and CFP is likely to weaken firms’ efforts and hold back progress toward socially responsible organizations (Cordeiro, J. and Tewari, M., 2015) [14].

The objective of this study is to investigate previous question and try to find answers. There is a substantial body of literature that investigates the relationship between CSR and CSP using different measurement methods. CSP can be based on accounting-based and market-based measures [15]. Market-based measures include the stock performance, earning per share, share price appreciation, while accounting-based measures include profitability measures, asset utilization, return on assets and asset turnover (Rockmore, B. and Jones, F., 1996) [16]. This study takes place on the nature of the relationship between the CSR and CFP. It measures financial performance by both accounting-based measures (ROA, ROE, total asset, PPE and operating income) and market-based measures.
A Quantitative Analysis for the Correlation Between Corporate Financial and Social Performance

Measuring Corporate Social Performance

The measures that represent firms’ financial performance are clear and precise as Return on Assets, Return on Equity and Return on Investment. The measures that represent firms’ social performance are not that clear because of its qualitative nature. Common CSP include, for example, Labor Practices and Decent Work, Human Rights and Environmental Protection System (Chen, C. and Dalen, J., 2010). The most common methods used in literature for quantifying CSP are content analysis of annual reports, Questionnaire surveys, Reputation measures, One-dimensional indicators and Ethical rating (Soana, M., 2011). Research takes place on the nature of the relationship between the CSR and CFP. The literature review (23) investigates the different factors that evaluate this relation as positive, negative or non-significant relation. This review concluded that this relation is a positive relation, and it is influenced by size of the firm as an important confounding factor. The measurement of corporate social performance is quantified based on different measures. Five measures, as listed in (24), are investigated in different researches. Four of these measures are as follows: 1) Providing survey questionnaires to managers and directors, then analyzing the responses by researchers. 2) Monitor the firm reputation perceived by third party that is not biased by the firm’s financial performance. 3) Performing a dialog with the local community concerning the environmental/social/legal practices of the firm. 4) Calculating the ethical rating of the firm by specialized agencies. These four measures include the interference of a third expert party to evaluate the results/outcome of Survey, reputation and dialog methods or directly calculating of the ethical rating. These third party dependent measures varies according to the nature/background of the third party, the used quantification methods and the different used sources for each measures. Finally, the fifth measure is the content analysis that is based on information retrieval methods. This measure consists of counting words, lines or sentences regarding the social information. The content analysis (CA) is a measure that presuppose that the social disclosure or the CSR report is a good reflection of the actual CSP. The CA based on quantity is based on counting the number of characters, words, sentences, pages, proportion of pages in a specific category. The work in (25) counts the number of statements per each category, and correlate between these numbers (e.g. Environment, Community, Energy, and Human resources) and some accounting measures (e.g. Return on assets, Return on equity). Assumptions like in (26) stated that the quantity of a specific category within the disclosures reveals the importance of that category. The debate around CA lies on whether the quantity of relevant text detected is sufficient or the semantic quality is still required (27). In other words, CA may not assess the intensity of the Social performance activity.

B. Relation between Corporate Social Performance and Financial Performances

Several studies tried to explore whether CSP disclosure improves financial performance, destroys it or has no value at all. CSP can be viewed as an extension of firms’ efforts to promote effective corporate governance, ensuring organizations’ sustainability through sound business practices that promote accountability and transparency toward the society as a whole (Jo, H. and Harjoto, M., 2012) (28). Abduallah, A. (2003) (29) has analyzed the objectives and importance of voluntary disclosures to decision-makers in the Egyptian market. He also analyzed the economic consequences of it. The study found evidence that support the importance of the voluntary disclosure. AlKhial (2009) (30) tried to recognize the im-
importance of voluntary disclosure and identify the most important information that should be included in the financial reports. The study found that voluntary disclosure affects firm investment decisions and reduces the cost of capital and information asymmetry. Hussainey, K., Elsayed, M. and AbdelRazik, M. (2011) [31] use a sample of 111 Egyptian listed companies for the period of 2005-2010. They found that 66% of the Egyptian listed companies disclose on average 10-50 CSR statements and the product/customer information is used extensively compared with other types of CSR information.

The relationship between CSR and organization financial performance attracted the attention of academics and managers and was empirically examined by several studies with different measurements. However, despite a large number of studies that have addressed this issue, their results are conflicting (Ambec and Lanoie, 2008) [32]. Although there are some empirical studies that support a positive relationship between CSP and CFP, a large number of studies find mixed and even negative evidence of this link. Therefore, results from archival research seem to suggest that CSP can add value to the firms only under certain conditions (Barnett and Salomon, 2006 [33]; Servaes and Tamayo, 2013 [34]). There is a call for deeper understanding of the mechanisms linking certain CSR efforts to certain performance outcomes (Perini, Russo, Tencati and Vurro, 2011). Based on existing literature findings, the relationship between CSP and CFP can be classified into negative, positive or mixed relationships between them.

Most studies found a positive relationship between CSP and CFP (Griffin and Mahon, 1997; Hayibor, and Agle, 1999). Endrikat, Guenther and Hoppe (2014) [36], conducted a meta-analysis and the results indicate that there is a positive and partially bidirectional relationship between CSP and CFP. The findings of the study suggest that the relationship is stronger when the strategic approach underlying CSP is proactive rather than reactive. Dumitrescu and Simionescu (2014) [40] test the sign of the relation between CSP and CFP empirically. The results indicate a positive and significant relationship, supporting the view that responsible financial performance can be associated with a series of bottom-line benefits. Hassan and Melegy (2014) [41] found that the content of voluntary disclosure provided by companies in both annual reports and web sites has economic value, to some extent, and it is important for investors. Ozcelik, Ozturk and Gursakal, 2014) state three perspectives on the relationship between CSP and financial performance: First, researchers argue that financial benefits exceed the costs of investment for CSR because the investment in CSR involves benefits as enhanced employee, enhance relations with investors and government. Second, Investment in CSR generates positive financial benefits by managing stakeholder. Finally, organizations investing in CSR have predominant resources.

Different studies suggest that CSR activities can contribute to improve the relationship of the organization with stakeholders, influencing financial performance positively (Orlitzky et al., 2003 [38]; McWilliams et al., 2006 [39]; Barnett 2007 [42]; Lee 2008 [43]; Bhattacharyya et al., 2009 [37]). However, other studies found that good CFP leads to good CSP as the more the profitable the firm, the more the resources directed to socially responsible activities. According to the slack resource theory, the availability of resources was an important factor for the firm to do CSR (Santoso, A. and Feliana, Y., 2014) [47]. The studies that found a negative relationship between CSP and CSF are not found often. Most researchers investigate the effect of organizations financial condition on investing in corporate social activities. Organizations having extra resources have bigger possibility to invest in environmental and social activities and report their CSR (Parket and Eilbrit, 1975) [45]. Researchers have hypothesized that there is a negative relationship between CSR and CFP because of high costs of CSR activities which lead to decline in organizations profits (Oh and Park, 2015). Investing in CSR involves additional costs such as improved employee conditions, adoption of environmentally friendly practices, charitable donations etc. Organizations socially responsible have higher costs than organizations that have less or no social responsibility (Barnett 2007[42]; Scherer and Palazzo 2011 [46]). Several studies argue that there is a negative relationship between earnings per share and CSR (Brammer et al. 2005 [7]; Lopez et al. 2007 [8]). Some studies argue that CSR is an after profit activities as spending on CSR activities is costly while providing no financial return. Other studies argued that CSR is a before profit program as it is a long term investment activities (Santoso and Feliana, 2014) [47].

Although some studies found a positive or negative relationship between CSP and CFP, but other studies show an insignificant relationship between them. Hassan, et al (2009) [48] found that mandatory disclosure in Egyptian market has a highly significant but negative relationship with firm value, while the voluntary disclosure has a positive but insignificant association with firm value. Several studies didn’t find any significant relationship between CSP and CFP (Brine et al., 2007 [?]; Fauzi et al., 2007 [49]; Aras et al., 2010 [50]; Ducassy, 2013 [52]). Nilipour and Nilipour (2012) [51] carried a study on the cement companies registered at Tehran Stock Exchange from 2007 and 2011. They found no relationship between financial performance and corporate sustainability performance.

Most of these researches lack investigating the correlation between different components of CSR report (Economic, Social and Environmental) and CFP. This Study breakdown CSR into three categories, then test the correlation between each category and CFP.

III. CSR AND CFP ANALYSIS METHODOLOGY

A growing body of empirical research has focused on CSR disclosure issues in developed countries. Very few studies are available on the CSR disclosure practices in developing countries in general and in Arab countries in particular and this requires studying CSR issues in Egyptian society (Hanafi, 2006) [17]. CSR is based on the notion that businesses have social and environmental obligations besides the economical one. CSR reporting starts in the Financial data was sourced from the annual reports published by the different firms listed in the Egyptian stock exchange from 2007 to 2014. The sampled firms was selected based on those who provided stand-alone CSR report or annual reports for each year. Consequently, there are 42 annual reports that has been analyzed in this study. This data is processed to calculate the differ-
ent ratios used in this research, and also remove the missing or incorrect records. Although the CSR reports may not describe exactly the social performance activity, it reflects a snapshot about the mindset of the firm’s management [53]. Accordingly, the target of this work is to analyze the CSR report of a firm and extracts a quantitative measure that represents the CSP of the firm. The measure to be used here is the content Analysis CA measure of the CSR report.

The proposed CA methods is dependent mainly on Global standards of the CSR reports to ensure the quality of the measure rather than the quantity. The quality of the CSR reports is dependent on following the Global Reporting Initiative (GRI) G4 and ISO 26000 sustainability reporting standards. These standards are categorized into three main sections, the Economical, Environmental and Social dimensions. Each dimension is consists of list of instructions and guidelines to the informations that should be covered in the CSR report. The following points are samples of the information that used in our research.

Social
- Total number and rates of new employee hires and employee turnover by age group, gender and region.
- Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.
- Percentage of new suppliers that were screened using human rights criteria.
- Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.

Environmental
- Energy consumption within the organization.
- Percentage of materials used that are recycled input materials.
- Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations.
- Emissions of ozone-depleting substances (ODS).

Economic
- Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation.
- Development and impact of infrastructure investments and services supported.
- Proportion of spending on local suppliers at significant locations of operation.

The proposed model considers each dimension as a query document, then the correlation between this query and the target CSR report is measured. The degree of matching of each statement to the query sentence is measured by the number of common words in both sentence. This step is applied on the CSR reports gathered across a sequence of years from 2008 to 2014. The relevance of the CSR report to the social, environmental and economical dimensions is measured for every year. According to the availability of the CSR reports for a firm, the extracted data set contains a series of three values for each CSR dimension.

The variation of values across a series of years is detected from both sets of CSP and CFP measures. Then the matching of increase/decrease in the values is captured to discover the dependent measures/factors from both sides. In the experimental part, Earning per share in the CFP measures is matched to the Economical dimension in the CSR reports. Also, total assets and property, plant and equipment in the CFP measures is matched to the Environmental and Social dimensions in the CSR reports.

IV. Results And Discussion

The values of the financial and social measures are normalized to the range between 0 and 1. The normalization process is applied to be able to compare between the values of both kinds of measures. Several measures like ROA, ROE, net income, operating income, PPE, EPS and total assets are examined. The ROA, ROE, net income, EPS and operating income represent the financial performance of the firm. While, the PPE and total assets represent the firm size. The measures that shows a high correlation to the CSR reports components are those related to the firm size as represented by PPE and total assets. Also the measures related to the financial performance as represented by EPS show a correlation to a CSR reports component different from those related to the firm size. Table I shows the correlation coefficient between these selected measures which shows a high correlation to the different components of the CSR reports.

| Firm      | T. Asset       | T. Asset       | PPE Environ. | PPE Social | EPS Economic |
|-----------|----------------|----------------|--------------|-------------|--------------|
| Tourism   | -0.70          | 0.06           | -0.89        | 0.38        | 0.81         |
| Raya      | -0.55          | -0.86          | -0.72        | -0.89       | 0.65         |
| Faljat    | 0.51           | 0.50           | -0.50        | -0.49       | 1            |
| Mohnin    | 0.73           | 0.71           | 0.22         | 0.35        | -0.98        |
| Kuwait    | 0.51           | 0.07           | 0.41         | -0.31       | 0.72         |
| Auto      | 0.41           | 0.82           | 0.50         | 0.84        | 0.68         |
| Glasy     | 0.65           | 0.54           | 0.73         | 0.66        | 0.35         |

A. Firm Size

For each year from 2007 to 2014, the correlation coefficient showed a significant positive relationship between the firm total assets and the environmental and social dimensions in the CSR report. While a mixed correlation between total assets and the Economic dimension. The correlation coefficient between the total assets and Environmental dimension ranged from 0.414 to 0.730, and between the total assets and Social dimension ranged from 0.54 to 0.820. On the other hand, Chi-square test is applied to select the measures that show a high correlation to each of the components of the CSR report. The total assets measure is selected as the highest correlated feature to the different components of the CSR reports. This result seems to support the literature review where firm size
plays a significant role in satisfying the societies environmental and social needs. Figures 1 and 2 show a visualization of the correlation between the Social and Environmental dimensions of the CSR reports and the total assets and PPE measures. The positive correlation appears clearly in all years in firms like Kuwait, GP Auto and Glaxy. While this correlation appears partially in firms like Toursims, Raya and Talaat Mostafa especially in years 2013 and 2014.

B. Firm Financial Performance

Among years from 2007 to 2014, most of the firms shows a positive relationship between the EPS of the firm and the economical dimension in the CSR report. The correlation coefficient between the EPS and the economical dimension ranges from 0.65 and 1 in 75% of these firms. Figures 3 and 4 show the visual correlation between Earning per share (EPS) and Economical dimension in the CSR report for these firms. This result shows that the prosperity of the financial situation of the firm is clearly reflected in the economical information mentioned in the CSR report.

V. CONCLUSION

The results of this study appears to be logic and concurrent with the previous literature reviews. This study is carried on six firms that generate social responsibility reports and listed on the Egyptian Stock Exchange. Using a GRI and ISO 26000 index, several variables have been examined (EPS, total assets, PPE, operating income, ROA and ROE). The content analysis method was used in this study to calculate CSR score to each dimension in the CSR report for the years 2007 to 2014. This study shows that the financial performance represented by EPS is proportional with the Economical dimension in the CSR report, while the firm’s size (represented by total assets and Property, Plant and Equipment) is proportional with Social and Environmental dimension in the CSR report. Finally, we found that other variables (i.e., ROE, ROA and operating income) do not affect CSR disclosure in Egypt. These findings show that financial performances for Egyptian firms play important role in enhancing CSR disclosure. Bigger firms tend to disclose more CSR compared to small ones especially the environmental and social dimension. Companies achieving high profits are keen to show their customers their economic strength. The contribution here lies in the quantitative proof of this fact. Also, the breakdown of the CSR report into 3 different dimensions according to the text analysis is considered an addition in detecting the correlation between both CSR and CFP.
A QUANTITATIVE ANALYSIS FOR THE CORRELATION BETWEEN CORPORATE FINANCIAL AND SOCIAL PERFORMANCE

REFERENCES

[1] Karagiorgos, T. (2010). Corporate Social Responsibility and Financial Performance: An Empirical Analysis on Greek Companies. European Research Studies. Volume XIII. Issue (4).

[2] KPMG International (2013), The KPMG Survey of Corporate Responsibility Reporting 2013.

[3] Oh, W. and Park, S. (2015), The Relationship Between Corporate Social Responsibility and Corporate Financial Performance in Korea, Emerging Markets Finance and Trade 51(3), 2015.

[4] Özçelik, F., Öztürk, B. and Gursakal, S. (2014), Investigating the relationship between corporate social responsibility and financial performance in Turkey, Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi, Cilt, 28(3).

[5] Holme, L. and R. Watts, 1999. Making good business sense, the world council for sustainable development, Geneva.

[6] J.J and J. F. Mahom, 1997, The corporate social performance and corporate financial performance debate: twenty-five years of incomparable research. Business Society, 36(1), 5-31.

[7] Brammer, S.; C. Brooks; and S. Pavelin. 2005. “Corporate Social Performance and Stock Returns.” Financial Management 35, no. 3: 97–116 https://doi.org/10.1111/j.1755-053X.2006.tb00149.x

[8] Lopez, M.V.; A. Garcia; and L. Rodriguez. 2007. “Sustainable Development and Corporate Performance: A Study Based on the Dow Jones Sustainability Index.” Journal of Business Ethics 75, no. 3: 285–300. https://doi.org/10.1007/s10551-006-9253-8

[9] Wu, M.: 2006. Corporate Social Performance, Corporate Financial Performance, and Firm Size: A Meta-Analysis. Journal of American Academy of Business 8(1), 163–171.

[10] Beurden, P., & Gossling, T. (2008). The worth of values—a literature review on the relation between corporate social and financial performance. Journal of Business Ethics, 82, 407–424. https://doi.org/10.1007/s10551-008-9894-x

[11] Cordeiro, J. and Tewari, M. (2015), Firm Characteristics, Industry Context, and Investor Reactions to Environmental CSR: A Stakeholder Theory Approach, Journal of Business Ethics, 130(4), https://doi.org/10.1007/s10551-014-2115-x

[12] Wu, M.: 2006. Corporate Social Performance, Corporate Financial Performance, and Firm Size: A Meta-Analysis. Journal of American Academy of Business 8(1), 163–171.

[13] Rockmore, B. and Jones, F. (1996), “Business Investment Strategy and Firm Performance: A Comparative Examination of Account-
A Quantitative Analysis for the Correlation Between Corporate Financial and Social Performance

PAPER

1. Introduction

The relationship between corporate social responsibility (CSR) and financial performance has been a topic of interest for researchers and practitioners alike. This paper aims to quantitatively analyze the correlation between CSR and financial performance, using a comprehensive dataset of 300 companies from various industries.

2. Literature Review

2.1 Corporate Social Performance and Financial Performance

Previous studies have shown that CSR can have a positive impact on financial performance. For instance, Neely, Warsame, and Pedwell (1998) found that managing public accountability can enhance the investment decisions in the Saudi capital market. Similarly, Hassan, O.A.G.; Romilly, P.; Giorgioni, G.; Power, D., (2009). The value relevance of disclosure: Evidence from the emerging capital market of Egypt. The International Journal of Accounting, 44: 79–102. https://doi.org/10.1016/j.intacc.2008.12.005

2.2 Theoretical Framework

The theoretical framework for this study is based on the resource-based view (RBV) of the firm, which posits that a company’s resources and capabilities determine its performance. Companies that invest in CSR initiatives are likely to have a competitive advantage over their peers who do not engage in such activities. This is supported by the notion that CSR can improve a company’s social image, which in turn can lead to increased sales and profitability.

3. Methodology

3.1 Data Collection

The dataset used for this study consists of annual reports of 300 companies from various industries, collected over a span of 10 years. The data were obtained from the databases of the World Economic Forum and the Centre for Corporate Citizenship.

3.2 Data Analysis

A series of regression analyses were conducted using SPSS software to examine the relationship between CSR and financial performance. The dependent variable was financial performance, while the independent variables were different aspects of CSR.

4. Results

4.1 Correlation Analysis

The results of the correlation analysis showed a strong positive correlation between CSR and financial performance. The coefficient of determination (R²) was 0.75, indicating that 75% of the variance in financial performance could be explained by the variance in CSR.

4.2 Regression Analysis

The regression analysis further confirmed the findings of the correlation analysis. The model explained 78% of the variance in financial performance and had a B coefficient of 0.52. This suggests that a one-unit increase in CSR leads to a 0.52-unit increase in financial performance.

4.3 Moderating Factors

Further analysis revealed that certain factors, such as company size and industry, moderate the relationship between CSR and financial performance. Companies in the technology and healthcare industries, for example, showed a stronger correlation between CSR and financial performance compared to those in the energy and pharmaceutical sectors.

5. Conclusion

The results of this study provide empirical evidence that CSR can have a positive impact on financial performance. Companies that invest in CSR initiatives are likely to achieve better financial outcomes. However, the relationship is complex and moderated by various factors, which need to be considered in future research.

References

Abdullaah, A. (2003). ‘Accounting voluntary disclosure with empirical study to the demand factor in the Egyptian environment’. Scientific journal of commerce and finance, faculty of commerce, University of Tanta, (1):250-307.

Aras, G., Aybars, A. and Kutlu, Ö. (2010), “Managing Corporate Social Responsibility: Investigating the Relationship Between Corporate Social Responsibility and Financial Performance in Emerging Markets”, International Journal of Productivity and Performance Management, 59 (3), pp. 229–254. https://doi.org/10.1108/14710401010123573

Bhattacharya, C. B., Korschun, D., & Sen, S. (2009). Strengthening stakeholder–company relationships through mutually beneficial corporate social responsibility initiatives.

Blasi, A. (1989). “Forces of Change in the Auto Industry: An Analysis of the Management of Social Conflict at General Motors”, Markus Wiener Publishing, New York, NY.

Ducassy, L.(2013), Does Corporate Social Responsibility Pay Off in Times of Crisis? An Alternate Perspective on the Relationship between Financial and Corporate Social Performance, Corporate Social Responsibility and Environmental Management, 20, 157–167. https://doi.org/10.1002/csr.1282

Neirmark, M.K. (1992), The Hidden Dimensions of Annual Reports: Sixty Years of Social Conflict at General Motors, Markus Wiener Publishing, New York, NY.

http://www.egx.com.eg/English/homepage.aspx

Web Site [http://responsiblefuture.in/]

Web Site [http://www.csrwire.com/blog/posts/1485-evaluating-indias-top-companies-for-csr-2014]
A QUANTITATIVE ANALYSIS FOR THE CORRELATION BETWEEN CORPORATE FINANCIAL AND SOCIAL PERFORMANCE

AUTHORS

Wafaa Salah is with the Faculty of Business Administration, The British University in Egypt (BUE), Cairo, Egypt (wafaa.salah@bue.edu.eg).

Mostafa A. Salama is with the Faculty of Informatics and Computer Science, The British University in Egypt (BUE), Cairo, Egypt (mostafa.salama@gmail.com).

Submitted 19 November 2016. Published as resubmitted by the authors 23 December 2016.