Corporate social responsibility and financial performance in Saudi Arabia
Evidence from Zakat contribution

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Abstract

Purpose – The purpose of this paper is to investigate the impact of corporate social responsibility (CSR) on corporate financial performance (CFP) using Zakat as a measure for CSR.

Design/methodology/approach – The study examines a sample of 107 non-financial firms listed on the Saudi Arabia stock market over a ten-year period from 2004 to 2013. The authors use the generalized method of moments framework developed by Arellano and Bover (1995) and Blundell and Bond (1998). In addition, for comparison purpose and as a robustness check, the present study uses other panel data techniques including fixed effects model, random effects model (and pooled ordinary least squares).

Findings – The results reveal that there is a strong positive relationship between CSR (Zakat) and CFP. This suggests that Zakat contribute positively to both firm’s profitability and value and can be considered as a win-win strategy to maximize returns and improve performance while considering the society as a whole. The results are robust to alternative econometric estimation methods.

Practical implications – The companies in Islamic economies can effectively and efficiently implement the basic Shari’a Law of paying Zakat, as a successful measure to implement CSR program, thus benefiting the society by narrowing the gap between the haves and have-nots, that, in turn, leads the company to achieve successfully its short-term as well as long-term goals and enhances the value of the firm in the market. Moreover, corporations are generally encouraged to adopt CSR because of its perceived benefits to both macro- and micro-performances.

Originality/value – To the best of the author’s knowledge, this is the first empirical study attempting to examine CSR-CFP relationship within Saudi context employing Zakat as a proxy for CSR. Additionally, the paper provides support for the stakeholder theory from an Islamic perspective.

Keywords Corporate finance, CSR, Zakat, Financial performance, Dynamic panel data, GMM, Saudi Arabia

Paper type Research paper

1. Introduction

Corporate social responsibility (CSR) is regarded as voluntary corporate commitment to exceed the explicit and implicit obligations imposed on a company by society’s expectations of conventional corporate behavior. Hence, CSR is a way of promoting social trends in order to enhance society’s basic order, which we define as consisting of obligations that cover both the legal framework and social conventions (Falck and Hebllich, 2007). In the past, several conceptual, theoretical and empirical studies had been conducted to provide insights into the evolution, theory and practice of CSR, but the contribution from a religious angle is few and peripheral (Raimi et al., 2014). The present study, therefore, intends to fill this gap in the body of knowledge by introducing a religious social dimension such as Zakat[1].

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To date, there has been a dearth of research that examine the relationship between CSR and corporate financial performance (CFP) in emerging markets as most of the studies focused on the developed countries (Oh and Park, 2015). The lack of evidence from Saudi Arabia is even more pronounced. According to a report published by Tamkeen (2007, p. 19), “internationally published material about Saudi Arabia in the context of CSR is limited and what is found provides an inconsistent picture.” Therefore, this paper will attempt to fill the gap in the literature by providing valuable insight into the CSR-CFP relationship of firms listed on the Saudi Stock Exchange. Moreover, in the Saudi context, to the best of our knowledge, this paper is the first of its type to examine the impact of CSR, measured by Zakat, on CFP. Thus, the present study provides significant contribution to the recent empirical CSR literature in emerging markets. More specifically, this study will try to find out empirically whether the relationship between CSR and CFP is positive, negative or neutral in the case of Saudi Arabia.

The objective of this paper therefore is threefold. First, it will examine the impact of CSR, measured by Zakat, on financial performance of companies listed on the Saudi Stock Exchange. Second, it will provide useful insight on how a religious (Islamic) dimension such as Zakat contributes to CSR and firm performance. Third, the paper will provide valuable policy implications and recommendations for companies, regulators, academics and other stakeholders and will also enable comparison with other Muslim countries where firms pay Zakat as part of their religious and social commitments.

1.1 Zakat as win-win strategy
But how do we measure CSR? We took a new yardstick to measure CSR by using “Zakat.” Etymologically, the concept of CSR is corporate obligation toward the society. Similar to this, Islamic Law, that is, Shari’a states that Zakat is the obligation toward the society. In other words, it is the responsibility of those who have, to help those who are in need (charity), and for maximizing the social welfare. Zakat is not restricted to only an individual responsibility but it can be extended as the responsibility or an obligation of all the corporations or organizations toward the society, as these entities are generating profits and they can very well support the cause of enhancing the societal benefits. Another significance of taking Zakat variable is that it truly shows the amount of expenditure made by a corporation on social welfare. Islam encourages people to take appropriate measures to check the concentration of wealth into a few hands, to redistribute resources, to minimize social gaps and to share the fortunes of the wealthy with unfortunate members of society by paying Zakat (alms) and Sadaqah (charitable donations). Regarding charitable activities and the relief of suffering among the poor, most of the religions support or require their followers to perform charity work. This requirement is specified in Islam, in which the institution of Zakat, one of the social dimensions of Islam, includes companies (Uddin and Karim, 2010; Khurshid et al., 2014).

The well-known quote by Friedman’s (1970) New York Times Magazine article is found to be true as it says “The responsibility of a corporate executive […] is to conduct the business in accordance with (the owners’) desires, which generally will be to make as much money as possible while conforming to the basic rules of the society, both those embodied in law and those embodied in ethical custom.” Taken collectively, Friedman’s position might thus be summarized as follows: a corporation’s only social responsibility is “to make as much money as possible” (i.e. maximize profits) while conforming to the “rules of the game” or “basic rules of the society” in which the firm is operating which include: obeying the “law”; conforming to “ethical custom” (i.e. business norms where you do business); and acting “without deception or fraud” (Friedman, 1962, 1970; Schwartz and Saia, 2012). Therefore, Zakat as a measure of social responsibility is basically obeying the Shari’a Law, conforming to ethical customs (Zakat as one of the five pillars of Islam) in the context of
Saudi Arabia, and maximizing returns without deception or fraud. Then, we can express Zakat as a win-win strategy to maximize returns and improve performance while considering the society as a whole. Furthermore, Margolis and Walsh (2001) and Orlitzky et al. (2003) present a broad review of the existing literature, arriving at the same conclusion that the market rewards enterprises’ social activities (Falck and Heblich, 2007).

Basically, on the theological foundation for CSR and conventional business practices in Islam, Cone (2003) explains that the Quran has an endless list of provisions, ethical values and rules of conduct on social and economic matters. The socio-economic dealings of Muslims as individuals and corporate groups are hinged strictly on four axioms or principles of Islam, namely, Tawheed (unity); Al’adl wal ihsan (equilibrium); Ikhtiar (free will); and Fardh (social responsibility), which are mutually reinforcing (Cone, 2003; Naqvi, 1997; Al-Sabban et al., 2014).

Regarding CSR which is the focus in his study, Naqvi (1997, p. 4) asserts that Fardh (social responsibility) “happens when [people] discharges […] Responsibility (Fardh) to the society, and especially towards the least privileged. Indeed, social irresponsibility and […] insensitivity to the misery of extreme poverty […] is unequivocally condemned in the Holy Qur’an: “what has come upon you that you fight not in the cause of Allah and for the oppressed, men, women, and children who pray […]” (4:75). It follows that if any harm is being done to the society – either through our own doings or by those of others – then we must be moved to remedial action within the bounds of law.” Scholars have explained that Zakat represents one of the key social institutions that could be used to build social justice, fairness and equity, redistribution of income and enduring peace in Muslim societies (Cizakca, 2004; Ahmed, 2007; Al-Sabban et al., 2014).

Moreover, corporations are generally encouraged to adopt CSR because of its perceived benefits to both macro- and micro-performances. Macro-performance includes environmental improvement and reduction in social inequality. Micro-performance includes reputation enhancement, potential to charge a premium price for products as well as the enhanced ability to recruit and to retain high-quality workers. The most attractive lure is that firms adopting CSR can gain financial benefits that outweigh the ensuing costs, thereby improving FP in the long run. Accordingly, adopting CSR can be beneficial to both corporate shareholders and stakeholders, which creates a potential win-win situation (Wua and Shen, 2013). It has been beautifully described in the holy book of Qur’a:n: “If you lend to Allah a goodly loan (i.e. spend in Allah’s Cause) He will double it for you, and will forgive you. And Allah is Most Ready to appreciate and to reward, Most Forbearing” (Al-Quran 64:17).

A specific body of CSR literature has examined the link between religiosity and CSR suggesting that religiosity influences individual preferences, managerial attitudes and decision making (Agle and Van Buren, 1999; Kidwell et al., 1987; Longenecker et al., 2004), and indicating that individuals with a religious orientation are likely to have different attitudes toward CSR than those without such an orientation. Moreover, religious individuals are likely to hold a broader conception of the social responsibilities than nonreligious individuals (Brammer et al., 2007). Therefore, differences between religions are expected to influence individual preferences regarding these aspects of CSR because some faiths, especially Judaism and Islam, offer significant direction for the ethics of specific business practices. Justice in Islam also includes the equitable distribution of wealth. Although inequality in terms of wealth is justified, all members of society have the right to be provided with basic needs, regardless of their race, religion, language, color, sex, age, health and status (Khurshid et al., 2014).

There is a numerous literature on Zakat effectiveness in reducing poverty and inequality. For instance, Abdullah et al. (2015) examine the role of Zakat in alleviating poverty and inequality in Pakistan using a newly developed index, namely, the Basic Needs Deficiency Index.
The index is formulated to measure the deficiency and effectiveness of Zakat as one of the different items of government expenditure/spending to alleviate poverty. On a similar note, Raimi et al. (2010) examine the appropriateness of faith-based model as a veritable policy response to the issue of poverty alleviation and actualization of the millennium development goals (MDGs) in Nigeria. The paper analyses the appropriateness of Islamic poverty reduction model as a policy response for the actualization of the eight MDGs (namely, to eradicate extreme poverty and hunger, achieve universal primary education, promote gender equality and empower women, reduce child mortality, improve maternal health, combat, HIV/AIDS, malaria and other diseases, ensure environmental sustainability and develop a global partnership for development) and argues that Islamic economic principles is plausible and beneficial in tackling poverty-related issues. In addition, studies by Ali and Hatta (2014), Johari et al. (2014), Ali et al. (2015), Olanipekun et al. (2015), Amuda (2013) had offered strategies to eliminate poverty through the Zakat distribution model, thereby reducing income inequality and maximizing social welfare, which, in turn, provides foundations for sustainable development and good life.

Another group of studies uses Zakat as a macro-economic instrument for fiscal policies to assist in overall economic growth and sustainability. For instance, Bashir (2002) constructs a simple neoclassical growth model, assuming a pure profit-sharing environment, to prove that government in an Islamic economy can effectively implement fiscal policy using Zakat. The fact that Zakat rate is fixed reduces the distortion created by variations in the tax rate. Revenues from Zakat and money creation can be used to finance public sector programs and/or finance the budget deficit. Similarly, Yusoff (2010) attempts to analyze the potential of Zakat as a fiscal policy instrument in an Islamic state, using a simple Keynesian model. He formulates the consumption equations for both Zakat payers and recipients, and Zakat collection to derive an equilibrium equation in the goods market showing the relationship between Zakat spending and real output. Empirical evidence using Malaysian panel data supports the hypothesis that Zakat spending is a potent fiscal instrument to generate economic growth.

Despite the fact that Zakat instrument has been a point of interest by Islamic economists, policy makers and academicians, we have found major studies centering on Malaysia (e.g. Yusoff, 2010; Johari et al., 2014; Ali et al., 2015); Nigeria (e.g. Raimi et al., 2010; Amuda, 2013) and Pakistan (e.g. Abdullah et al., 2015), while other studies analyzed Islamic countries in general (e.g. Bashir, 2002; Choudhury and Harahap, 2008). To the best of our knowledge, there is no study solely conducted on Saudi Arabia, and is therefore another major contribution of the present paper. More precisely, so far, there is no study conducted taking Zakat as a proxy for CSR, though in its very meaning, both terms in their essence imply the social welfare.

The next section elaborates on CSR in the Saudi context, followed by prior research on CSR-CFP relationship. Then, the data and methodology employed are discussed. Finally, the paper discusses the results and provides concluding remarks.

2. CSR in Saudi Arabia

CSR movement in Saudi Arabia is considered to be a driving force for sustainable development rather than a reactive movement as was the case in many developed economies (Tamkeen, 2007). In recent years, Saudi firms have started paying attention to CSR and have begun to show greater commitment in terms of instituting CSR guidelines and programs. However, their efforts are likely to be slowed since there are no guiding theoretical and practical frameworks that have examined this phenomenon, exclusively within the Saudi context, which they could depend upon (Mandurah et al., 2012). As rightly said by eighteenth century Moral Philosopher, Adam Smith, widely considered as the father of modern capitalism, “it is only when business firms focus on their own best interests that ultimately the best interests of society are served” (Schwartz and Saia, 2012).
Firms in developing countries, however, are still in the nascent stage of their awareness and integration of CSR activities within their corporate policies and strategies. As clearly stated by Al-Sabban et al. (2014) that Saudi businesses are aware of the importance of CSR activities, and the value it adds to their businesses, which is the reason why they are already putting more emphasis on it than ever before. Notably, Mandurah et al. (2012) present an exploratory study, utilizing a sample of Saudi Arabian firms’ managers to assess the extent of their awareness of CSR, its role within their organizations, the extent of CSR integration in their corporate policies, and the nature and scope of these firms’ CSR activities. Results indicate that there is a reasonable level of CSR awareness as well as a moderately positive attitude toward the concept.

Also, it is worth noting that the majority of listed Saudi firms are transparent in respect of the amount they spend on Zakat are conforming their positive attitude with respect to CSR activities. The 2006 stakeholder satisfaction survey by Globalscan CSR monitor (2006) placed Saudi Arabia among the top category of satisfied markets. However, according to a report titled “The Evolution of CSR in Saudi Arabia – The Changing Landscape” (Tamkeen, 2010), which surveyed Saudi companies, 85 percent of Saudi leaders identified the government/regulatory framework as the main challenge in implementing CSR. And that the three main areas of CSR that have gained recognition in the Saudi corporate world were employees, the community and the environment.

Furthermore, Nalband and Al-Amri (2013) aim at identifying perceptions of managers, practices and performance of companies concerning CSR practices in 21 listed Saudi firms. Primary data were collected by conducting interviews and discussions with management respondents (total 210 respondents) through questionnaires. Their major findings support the applicability of Carroll’s Pyramid of CSR constructs and Lawrence et al.’s charity and stewardship principles in Saudi Arabia (see also Ali and Al-Aali, 2012). To the best of our knowledge, the available studies, reports and papers on CSR in the context of Saudi Arabia are either questionnaire based or qualitative in nature and majorly determining the level of CSR awareness (see Mandurah et al., 2012; Ali and Al-Aali, 2012; Nalband and Al-Amri, 2013; Tamkeen, 2007; Khurshid et al., 2013). Therefore, empirical analysis related to CSR-FP is yet another major gap. The next section reviews the literature on the link between CSR and FP.

3. Literature review

There are a large number of empirical studies examined the relationship between CSR and FP. However, the results are mixed. Margolis and Walsh (2001) offer an excellent review of the literature focusing on the relationship between CSR and FP. They observe that approximately 50 percent of the studies found positive relationship between CSR and FP, while 25 percent reported no relationship, 20 percent had mixed results and 5 percent revealed a negative relationship.

For example, studies by Sun (2012), Chen and Wang (2011), Van der Laan et al. (2008), Bird et al. (2007), Wu (2006), Orlitzky et al. (2003) and Ruff et al. (2001), among others, have documented a positive relationship between CSR and FP. Conversely, a large body of research has reported a negative relationship between CSR and FP (see, for instance, Boyle et al., 1997; Lopez et al., 2007; Cavaco and Crifo, 2014). To illustrate, using Brazilian data, Crisostomo et al. (2011) find that there is a negative CSR-FP relationship and conclude that CSR is value destroying in Brazil. However, Mallin et al. (2014) examine the CSR-FP relationship of Islamic banks across 13 countries and find a positive relationship between CSR and FP. The results of the three-stage least square estimation show that the causality between the two endogenous variables runs from FP to CSR disclosure. Moreover, Mallin et al. (2014) point out that Islamic banks show a considerable awareness of the mandatory disclosure recommendations of the Accounting and Auditing Organisation for Islamic Financial Institutions, but they pay less attention to the voluntary CSR disclosure. Similarly,
Aribi and Gao (2012) and Farook et al. (2011) examine the CSR disclosure and FP in Islamic banks in the Gulf region and report a positive relationship between the two. They find that the main CSR disclosures were contained in the Shari'ah supervisory Board reports with less disclosure in the annual reports on other Islamic-based information such as Zakat, interest free loans and charitable donations.

Furthermore, using generalized method of moments (GMM) estimation on a dynamic panel model, Oh and Park (2015) investigate the CSR-CFP relationship covering the period 2004-2010 in Korea. Their results show that CSR has a positive impact on CFP, thus validating the stakeholder theory. In another comprehensive study, using Chinese data for the period 2007-2008, Chen and Wang (2011) find that there is a significant and reciprocal relationship between CSR and CFP. The study reveals that by taking social responsibilities, companies can not only improve this period’s FP but also future FP through more positive CSR actions. Likewise, Ruff et al. (2001) show that long-term financial benefits may exist when CSP is improved. Furthermore, Orlitzky et al. (2003) perform a meta-analysis and find that the relationship between CSR and FP is rather positive in a wide variety of contexts and sectors (see also Scholtens, 2008).

On the one hand, as shown above, researchers have produced conflicting results and reported either positive or negative relationship between CSR and FP. On the other hand, however, some studies find no significant relationship between CSR and FP (see Lee et al., 2013; Aras et al., 2010; Griffin and Mahon, 1997). For instance, Aras et al. (2010) examine the relationship between CSR and FP for companies listed in the Istanbul Stock Exchange for the period 2005-2007. They fail to find any significant relationship between CSR and FP. Similarly, using a sample of US firms, Lee et al. (2013) find no effect of CSR on CFP, regardless of different CSR dimensions.

The above literature clearly shows that there is no consensus among researchers on the relationship between CSR and FP and the existing work on emerging markets in particular has produced mixed results. This provides further justification for conducting the present study.

4. Data and methodology

4.1 Data

The present study covers a ten-year period from 2004 to 2013. The sample consists of 107 non-financial companies listed on Saudi stock market, fairly covering all the 13 different sectors, namely, petrochemical, cement, retail, energy and utilities, telecom and IT; multi-investments, hotel and tourism, media and publishing, transport, industrial investment, agriculture and food industries, building and construction and real estate development. The banking and insurance sectors are excluded from the analysis, as they maintain their financial statements in a different manner that will lead to inconsistency in data. The data used in the analysis are derived from the database of Gulf Base (www.gulfbase.com), which provides annual financial and market data relating to all sectors.

4.2 Methodology

4.2.1 The empirical model. The empirical literature on CSR-CFP often proposes the following model for longitudinal (panel) data:

$$
\text{CFP}_i = f(\text{CSR}_i, \text{CFP}_{i,t-1}, X_i) + \epsilon_{it}
$$

where, for firm $i$ in period $t$, CFP is the corporate financial performance which is a function of CSR (corporate social responsibility), previous year financial performance (lagged CFP) and $X$ (set of control variables believed to be associated with CFP). $\epsilon_{it}$ is the error term.
In order to examine the relationship between CSR and financial performance (Equation (1)), we need to identify the appropriate proxy variables. For CFP and to avoid any potential measurement biases (see Scholtens, 2008), both accounting- and market-based measures are used. The former is a backward-looking measure, based on historical cost, namely, the return on equity (ROE) which is calculated as the net profit divided by the owners’ equity. This proxy is an obvious measure for firm performance and widely used in the literature (see for example, Waddock and Graves, 1997; Preston and O’Bannon, 1997; Gentry and Shen, 2010; Kang et al., 2010, among others). The latter is a forward-looking measure, namely, the price-to-book ratio (PB). This ratio is calculated as the last closing market price per share divided by the latest book value per share (see Simionescu and Gherghina, 2014; Gentry and Shen, 2010). Recently, Sharma et al. (2013, p. 23) examine the market-to-book (MB) ratio of a large to midsize US firms for the period 2000-2009 and conclude that “the MB ratio mostly reflects the success of managers in delivering strong operating performance and growth in the net assets of the firm. In this sense, strategy scholars are perhaps justified in using the MB ratio as a measure of firm performance.” Also, the MB ratio is often used by researchers as a proxy for Tobin’s Q ratio (see Kang et al., 2010; Sharma et al., 2013). Thus, using PB ratio as a market measure for FP is well established in the literature.

As far as CSR is concerned, as stated earlier, the current study takes a new yardstick by using “Zakat” as the proxy variable. Hassan et al. (2013, p. 220) demonstrate that “[…] certain mechanisms for wealthy people to discharge their social obligations […] These mechanisms include Zakat (compulsory alms), sadaqah (voluntary alms), waqf (charitable endowment) […]” (see also Raimi et al., 2014). In the same vein, Lin et al. (2009) examine the impact of CSR on CFP in Taiwan and consider “charitable expenditures as contributions to CSR.” Accordingly, they use the donation ratio as a CSR proxy variable. Therefore, our inclusion of Zakat as a proxy variable for CSR in the current study is justified. Based on the preceding discussion and consistent with the stakeholder theory, that a higher level of CSR leads to better CFP (Waddock and Graves, 1997; Preston and O’Bannon, 1997), CSR, measured by Zakat, is expected to have positive relationship with CFP. This suggests the following hypothesis:

\[ H1. \] Ceteris paribus, there is a significant positive relationship between CSR, measured by Zakat, and CFP.

As shown in Equation (1), the CSR-CFP model incorporates a set of control variables to account for potential firm-specific characteristics. Consistent with the standard literature on CSR, we include four control variables: firm size, capital structure, age and lagged CFP (\( \text{CFP}_{t-1} \)) (see for instance, Waddock and Graves, 1997; Kang et al., 2010; Ammann et al., 2011; Simionescu and Gherghina, 2014; Cavaco and Crifo, 2014; Oh and Park, 2015). Firm size (\( \text{SIZE} \)) is measured by the natural logarithm of total assets; capital structure is measured by the leverage or debt to equity ratio (\( \text{LEV} \)) and firm age (\( \text{AGE} \)) is calculated as the number of years since incorporation. According to Majumdar (1997), theory is equivocal on the precise relationship between \( \text{SIZE} \), \( \text{AGE} \), and CFP. Similarly, the use of debt (\( \text{LEV} \)) might influence CFP either positively (greater level of financial leverage) or negatively (increasing risk). Therefore, the direction of the relationship between \( \text{SIZE} \), \( \text{AGE} \), \( \text{LEV} \) and CFP is not specified. Hence, the following hypotheses are proposed:

\[ H2. \] Ceteris paribus, there is a significant relationship between \( \text{SIZE} \) and CFP.

\[ H3. \] Ceteris paribus, there is a significant relationship between \( \text{AGE} \) and CFP.

\[ H4. \] Ceteris paribus, there is a significant relationship between \( \text{LEV} \) and CFP.
4.2.2 Estimation method. The preceding discussion can be expressed by the following dynamic panel model:

\[ \text{CFP}_{it} (\text{ROE or PB}) = x + \lambda \text{CSR}_{it} + \beta \text{CFP}_{i,t-1} + \phi X_{it} + \eta_i + \epsilon_{it} \]  

(2)

where for firm \( i \) in period \( t \), CFP is corporate financial performance (ROE or PB) and CFP\(_{i,t-1}\) its lagged value, CSR is corporate social responsibility measured by Zakat, \( X_{it} \) is a set of other control variables (SIZE, LEV, AGE), \( \eta_i \) are unobserved firm-specific fixed effects and \( \epsilon \) is the error term, assumed to be independent and identically distributed. Table I shows the definition of variables, summary statistics and the hypothesized relationship between the independent variables (ROE and PB) and the regressors.

As can be seen in Equation (2), the dynamic models include the lagged dependent variable as an explanatory variable. In this case, estimation of such models using either within groups or random effects estimators produce biased and inconsistent coefficient estimates unless the number of time periods \( t \) is large (Munoz, 2007). The OLS estimator is also biased because of the correlation between the fixed effects and the lagged dependent variable. “One solution to this problem is to first difference the model and use lags of the dependent variable as instruments for the Lagged dependent variable” (Munoz, 2007, p. 18). Therefore, to overcome this problem, the present study employs the extended differenced-GMM estimator which is the system-GMM developed by Arellano and Bover (1995) and Blundell and Bond (1998). According to Munoz (2007, p. 19) “this estimator makes use of the fact that values of the dependent variable lagged two periods or more are valid instruments for the Lagged dependent variable. This will generate consistent and efficient estimates of the parameters of interest.” In a first-differenced form, the dynamic model of Equation (2) to be estimated can be written as (see Munoz, 2007):

\[ \Delta \text{CFP}_{it} (\text{ROE or PB}) = x + \lambda \Delta \text{CSR}_{it} + \beta \Delta \text{CFP}_{i,t-1} + \phi \Delta X_{it} + \epsilon_{it} \]  

(3)

The GMM framework generally has several advantages: it controls for firm-specific effects; it deals with the inclusion of the lagged dependent variable as an explanatory variable; and controls for the problem of endogeneity of the regression predictors (see Cavaco and Crifo, 2014;

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Mean</th>
<th>Median</th>
<th>SD</th>
<th>Expected relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFP: corporate financial performance measured by return on equity (ROE, accounting measure) and price-to-book ratio (PB, market measure)</td>
<td>846 (858)</td>
<td>0.158 (3.405)</td>
<td>0.145 (2.355)</td>
<td>0.118 (3.244)</td>
<td>Dependent variables</td>
</tr>
<tr>
<td>( \text{CFP}_{t-1} ): lag of CFP measures</td>
<td>752 (752)</td>
<td>0.160 (3.457)</td>
<td>0.147 (2.425)</td>
<td>3.284 (1.614)</td>
<td>( \pm )</td>
</tr>
<tr>
<td>CSR: corporate social responsibility measured by the logarithm of the amount of Zakat paid at a given year*</td>
<td>872</td>
<td>8.933</td>
<td>8.819</td>
<td>1.713</td>
<td>+</td>
</tr>
<tr>
<td>SIZE: firm size measured by the natural logarithm of total assets</td>
<td>981</td>
<td>14.331</td>
<td>14.193</td>
<td>1.614</td>
<td>( \pm )</td>
</tr>
<tr>
<td>LEV: firm leverage measured by debt to equity ratio</td>
<td>636</td>
<td>0.294</td>
<td>0.1638</td>
<td>3.287813</td>
<td>–</td>
</tr>
<tr>
<td>AGE: firm age calculated as the number of years since incorporation</td>
<td>1,039</td>
<td>23.340</td>
<td>21.000</td>
<td>12.941</td>
<td>( \pm )</td>
</tr>
</tbody>
</table>

Notes: Numbers in parentheses show the values of price-to-book ratio (PB). \( n \) denotes the number of observations. *The rate of Zakat is 2.5 percent of capital employed, not invested in fixed assets, long-term investments and deferred costs, as adjusted by net results of operations for the year (see www.gulfbase.com)

Table I. Summary statistics of variables and the expected relationship between independent variable(s) and the regressors.
Numerous studies have employed GMM to estimate the relationship between CSR and FP including Oh and Park (2015), Ferreira et al. (2015), Cavaco and Crifo (2014), Belu and Manescu (2013) and Ammann et al. (2011), among others.

The consistency of the system-GMM estimators requires two conditions: the validity of the instruments (i.e. the lagged values of the variables) and the absence of second-order serial correlation in the error terms. The first issue can be addressed by Sargan test of over-identification restrictions under the null hypothesis that the instruments used in the regression are not correlated with the residuals. The second issue can be tested by using Arellano-Bond (A-B) test under the null hypothesis that the errors in the first-differenced (AR1) must be correlated but exhibit no serial correlation in second-differenced (AR2). If the null hypotheses of both tests (Sargan and A-B) are not rejected, then the conditions are satisfied and the model is supported (see Munoz, 2007).

Having established that the GMM framework is the appropriate estimation method to examine the relationship between CSR and CFP, for comparison purpose and to ensure that our results are robust and not sensitive to any estimation method, the current study will also employ the traditional panel data techniques including fixed effects model (FEM), random effects model (REM) and pooled ordinary least squares (POLS). The next section presents the empirical results of all estimation methods.

### 5. Empirical results

Table II presents the correlation matrix of all regressors included in the analysis along with computed variance inflation factors (VIF). The intercorrelations among the independent variables are relatively low, except between SIZE and CSR (0.7863). However, the low values of VIF clearly suggest that multicollinearity problem is not a serious concern in our regression. All VIF values are significantly below the threshold of 10, with an average of 1.89 (see Kang et al., 2010).

Tables III and IV report results from regression analysis of the relationship between CSR and CFP using accounting measure (ROE) and market measure (price-to-book ratio – PB) as dependent variables, respectively. The regression coefficients, in all models (GMM, FEM, REM and POLS), are jointly significant at 1 percent level or better ($p$-values of Wald and $F$-tests $= 0.000$). From GMM estimation, the $p$-values of Sargan test are greater than 5 percent (0.162 (Table III) and 0.072 (Table IV)) indicating that the instruments used in the models are valid[2]. Similarly, the Arellano-Bond test suggests that there is first-order serial correlation ($p$-value $= 0.004$ (Table III) and 0.005 (Table IV)) of the differenced errors but not a second-order correlation ($p$-value $= 0.442$ (Table III) and 0.966 (Table IV)). This implies that the two conditions for system-GMM estimators to be consistent are satisfied; therefore, the model is correctly specified.

The results of Tables III and IV (GMM estimation) suggest that CSR, measured by Zakat, has positive impact on CFP using both accounting (ROE) and market (PB) measures of performance.
The coefficients on CSR are highly significant ($p$-values $= 0.000$), indicating that the Zakat contribute positively to the profitability and firm's value. This empirical evidence lends support to the stakeholder theory, which asserts that companies that build strong relationships with their stakeholders are more likely to generate higher returns (Freeman, 1984; Waddock and Graves, 1997). Our results are in line with other studies who report

<table>
<thead>
<tr>
<th>Regressors</th>
<th>GMM</th>
<th>FEM</th>
<th>REM</th>
<th>POLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSR</td>
<td>0.0242*** (0.000)</td>
<td>0.0285*** (0.000)</td>
<td>0.0129*** (0.000)</td>
<td>0.0091*** (0.001)</td>
</tr>
<tr>
<td>CFP_{-1}</td>
<td>0.5284*** (0.000)</td>
<td>0.3149*** (0.000)</td>
<td>0.7014 (0.000)</td>
<td>0.7393*** (0.000)</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.0276*** (0.000)</td>
<td>-0.0331** (0.010)</td>
<td>-0.0120*** (0.003)</td>
<td>-0.0073** (0.014)</td>
</tr>
<tr>
<td>LEV</td>
<td>-0.0014 (0.811)</td>
<td>0.0035 (0.785)</td>
<td>0.0009 (0.931)</td>
<td>-0.0005 (0.935)</td>
</tr>
<tr>
<td>AGE</td>
<td>-0.0011** (0.033)</td>
<td>0.3149*** (0.000)</td>
<td>-0.0002 (0.541)</td>
<td>-0.0001 (0.659)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.2816*** (0.000)</td>
<td>0.4951*** (0.001)</td>
<td>0.1061** (0.013)</td>
<td>0.0554* (0.095)</td>
</tr>
<tr>
<td>Wald test ($p$-value)</td>
<td>0.000</td>
<td>–</td>
<td>0.000</td>
<td>–</td>
</tr>
<tr>
<td>Sargan test ($p$-value)</td>
<td>0.162</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>AR1 test ($p$-value)</td>
<td>0.004</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>AR2 test ($p$-value)</td>
<td>0.422</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>$R^2$</td>
<td>–</td>
<td>0.108</td>
<td>0.671</td>
<td>0.674</td>
</tr>
<tr>
<td>$F$-test ($p$-value)</td>
<td>437</td>
<td>437</td>
<td>437</td>
<td>0.000</td>
</tr>
<tr>
<td>Observations</td>
<td>437</td>
<td>437</td>
<td>437</td>
<td>437</td>
</tr>
</tbody>
</table>

Notes: Variables are defined in Table I. GMM is the generalized method of moment estimator. FEM is the fixed effects model. REM is random effects model. POLS is pooled ordinary least squares estimator. First value for each estimate is the coefficient and $p$-values are in the parentheses. Wald and $F$-tests provide a test for joint significance of all the regression coefficients except the constant. Sargan test provides a test of over-identifying restrictions. AR1 and AR2 are Arellano-Bond tests for serial correlation in the first-differenced residuals. Hausman test is testing fixed against random effects estimators under the null hypothesis that the random effects model is preferred. *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$, respectively
positive association between CSR and CFP including, for example, Waddock and Graves (1997), Preston and O’Bannon (1997), Scholten (2008), Callan and Thomas (2009), Lin et al. (2009), Ammann et al. (2011) and Oh and Park (2015). Recall that Lin et al. (2009) examine the CSR-CFP relationship in Taiwan using charitable expenditures (donation ratio) as a proxy variable for CSR. They find that firms with more investment in CSR have better financial performance over the long term, consistent with the findings of the present study in the Saudi context. To sum up, employing GMM estimation, the relationship between CSR (Zakat) and CFP is robustly positive using different measures of financial performance (accounting-based and market-based).

5.1 Robustness checks

Tables III and IV also report the results of other panel data estimation techniques, namely, FEM, REM and POLS. As stated earlier, we employed these techniques to allow for comparison with GMM estimator and to confirm the validity of our results regardless of the method used to estimate CSR-CFP relationship. To choose between FEM and REM, Hausman specification test is employed under the null hypothesis that fixed effects and random effects estimates should not differ systematically. If the null hypothesis is rejected, the fixed effects estimator is more appropriate. In both models, ROE and PB, the Hausman test favors the fixed effects estimator ($p$-values $= 0.000$ and 0.037, respectively). For the POLS, the robust standard errors are used to cope with potential heteroscedasticity problem.

As can be seen from Table III, under all estimation methods (FEM, REM and POLS), when the ROE is used as a dependent variable, the coefficients on CSR (Zakat) are consistently positive and statistically different from zero at $p \leq 0.001$ level. Similarly, when PB is used as a dependent variable (Table IV), all coefficient estimates are still positive and statistically significant at $p < 0.10$ level. This suggests that CSR-CFP relationship is not sensitive to system-GMM estimator. Therefore, we can confidently conclude that Zakat (CSR) enhance CFP in the case of Saudi Arabia.

Turning to the control variables included in the analysis, Table III shows that the lagged CFP ($\text{CFP}_{t-1}$) is positively related to CFP when the ROE is used as dependent variable. This relationship is consistent using all estimation methods, indicating that the current year ROE is a function of previous year ROE (see Cavaco and Crifo, 2014). However, the results are mixed when the market-based measure (PB) is used as dependent variable (Table IV). For example, when GMM estimator is used, the coefficient on $\text{CFP}_{t-1}$ is negative and statistically significant ($p$-value $= 0.000$), while when FEM is used, the relationship become not significant.

Also, Tables III and IV report that SIZE has a negative relationship with CFP. The coefficients on SIZE (natural log of total assets) are consistently negative and statistically different from zero, when CFP is measured by both ROE and PB. According to Becker-Blease et al. (2010), transaction, agency and organizational costs increase with firm size. Waddock and Graves (1997) report a negative relationship between SIZE, measured by total assets, and CFP (see also Cavaco and Crifo, 2014).

Another control variable found to be significantly negatively correlated with CFP is firm’s age (AGE), when CFP is measured by both ROE and PB. The results of GMM estimators indicate that AGE has negative impact on CFP, which suggest that, ceteris paribus, as firms grow older their performance seems to deteriorate. The coefficient on AGE is statistically significant at 5 percent level when CFP is measured by ROE (Table III), whereas it is significant at 1 percent level when PB is used to measure CFP (Table IV). This result is consistent with the findings of Loderer and Waechlhi (2010) and Al-Malkawi and Pillai (2013) who document a negative relationship between AGE and CFP. Loderer and Waechlhi (2010, p. 4) observe that older firms are less efficient compared to their counterparts, have higher costs, slower growth, older assets, and reduced R&D and investment activities, degenerated governance polices and larger boards.
Further, Table III reveals that there is no significant relationship between leverage (LEV) and CFP, when ROE is used as a dependent variable. However, when the market-based measure (PB) is used as a dependent variable, the relationship turns out to be significant (Table IV). The coefficients on LEV are negative and statistically significant at 1 percent (GMM) and 5 percent (FEM) levels. This implies that a higher degree of financial leverage is expected to influence CFP negatively, when market-based measure is used as a proxy for financial performance. This result is in line with the previous findings obtained, for instance, by Kang et al. (2010) and Al-Malkawi and Pillai (2013) for US and UAE non-financial firms, respectively.

6. Concluding remarks

The aim of this paper is to investigate the impact of CSR on financial performance (CFP), using Zakat as a measure for CSR. To the best of our knowledge, this is the first attempt to use Zakat as a proxy for CSR in the context of Saudi Arabia. The study uses both accounting (ROE) and market (PB) measures for performance and employs a set of control variables (SIZE, LEV, AGE). The study examines a sample of 107 non-financial firms listed on the Saudi Arabia stock market over a ten-year period from 2004 to 2013. The GMM framework developed by Arellano and Bover (1995) and Blundell and Bond (1998) is employed in the study. In addition, for comparison purpose and as a robustness check, the present paper uses other panel data techniques including FEM, REM and POLS.

The results reveal that there is a strong positive relationship between CSR (Zakat) and CFP. Our results are robust to different econometric estimation methods. This suggests that Zakat contributes positively to both profitability and firm’s value. Thus, CSR (Zakat) in the light of Islam has a positive impact on CFP by serving the society as a whole. In other words, Zakat can be expressed as a win-win strategy to maximize returns and improve performance while considering the society as a whole. In addition, this finding lends support to the stakeholder theory form an Islamic perspective.

The present paper may have implications and recommendations for companies, regulators, academics and other stakeholders. The companies in Islamic economies can effectively and efficiently implement the basic Shari’a Law of paying Zakat, as a successful measure to implement CSR program, thus benefiting the society by narrowing the gap between the haves and have-nots, that, in turn, leads the company to achieve both short-term as well as long-term goals thus enhancing the firm value in the market. Also, being socially responsible is worth investing as one will reap benefits in this world as truly depicted from our analysis and in the hereafter too (as prescribed in the holy Quran). “The parable of those who spend their wealth in the way of Allah is that of a grain of corn. It grows seven ears and each ear has hundred grains. Allah increases manifold to whom He pleases” (Quran 2:261). In another verse, it states that “Who is he that will lend to Allah a goodly loan, then (Allah) will increase it manifold to his credit (in repaying), and he will have (besides) a good reward (i.e. Paradise)” (Al-Quran 57:11).

Moreover, corporations are generally encouraged to adopt CSR because of its perceived benefits to both macro- and micro-performances. Macro-performance includes environmental improvement and reduction in social inequality. Micro-performance includes reputation enhancement, potential to charge a premium price for products as well as the enhanced ability to recruit and to retain high-quality workers.

Inarguably, we can say that when a company engages in socially responsible activities by way of paying Zakat, based on Islamic values and beliefs, this will contribute to building strong economy, reducing inequality within the society and leading to the success of the firm. In other words, the payment of Zakat can help balance the economy of a country by helping the poor and needy to pursue a better life (Dusuki, 2008). Therefore, the payment of zakat may help companies fulfill their responsibilities toward both God and society
(Khurshid et al., 2014). In sum, it can be well described that if it is a company’s goal to survive and prosper, it can do nothing better than to take a long-term view and understand that if it treats society well, society will return the favor (Falck and Heblich, 2007).

As shown above, the current paper has produced some interesting results with regard to how Zakat, as a measure for CSR, can contribute to the improvement of CFP in the case of Saudi Arabia. This analysis can be replicated to investigate the CSR-FP relationship in other Muslim countries where companies pay Zakat voluntary, not obligatory by law as in Saudi Arabia.

Nevertheless, the current study is not free from limitations. For example, the study is based on a single-country analysis which may limit its empirical generalization. Another potential limitation is that our analysis is limited to non-financial companies. It is recommended to include financial companies in future research in order to get a wider view on the CSR-FP relationship in Saudi Arabia.

Notes

1. “Zakat involves the payment of a small proportion of one's wealth to be distributed to poor and needy people. In Islam, all Muslims who have (sufficient) wealth are obligated to pay Zakat as one of the five pillars of Islam” (Khurshid et al., 2014, p. 262).

2. Ackah et al. (2015, p. 28) note that “For instruments to be acceptable, the $p$-values for Sargan and AR (2) test should both be greater than 0.05 and the $p$-values for AR (1) should be less than 0.05.”

References


Further reading


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