Corporate social responsibility and agency cost: Evidence from the UK retail industry

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Abstract

This paper aims to evaluate corporate social responsibility (CSR) impacts on the UK listed retailers' agency costs in 2016-2020 and is broken down into three main objectives – (1) describe the UK listed retailers' CSR performance level, (2) test impacts of CSR on agency costs of these firms, and (3) test the moderating role of industry for the CSR-agency costs relationship. By the application of the regressions with fixed effects and robust standard error type, this study has revealed that in this period, the UK listed retailers' CSR performance is at the moderate level on average. However, there is a large dispersion in CSR performance among retailers. CSR of the UK listed retailers significantly reduced their asset turnover (RTA), but it insignificantly affected selling and general administrative expenses (SGAE) ratio. This study finds no moderating effects of firm size for UK-listed retailers' CSR - agency costs relationship. Finally, this study offers several implications associated with CSR investment and corporate governance mechanisms to shareholders and management of the UK-listed retailers and academicians.

Keywords: agency costs, CSR, the UK, retail industry, retailers.

1 Introduction

Since its introduction in the 1950s, the concept of corporate social responsibility (CSR) has evolved over the decades (Agudelo et al., 2019). However, the consensus on CSR's meaning and motives has not been attained (Brammer et al., 2006; Limones, 2020; Miller et al., 2020). While the instrument theories of CSR suggests that CSR is implemented since it enables firms to generate profits and create shareholder's wealth (Garriga & Melé, 2004), the integrative theories of CSR argue that firms engage in CSR to satisfy the demands of stakeholders, contributing to the improvement of a company's performance (Nikolova & Arsić, 2017). Differently, the policy theories of CSR care about the political and social power received by firms when they implement CSR (Frynas & Stephens, 2015). In contrast, the ethical theories emphasise the ethical aspects of CSR activities (Schwartz, 2011). Therefore, the impacts of CSR on a company's performance are increasingly attended by scholars and practitioners as findings from such studies can offer helpful implications to literature and practice. However, such impacts are mixed in empirical studies, making this topic a puzzle (Yoon & Chung, 2018).

Under the perspective of the agency theory, agency conflicts are inevitable when ownership and management are separated, leading to agency costs incurred by shareholders (Jensen & Meckling, 1976). Thus, one of the shareholders' critical concerns is to minimise agency costs and thus align interests between owners and managers, which is a critical condition for improving firms' performance. In the literature, agency costs are found to be mitigated by several factors, including effective corporate governance (Imelda & Patricia, 2019; Hussain et al., 2019) and the utilisation of external debts (Imelda & Patricia, 2019; Pandey & Sahu, 2019). However, the impacts of CSR, an increasingly attended practice of firms, on agency costs have not been properly investigated.

In the UK, the 2018 Corporate Governance Code (the Code), the latest version of the Corporate Governance Code of the country, suggests that UK firms should engage in CSR activities since the sustainability of businesses is essential to the long-term development of firms as well as the whole economy. This Code also emphasises the relationship between firms and a spectrum of stakeholders (FRC, 2018). In other words, CSR is a good practice that is encouraged to be implemented by UK-listed firms. Since the Code was originally developed to address the agency dilemma, the promotion of CSR practices in the Code raises several questions such as whether CSR implementation supports the mitigation of agency costs;

whether CSR that fosters the relationship between firms and stakeholders can involve other stakeholders as monitoring mechanisms for firms' performance. Considering the scarcity of answers to these questions, this study is initiated to evaluate whether CSR significantly affects the UK listed retailers' agency costs from 2016 to 2020 to contribute to addressing the determined literature gap.

This study focuses on the UK-listed retailers as its samples because the retailing industry plays a critical role in the UK service sector. This industry offers its products and services to end-user customers. Therefore, this industry can be used as an indicator of the strength of customer's spending and the performance of the whole economy (ONS, 2020).

This study aims to investigate the impacts of CSR on the UK listed retailers' agency costs in the period of 2016-2020. This aim is specified in three main objectives. (1) To depict the current CSR performance level of the listed retailers in the UK. (2) To evaluate whether CSR significantly influences the UK listed retailers’ agency costs. (3) To test whether firms' size moderates the relationship between CSR and agency costs.

Following this section. The section we focus on reviewing the literature on theoretical and empirical aspects of CSR and the impacts of CSR on firms' performance and agency costs. The third section clarifies the research strategy and design and details of techniques used to select samples, collect, and analyse the secondary quantitative data. The fourth section presents empirical outcomes derived from the descriptive, correlation, and regression analyses and discusses findings. The last section summarises the study, its strengths, and weaknesses and offers implications associated with CSR performance and mechanisms to mitigate agency costs to the UK listed retailers' shareholders, management, and academicians.

2 Literature Review

2.1. CSR theories

2.1.1. Instrument theories

Emerged from the concept of social responsibility of businesspeople, the concept of CSR has evolved over the decades (Frynas & Yamahaki, 2019; Hasan, 2020). However, the consensus on its meaning has not been reached (Visser et al., 2010). Carroll (2008) argues that the CSR concept is a multifaceted concept that comprises legal liabilities, socially responsible behaviours, charitable contributions and the social consciousness of firms. From the more comprehensive approach, Garriga & Melé (2004) state that CSR has been viewed by four groups of theories – instrument, political, integrative, and ethical. Thus, this concept is defined differently from different perspectives.

From the perspective of the instrument theories, CSR is merely a vehicle for firms to achieve their profit goals and to create shareholder’s wealth since the sole social responsibility of a business is to generate profit for shareholders within the legal framework and ethical standards required by a society (Garriga & Melé, 2004). Therefore, firms should not overinvest in CSR since such investment is harmful because of significant costs that emerge from this overinvestment (Kang et al., 2010; Crisóstomo et al., 2011). Hence, the investment in CSR is minimal to meet the legal and ethical requirements, allowing firms to operate smoothly (McWilliams & Siegel, 2001).

Instrument theories are classified into three groups. The first one is closest to the shareholder theory that considers that CSR aims to maximise firms’ short-term profit measured by market value per share.

The second one focuses on the role of CSR in reallocating firms' resources to enable firms to achieve their long-term sustainable development (Husted & Allen, 2000; Porter & Kramer, 2002). As a result, firms' competitiveness can be enhanced. Under this group's angle, firms have the best knowledge of social problems associated with their business. Therefore, the investment in CSR enables firms to address these social problems, leading to their long-term sustainable performance. For example, an oil and gas company have the best knowledge of environmental footprints created by its business (Hasan, 2020). Consequently, its investment in environmental initiatives to address these problems is more effective than others, which do not fully understand environmental issues created by the oil and gas industry. On the other hand, the investment in social initiatives that aims to ensure the wellbeing of employees enables firms to enhance their relationships with the people. As a result, firms' competitiveness developed based on their people's resources can be enhanced. According to Prahalad (2002), the investment in CSR can create a blue ocean for firms. The economic pyramid shows that most customers come from the low-income segment. Therefore, when firms produce green and recycled products or services, they can meet the demands of many customers in the economic pyramid (Masoud, 2017).

The third group of the instrument theories argues that CSR investment enables firms to conduct cause-related marketing strategies that mean the mutually beneficial collaboration between firms and non-profit organisations aims to foster sales and encouraging social causes (Smith & Higgins, 2000; McWilliams & Siegel, 2001).

2.1.1.2. Integrative theories

The integrative theories differently are underpinned by the stakeholder theory that contends that firms do not only have shareholders, but they have other stakeholders that contribute significant resources to firms (i.e., human resources, natural resources, materials, machines, and equipment.) (Freeman et al., 2010). Therefore, firms need to discharge their accountability to resource holders through CSR activities reporting when using such resources. CSR, hence, needs to be integrated with firms' business strategies. The implementation of CSR, thus, is critical to meet the demands of different stakeholders and thereby improves the relationship between firms and stakeholders. The integrative theories, hence, promote the implementation of CSR to satisfy the demands of firms' stakeholders that enable firms to improve their competitiveness and to achieve long-term sustainable development (Nikolova & Arsić, 2017).

2.2. CSR disclosure theories

There are differences between CSR implementation and CSR disclosure. CSR implementation refers to CSR activities implemented by firms (Agudelo et al., 2019). These activities may be justified by different theories such as the instrument, political, integrative, and ethical theories (Garriga & Melé, 2004). Differentially, CSR disclosure refers to the communication of firms' CSR activities to the public (Cho et al., 2015). This communication can be explained by several other theories such as the institutional (Campbell, 2007), the legitimacy (Nielsen & Thomsen, 2018), the stakeholder (Freeman, 2010), and the reputational risk theories (Unerman, 2008).

The institutional theory advocates that firms disclose their CSR to deal with institutional pressure (i.e., regulations on CSR, competitors' CSR performance and industry's CSR performance.) (Campbell, 2007). In other words, when firms face such pressure, they need to communicate their CSR activities to the public to either comply with regulations or compete against competitors in terms of CSR performance (Brammer et al., 2012).

The legitimacy theory argues that firms disclose CSR to legitimate themselves (i.e., BP disclosed CSR to legitimate the company from oil spill scandal) (Deegan, 2002). Thus, CSR disclosure may be a greenwashing activity (Nielsen & Thomsen, 2018).

The stakeholder theory contends that CSR disclosure is rooted in demands for discharging accountability of firms to their stakeholders (Freeman, 2010). In other words, stakeholders offer their resources to firms, so they need firms to discharge firms' accountability to them. For example, suppliers offer raw materials and equipment. Thus, they demand firms disclose how they treat suppliers in the short-term and long-term. Employees contribute human resources to firms, so they demand firms disclose their policies towards employees' wellbeing and safety (Nikolova & Arsić, 2017).

The reputational risk theory considers the benefits of CSR disclosure as the motives of these activities. By engaging in CSR disclosure, firms can detect reputational risk and prevent such risk (i.e., modern slavery, environmental footprints) (Pineiro-Chousa et al., 2017). In other words, CSR disclosure is a process in which firms review their CSR performance and detect problems before communicating CSR activities to the public. As a result, firms can prevent reputational risk (Unerman, 2008).

2.3. Agency theory

This study investigates the impacts of CSR on agency costs of the UK-listed retailers. Thus, agency theory is a critical theory that clarifies how agency costs emerge and are controlled.

The agency theory contends that the relationship between owners and managers is also called the principal-agent relationship (Jensen & Meckling, 1976). In this contractual relationship, each party is driven by its economic benefits according to the model of man for agency theory, so managers or agents tend to behave opportunistically to maximise their interests, leading to the agency dilemma – the conflicts of interests between principals and agents (Shapiro, 2005).

In the principal-agent relationship, agents are possible to behave opportunistically because they are involved in the daily operations of firms on behalf of the principal (Jensen & Meckling, 1976). Thus, they possess information advantages over principals. The information asymmetry enables agents to either consume more resources than needed or to engage with risky projects in exchange for their benefits without any responsibility for loss of shareholders (moral hazard) (Ballwieser et al., 2012). Because of information asymmetry, principals may also incur adverse selection that means the selection of unqualified managers. Consequently, these managers underperform, leading to the agency costs incurred by principals (Jensen, 1986).

Different approaches can mitigate agency costs in the corporate governance literature (Saltaji, 2013). The systematic approach to address agency costs is to develop effective internal corporate governance mechanisms that enable firms to be directed and controlled as expected by principals (Becht et al., 2003). According to Farrar (2008), the core component of the internal corporate governance mechanisms is the board of directors that is responsible for firms' sustainable and long-term development. The board of directors has several roles – (1) to supervise the management to make strategic decisions and (2) to monitor the management's behaviours (FRC, 2018). Thus, when the board is effectively presented at the diversity of the board members' background, skills, expertise, knowledge of firms, the high level of independent directors, the board can perform well to lead firms to achieve their goals and to mitigate agency conflicts. Besides the board of directors, other internal corporate governance mechanisms may also be effective in reducing agency conflicts such as managerial ownership, institutional ownership, the role of the audit committee (Becht et al., 2003). For external corporate governance mechanisms, debt financing is considered an effective external monitoring system that firms can utilise the mitigate agency conflicts (Jensen, 1986). When

firms borrow money from creditors/ lenders, they need to follow debt covenants that are thresholds required for firms (i.e. required financial ratios) to ensure that they perform well to pay debts. Firms do not want to violate covenants since they have to incur significant fines and punishment (Bradley & Roberts, 2015). Therefore, under debt financing, the management tends to perform well as expected to prevent firms from violating covenants (Demerjian, 2017).

2.4. CSR impacts on firm's performance in the UK

In the UK literature, there are substantial research studies examining the impacts of CSR on firms' performance. However, empirical evidence presents a divergence with three main trends.

Firstly, CSR has been found to improve the UK firms' performance (Keffas & Olulu-Briggs, 2011; Adeneye & Ahmed, 2015; Limones, 2020), meaning that the investment in CSR benefited firms as stated by the integrative theories. For example, Keffas & Olulu-Briggs, 2011 found a positive relationship between CSR measured by the FTSE4Good index and the performance of the UK banks. CSR banks presented better asset quality, higher capital adequacy, and higher efficiency in managing their portfolios. Adeneye & Ahmed (2015) contended that CSR measured by CSR index positively linked with the market to book ratio and return on capital employed of the UK firms. However, CSR did not significantly link with the UK firm's size. By conducting a quantitative primary research study, Limones (2020) realized that in the UK manufacturing sector, CSR positively influenced the financial performance of these firms.

Secondly, several scholars found that CSR negatively influenced the performance of the UK firms measured by either market indicators or accounting indicators. For example, Moore (2001) found that in the supermarket industry in the UK, CSR, measured by CSR index constructed based on a list of raw social performance indicators, negatively influence the financial performance of supermarket firms (turnover growth, profitability, return on capital employed, growth in EPS). Brammer et al. (2006) found the negative impacts of CSR composite score on UK-listed firms' stock returns.

Thirdly, the insignificant and inconsistent relationships between CSR and a firm's performance have also been documented in the UK literature (Samy et al., 2010). This type of relationship can be justified by both advantages and disadvantages of CSR activities. While CSR enables firms to strengthen relationships with their stakeholders, it also requires significant investment costs. As a result, when such costs cannot be well offset by CSR benefits, CSR seems to influence firms' performance insignificantly.

2.5. Implications & hypothesis development

Despite a significant number of research studies in the UK investigating the impacts of CSR on a firm's performance, CSR's effects on agency costs have not been well addressed.

Agency costs refer to costs incurred by shareholders when agents behave opportunistically (Ang et al., 2000). In the literature, agency costs are measured by (1) asset turnover (Ang et al., 2000; McKnight & Weir, 2009; Florackis, 2008), (2) operating expenses (Ang et al., 2000), (3) selling and general administrative expenses (Florackis, 2008). Asset turnover refers to the efficiency of firms in utilising assets to generate revenue. When asset turnover is high, the efficiency in generating revenue from the assets of firms is high, meaning the low level of agency costs and vice versa (Ang et al., 2000). However, asset turnover is also influenced by industry-specific factors. For example, the asset turnover ratio of the healthcare industry is generally lower than that of the retail industry. Operating costs are proxied by the ratio between operating expenses and revenue (Ang et al., 2000). This measure is used to gauge agency costs since the high level of operating expenses reflects the inefficiency of managers in controlling operating expenditures. In other words, when managers are inefficient in operating expense

management, it means the management may underperform, assuming that the management is qualified for their work or no adverse selection takes place. However, according to Florackis (2008), operating costs do not reflect agency costs well since operating expenses comprise other costs that do not relate to the management's behaviours (i.e., impairment of intangible assets). The selling and general administrative expenses are measured by these expenses scaled by revenue. This indicator is commonly agreed as a good measure of agency costs since this ratio reflects the management efficiency in controlling selling and general administrative expenses that is controllable by the management (Florackis & Ozkan, 2009) (Chen & Yur-Austin, 2007). When this ratio is high, the agency cost level is high since the management might claim more resources than needed (Florackis, 2008).

Agency costs and a firm’s performance have some similarities and differences. In terms of similarities, agency costs can be used as a proxy of firms' performance (McKnight & Weir, 2009). When agency costs are low, the firm's performance will be improved since the management minimises their opportunistic behaviours. Differently, when agency costs are high, firms' performance will be reduced since the management tends to maximise their opportunistic behaviours (Jensen & Meckling, 1976).

In terms of differences, agency costs differ from a firm's performance since agency costs reflect the consequences of agency dilemmas (Jensen, 1986). However, a firm's performance does not only reflect the consequences of agency dilemma, but it also captures other factors (i.e., competencies of firms' human resources, leadership effectiveness, favourable market conditions) (Dawar, 2014).

Considering the similarities and differences between agency costs and a firm's performance, the study on impacts of CSR on agency costs is critical to clarify whether CSR contributes to reducing agency conflicts between owners and managers that have not been well examined in the UK literature.

To examine CSR's impacts on the UK listed retailers' agency costs, this study applies the integrative theories of its theoretical framework. According to the integrative theories, firms implement CSR to integrate social demands into their business strategy to enhance the relationships with stakeholders (Freeman et al., 2010). In the 2018 Corporate Governance Code in the UK, the stakeholder theory has also been incorporated since firms are required to ensure the mutual benefits of all stakeholders instead of just shareholders (FRC, 2018). Therefore, when the management has to discharge their accountability to different stakeholders through CSR activities implementation, the management's behaviours will be monitored by stakeholders instead of just shareholders. As a result, the management's performance can be improved as the monitoring activities are strengthened. CSR, hence, reduces agency costs incurred by the UK firms in general as well as retailing firms.

H1. CSR increases asset turnover of UK retailing firms.

H2. CSR reduces selling and general administrative expenses incurred by the UK retailing firms.

According to Ebiringa et al. (2013) and Hasan (2020), CSR disclosure depends on firm size, whereas agency costs are also influenced by firm size (Singh & Davidson III, 2003). Large firms tend to experience lower agency costs than small firms since they are controlled more strictly by a large spectrum of stakeholders than small firms. Therefore, in this study, firm size is hypothesised to moderate the CSR-agency cost relationship.

H3. Firm size moderates the CSR-agency cost relationship of the UK listed retailers

3 Methodology

Since this study examines the impacts of CSR on the UK listed retailers' agency costs in the past five years (2016-2020), its dependent variables are agency costs, whereas its

independent variables are CSR scores. Furthermore, there are also control variables that refer to factors that may affect agency costs. Hence, such factors are controlled throughout the research models.

To measure agency costs, this study uses two proxies – asset turnover (RTA) and the selling and general administrative expense ratio (SGAE) as adopted by Florackis (2008). Therefore, RTA and SGAE are two dependent variables used in this study (hypotheses 1 and 2 mentioned in section 2.5). RTA, measured by the ratio between revenue and total assets, presents the efficiency of the UK retailers in using their assets to generate revenue (Sinha, 2012). It, hence, is an inverse measure of agency costs. Thus, the low asset turnover ratio means the low efficiency of retailers in generating revenue from their total assets, implying the high agency costs. The high asset turnover ratio means the high efficiency of retailers in generating revenue from their total assets, implying the low agency costs (Williams & Dobelman, 2017).

SGAE as a fraction of revenue is used as a direct proxy of agency costs as proposed by Florackis (2008). This ratio is better than the operating expense ratio since it only contains expenses associated with the managerial consumption of firms' resources whereas operating expense ratio may contain expenses that do not relate to managerial use of firms' resources (i.e., impairment of intangible assets) (Williams & Dobelman, 2017).

In terms of CSR as an independent variable, this study measures CSR performance by CSR scores collected from the CSRHub database (https://www.csrhub.com). The highest CSR score is 100, meaning the excellent CSR performance is estimated based on different criteria – environmental performance, social performance (community, employee, and governance). CSRHub database is chosen, following scholars such as Conway (2019) and Lin et al. (2019).

On the other hand, this study controls several variables that may be determinants of agency costs.

According to the agency theory, the conflicts of interests between principals and agents lead to agency costs (Jensen & Meckling, 1976). Therefore, to mitigate agency costs, the effective corporate governance mechanisms should be developed (Florackis, 2008). Furthermore, the involvement of the external debts as the external monitoring mechanisms (capital structure) is also essential to minimise agency costs (Imelda & Patricia, 2019). In this study, corporate governance, focusing on characteristics of the UK listed retailers' corporate boards and capital structure (gearing ratio) are controlled to evaluate CSR's effects on these firms' agency costs. Additionally, firm size proxied by the log value of total assets is also controlled since agency costs may be affected by the firm's size (Singh & Davidson III, 2003).

The research models, hence, are developed as followings:

$$\boldsymbol{RTA/SGAE = \alpha + \beta_1 CSR + \beta_2 BSI + \beta_3 BIN + \beta_4 BGD + \beta_5 Capital\ structure + \beta_6 firm\ size + \varepsilon}$$

Where RTN is measured by revenue divided by the total asset of a retailer, SGAE is calculated by selling, general administrative expenses divided by total revenue (Florackis, 2008). CSR is measured by CSR scores collected from the CSRHub database as mentioned. Board size (BSI) is measured by the log value of the number of directors in the boardroom of the UK-listed retailers. Board independence (BIN) is the ratio between the number of non-executive directors and a total number of directors of the UK listed retailers' boardroom. Board gender diversity (BGD) is the ratio between the number of female directors and a total number of directors in the UK listed retailers' boardroom. Capital structure is measured by the gearing ratio – non-current liabilities divided by capital employed (Imelda & Patricia, 2019). Firm size is measured by the log transformation of the UK retailers' total assets (Florackis, 2008).

Additionally, this study also tests for the firm size's moderating effects for the CSR - agency cost relationship since CSR performance may vary with the variation of firm size (Ebiringa et al., 2013), and agency costs may also be affected by firm size (Singh & Davidson III, 2003). To test these moderating effects, the interaction term between CSR and firm size is added in the research model as following:

$$RTA/SGAE = \alpha + \beta_1 CSR + \beta_2 BSI + \beta_3 BIN + \beta_4 BGD + \beta_5 Capital\ structure + \beta_6 firm\ size + \beta_7 Interaction\ term + \varepsilon$$

Table 3.1. Variables of the study

Variable	Formula
Dependent variables	
Asset turnover (RTN)	RTN = Revenue/Total assets
Selling, general administrative expenses (SGAE)	SGAE = Selling, general administrative expenses/Total revenues
Independent variable	
CSR	CSR scores ranged from 0 to 100
Control variables	
Board size (BSI)	BSI = log(number of directors in the boardroom)
Board independence (BIN)	BIN = Number of non-executive directors/Total number of directors in the boardroom
Board gender diversity (BGD)	BGI = Number of female directors/Total numbers of directors in the boardroom
Capital structure	Gearing ratio = non-current liabilities/Capital employed
Firm size	Firm size = log(total assets)
Interaction term	Interaction term = CSR score * firm size (log)

3.3. Sample selection

This study examines the impacts of CSR on agency costs of the UK-listed retailers. Therefore, its samples must be from the UK-listed retailers. To select samples among the UK listed retailers, this study applies the random sampling method (Saunders et al., 2019) because this method gives an equal chance for all listed retailers in the UK to be included in the list of samples. Thus, this method can minimise sampling bias. The number of companies selected for this study is 45 retailers (groceries, supermarkets, internet retail.). These retailers will be studied in a five-year period (2016-2020), total firm-year observations of this study are 225.

This study focuses on the five-year period (2016-2020) in the UK due to a number of reasons. Firstly, in 2016, the UK voted for leaving the UK (Brexit vote) (Asthana et al., 2016). This event resulted in the significant macroeconomic uncertainty in the UK (Amadeo, 2019). The relationship between the UK and EU after the Brexit was vague, leading to risk facing the UK firms. After the official departure from the EU, the UK firms need to secure new business licences, spend more resources for logistics and transportations when operating in the EU. They may have to incur higher labour costs due to the restriction of free movement of labour from the UK to the EU and vice versa. Furthermore, the large swing of the foreign exchange rates

following this event is also a critical issue for multinational firms in the UK (Belsie, 2019). In 2020, the UK firms had to deal with the Covid-19 pandemic that required unpredicted costs (Hasan & Ahmed, 2021). Therefore, this study aims to examine whether the engagement in CSR is helpful for the UK listed retailers to deal with the tough macroeconomic conditions through the mitigation of agency costs, leading to the improvement of performance. Specifically, CSR can strengthen the relationship between firms and their stakeholders and improve their competitiveness regarding the integrative theories of CSR.

3.4. Data collection

In this study, the secondary quantitative data associated with financial figures of the UK listed retailers such as revenue, selling, and general administrative expenses, total assets and total equity is gathered from the FAME database from 2016 to 2020. The secondary data associated with CSR scores of the UK-listed retailers is collected from CSRHub, which is a good database of CSR performance of firms worldwide. This database has been used by several scholars, such as Conway (2019) and Lin et al. (2019). The secondary data associated with corporate governance of the UK listed retailers such as number of directors in the board of directors, number of non-executive directors, number of female directors, is gathered from these firms' annual reports because this data is not provided sufficiently in different years in FAME database. FAME only reports data associated with the board of directors in the latest year, whereas this study involves a time horizon of five years (2016-2020). Therefore, annual reports are reliable and useful sources of corporate governance data.

4 Empirical analyses

4.1. Descriptive analysis

In table 4.1, key statistics of dependent, independent, and control variables of the study in the period of 2016-2020.

In terms of dependent variables, the average asset turnover ratio (RTA) of the UK listed retailers is 1.758, meaning that for each pound asset, the UK listed retailers can generate 1.758-pound revenues. The standard deviation of this dependent variable is 1.035, so the difference in asset turnover ratio among samples is relatively high. The average selling, general administrative expense (SGAE) as a per cent of the revenue of the UK listed retailers is 0.309, meaning that such expenses are accounted for approximately 30.9% of their revenue. The standard deviation of this expense is 0.162, meaning the moderate level of volatility of this variable. Most of the UK-listed retailers have this expense accounted from 14% to 47% of their revenue.

In terms of independent variable, the average CSR score of the UK listed retailers is 0.534, meaning the moderate level of CSR performance achieved by these firms. However, the standard deviation of CSR scores is 0.317, meaning that most of the UK listed firms have CSR scores distributed from 0.21 to 0.85, meaning a significant dispersion in this score among samples. Therefore, the UK-listed retailers are very different from each other in terms of CSR performance.

In terms of control variables, the average size of the UK listed retailers' boards is 8.316, meaning there are approximately eight directors in these firms' boards of directors. The standard deviation is 2.302, so the boards of these firms moderately vary in terms of size. The average degree of independence of these firms' boards is 0.623, meaning that non-executive directors of the UK listed retailers are accounted for approximately 62.3% of the board size. This variable has a small standard deviation (0.123), so the variation in terms of the independence of the boards of these firms is relatively small. The average proportion of female directors in the boards of the UK-listed retailers is 0.245, so female directors are accounted for approximately 24.5% of the board size. The standard deviation of this control variable is 0.14,

so the difference in the proportion of female directors among the UK-listed retailers is moderate.

The average gearing ratio of these firms is 0.369, so non-current liabilities are accounted for approximately 36.9% of these firms' total capital employed. In other words, the UK-listed retailers adopted a low level of financial gearing. The standard deviation of the gearing ratio is 0.242, so most of the UK listed retailers have a gearing ratio ranged from 0 to 48% or a relatively high dispersion of this variable presented.

In terms of firm size, since the standard deviation is high (£122,727.2 million), the samples are extremely different in terms of the firm's size. The median firm size is £1,178.9 million, meaning that half of the samples have total assets less than £1,178.9 million, whereas the remaining have total assets higher than £1,178.9 million.

Table 4.1. Statistical profiles of samples of the UK listed retailers (2016-2020)

Source: the dissertation's author

	RTA	SAGE	CSR	BSI	BIN	BGD	Capital structure	Firm size
Mean	1.758	0.309	0.534	8.316	0.623	0.245	0.369	30,537.020
Median	1.534	0.308	0.660	8.000	0.636	0.250	0.393	1,178.900
Maximum	7.162	0.843	0.980	16.000	0.917	0.545	0.944	948,689.300
Minimum	0.308	0.015	0.000	4.000	0.333	0.000	-0.266	10.743
Std. Dev.	1.035	0.162	0.317	2.302	0.123	0.140	0.242	122,727.200
Skewness	2.724	0.117	-0.518	0.846	-0.400	-0.187	-0.208	5.975
Kurtosis	14.077	2.723	1.946	3.524	2.812	2.321	2.558	41.075
Jarque-Bera	1,428.61	1.24	20.48	29.45	6.34	5.64	3.45	14,930.02
Probability	0.00	0.54	0.00	0.00	0.04	0.06	0.18	0.00

4.3. Correlation analysis

In table 4.2, the outcomes of the correlation analysis are presented. Among the pair of variables, the correlation between BGD and CSR is 0.48, the correlation between firm size and BIN is 0.43, the correlation between firm size and capital structure is 0.42. The remaining variables have low correlation degrees. Hence, all pairs of variables have correlation coefficients less than 0.5, meaning the modest degree of correlations between them. As a result, the dataset is good with the low likelihood of multicollinearity in regressions with these variables.

Table 4.2. Correlation matrix

Source: the dissertation's author

	RTA	SAGE	CSR	BSI	BIN	BGD	Capital structure	Firm size
RTA	1.00							

SAGE	-0.27***	1.00						
CSR	-0.35***	0.17**	1.00					
BSI	-0.34***	-0.09*	0.24***	1.00				
BIN	-0.15**	-0.05*	0.13**	0.37***	1.00			
BGD	-0.23***	0.22***	0.48***	0.20** *	0.01	1.00		
Capital structure	-0.36***	-0.18**	0.15**	0.22***	0.26***	-0.28***	1.00	
Firm size	-0.39***	-0.36***	0.20***	0.38***	0.43***	-0.12**	0.42***	1.00

**** 0.01 level of significance.*
*** 0.05 level of significance*
** 0.1 level of significance*

4.4. Regression analysis

4.4.1. Regression outcomes

This study firstly conducts the regressions with fixed and random effects and Hausman tests to determine the most suitable regression models for the study.

The Hausman tests show that in the regression between asset turnover (RTA) and CSR, the fixed effects are more appropriate than the random effects. Similarly, in the regression between SGAE and CSR, the fixed effects are also more appropriate than the random effects (table 4.3). The significant chi-square statistics of the Hausman tests rejected the null hypothesis on the appropriateness of the random effects and confirmed the alternative hypothesis on the suitability of the fixed effects.

Table 4.3. Hausman test for the fixed and random effects of the regression between RTA/SGAE & CSR scores

Source: the dissertation's author

	RTA	SGAE
Chi-square statistics	16.3**	15.42**
*** significance at 0.05 level*		

The heteroscedasticity tests (table 4.4) suggest that the robust standard error type should be applied to ensure the robust estimations in the context of the heteroscedasticity. Therefore, a robust standard error type is applied for both regressions, using fixed effects.

Table 4.4. Heteroscedasticity tests

Source: the dissertation's author

	RTA	SGAE
Chi-square statistics	90735.95***	310000***
**** significance at 0.01 level*		

In table 4.5, outcomes of regressions with fixed effects and robust standard error type between RTA/SGAE and CSR, controlled for corporate governance, capital structure, and firm size, are provided.

In the regression with fixed effects, robust standard error type between asset turnover and CSR and control variables, the CSR's coefficient is significant and negative. Therefore, CSR significantly reduced the asset turnover of the UK-listed retailers in this period. If CSR score increases by one unit, RTA will reduce 0.198 units when others are fixed. Hence, this negative effect is marginal.

For the UK retailers with the CSR scores controlled, their asset turnover ratio is significantly influenced by board size, capital structure, and firm size. Since coefficients of these variables are negative, they inversely affected asset turnover ratios of the UK listed retailers with the strongest effects of capital structure and moderate effects of board size and firm size. If board size increases by 1%, the asset turnover ratio will reduce by 0.277 units when others are constant. If the gearing ratio increases by one unit, the asset turnover ratio will reduce by 0.8496 units when others are constant. If firm size increases by 1%, asset turnover will reduce by 0.431 units when others are constant.

In the regression with the fixed effects, robust standard error type for SGAE and CSR, controlled by determining variables, the coefficient of CSR is insignificant. Therefore, CSR insignificantly affected the SGAE of the UK-listed firms.

For the UK listed retailers with CSR control, their SGAE is significantly affected by board size at a 90% confidence level. If board size increases by 1%, SGAE will reduce by 0.046 units when others are constant. Thus, such negative effects of board size on SGAE are modest. Remaining variables such as board independence, board gender diversity, capital structure, and firm size insignificantly influence the SGAE of the UK samples.

Table 4.5. Regression outcomes

Source: the dissertation's author

	RTA	SAGE
Constant	5.9029***	0.2514*
CSR	-0.198**	-0.0458
Board size	-0.2277**	-0.0465*
Board independence	0.1519	-0.0175
Board gender diversity	-.1105	-0.0794
Capital structure	-0.8496***	0.0367
Firm size	-0.4309**	0.0262
R-squared	0.2031	0.1748
Observation	225	225

**** 0.01 level of significance*
*** 0.05 level of significance*
** 0.1 level of significance*

4.4.2. Robustness tests

Since fixed effects with the robust standard error type are applied, regressions are robust to heteroscedasticity. The normality of residuals/errors are tested to confirm R of the regressions. The outcomes show that errors are normally distributed, so the consistency of the predicted value across the range of explanatory values can be assured (Table 4.6).

Table 4.6. Normality of residuals of regression models

Source: the dissertation's author

	RTA	SAGE
Jarque-Bera	2.89	2.12

4.5. Moderating effects of firm size

To test the firm size's moderating effects for the relationship between agency costs and CSR, the interaction term between CSR and firm size is added in regression models. In table 4.7, outcomes of the regressions with interaction terms are presented.

In both regression models, the coefficients of the interaction term are insignificant. Therefore, firm size does not moderate the CSR - agency costs relationship, controlled by corporate governance and capital structure.

Table 4.7. Tests for firm size's moderating effects

Source: the dissertation's author

	RTA	SAGE
Constant	6.184***	.1368
CSR	-.8419**	.2166
Board size	-.2761	-0.047*
Board independence	.1437	-.0142
Board gender diversity	-.0999	-.0837
Capital structure	-.8626***	.042
Firm size	-.4619*	.0388
Interaction term	.0724	-.0295
R-squared	0.2076	0.0797
Observation	225	225

**** 0.01 level of significance*
*** 0.05 level of significance*
** 0.1 level of significance*

4.6. Discussions

4.6.1. The CSR performance of the UK listed retailers (2016-2020)

In the period of 2016-2020, the UK-listed retailers have the moderate CSR performance with the average score of 0.534. However, because of the high standard deviation, this industry has experienced a high dispersion in CSR performance among the UK-listed retailers. This means that besides good CSR performers in this industry, there are bad CSR performers. For example, there are 10 UK listed retailers have CSR scores higher than 80/100 (i.e., Next Plc, Unilever, WH Smith, Travis Perkins, Sainsbury) 14 retailers have CSR scores from 60/100 to 79/100 (i.e., PZ Cussons, Dixons Carphone, Halfords Group). Remaining (18 retailers have CSR scores lower than 50/100 (i.e., BooHoo Group, Ocado Group, Fraser Group), and three retailers have CSR scores from 50 to 59/100 (i.e., Pendragon, Card Factory, JD Sports). Therefore, the UK-listed retailers need to invest more in CSR in order to improve their CSR performance, especially since the retail industry uses significant human resources that relate to several CSR issues such as human rights, employee wellbeing, working conditions, health, safety and modern slavery. The investment in CSR activities also enables the UK-listed

retailers to comply with the 2018 Corporate Governance Code and to satisfy the public demands on CSR.

The average CSR performance of the UK-listed retailers may be explicated by the fact that this industry does not create significant environmental footprints like textile, oil, and gas industries (Hasan, 2020). Therefore, they are not motivated to engage in CSR, especially environmental activities in order to legitimate themselves and to deal with the industrial pressure and regulations. The low investment in environmental initiatives of the UK retailers contributes to their low overall CSR scores.

4.6.2. Impacts of CSR on agency costs

This study has investigated that CSR significantly reduced asset turnover ratios of the UK-listed retailers in the period of 2016-2020. Therefore, H1 is rejected. The significant negative effects of CSR on asset turnover of the UK listed retailers are aligned with findings of Moore (2001) and Brammer et al. (2006) since they revealed that CSR negatively influenced the UK listed firms' performance, including that of supermarkets (Moore, 2001).

However, this study has explored that CSR insignificantly affected the selling and general administrative expenses of the UK-listed retailers. With this finding, H2 is also rejected. Findings associated with H1 and H2 present some discrepancies. However, such discrepancies are explainable.

Firstly, the asset turnover ratio measures the efficiency of the management in generating revenue from assets (Florackis, 2008). Thus, the high asset turnover means low agency costs, and the low asset turnover means high agency costs. Hence, the asset turnover ratio is an indirect proxy of agency costs as the low ratio may reflect the inefficient investment decisions, the significant perquisite consumption, the insufficient managerial efforts, and the purchase of unproductive products. However, the efficiency of the management in generating revenue from assets is also influenced by the qualifications and abilities of the management instead of just agency conflicts (Ang et al., 2000). Differently, selling and general administrative expenses refer to all expenses associated with everyday operating expenses for running a business, including rent, salaries, advertising, and marketing costs (Florackis, 2008). Therefore, the selling and general administrative expenses ratio is a direct proxy of agency costs as it shows the degree of discretion of the management in using a company's resources. However, this proxy does not show different types of agency costs incurred by a company that is out of the scope of selling and general administrative expenses (i.e., poor investment decisions). Therefore, this ratio covers a narrower range of agency costs than asset turnover. Because of the difference in the two proxies of agency costs, the impacts of CSR on agency costs vary across their measures.

From the negative impacts of CSR on asset turnover as an indirect proxy of agency costs found in this study, we suggest that the investment in CSR can be a means for the management to claim more resources than needed and/or to make poor investment decisions, making the agency costs increase, assuming that the management is qualified to conduct their tasks (no adverse selection). Since the current accounting systems are not sufficient to account for CSR activities, CSR costs are not treated properly, leading to opportunities for the management of the UK listed retailers to claim more resources than needed through other broader activities than managerial activities measured by SGAE. Therefore, it is critical for the development of CSR accounting to recognise CSR costs properly and to evaluate the effectiveness of CSR performance (i.e., the return on investment in CSR activities). As a result, CSR cannot be treated as a means for the management to claim more resources, leading to the higher agency costs proxied by the low asset turnover found in this study.

4.6.3. The moderating role of firm size

This study does not find any firm size's moderating effects for the relationship between CSR and agency costs. This means that this relationship does not vary across the size of the UK-listed retailers. Hence, H3 is rejected. This finding is a significant contribution of the study to the UK literature as it shows that impacts of CSR on agency costs of the UK listed retailers are consistently disregarding their firm size.

5 Conclusions & implications

5.1. Conclusions

This study aims to investigate the impacts of CSR on the UK listed retailers' agency costs in the period of 2016-2020. In a form of an empirical design, using regression analysis with fixed effects and robust standard error type for panel data, this study has obtained its research aims and objectives.

Firstly, through the descriptive analysis, this study has revealed that in the 2016-2020 period, the UK-listed retailers have moderate CSR performance on average. However, there is a large dispersion in CSR performance among retailers. The moderate CSR performance of these firms is justified by the industry-specific characteristics. The UK retailers do not create significant environmental footprints due to their nature, so they are not pressured to significantly invest in environmental activities regarding the institutional and legitimacy theories. As a result, their CSR average score is moderate.

Secondly, through the regression analysis with fixed effects and robust standard error type applied for panel data, this study has investigated that in the studied period, CSR significantly reduced asset turnover of the UK listed retailers with the modest effects, but it insignificantly influences selling and general administrative expenses of this industry. Therefore, CSR increases agency costs when a broader measure (RTA) is used and insignificantly influenced agency costs when a narrower measure (SGAE) is applied. These findings imply that the management of the UK-listed retailers tended to engage in broader activities such as the poor investment decisions associated with CSR rather than to consume more selling and general administrative resources when their firms invest in CSR activities. Therefore, CSR might serve as a means for the UK-listed retailers' management to maximise their benefits from the inefficient assets' utilisation.

Thirdly, this study does not find firm size’s moderating effects for the relationship between CSR and agency costs in the studied period, meaning that these relationships are consistent across sizes of the UK listed retailers.

For the UK listed retailers with CSR controlled, their asset turnover is negatively affected by board size, capital structure, and firm size, whereas their selling and general administrative expenses ratio is only negatively affected by board size. Therefore, the reduction of board size and external debts is proposed to mitigate agency conflicts. Large firms need to enhance their corporate governance mechanisms and internal control systems to mitigate agency conflicts.

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