THE INFLUENCE OF RELIGION AND STATE OWNERSHIP ON CSR DISCLOSURE QUALITY: A CASE OF THE PHARMACEUTICAL INDUSTRY IN CHINA

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DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF [MASTER OF ACCOUNTING (REPORTING AND MANAGEMENT ACCOUNTABILITY)]

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THE INFLUENCE OF RELIGION AND STATE OWNERSHIP ON CSR DISCLOSURE QUALITY: A CASE OF THE PHARMACEUTICAL INDUSTRY IN CHINA

ABSTRACT

A growing amount of research has identified the importance of the institutional environment in determining the companies' CSR disclosure (CSRD). This perspective suggests that companies in any society facing both formal and informal institutional constraints that they must follow to gain legitimacy. Hence, this research provides insights into the CSRD quality by considering the vital role of institutional constraints. Specifically, the primary purpose of this research is to investigate the influence of religion, representing an informal institution, on the CSRD quality. Additionally, the study identifies the effect of different religions on the CSRD quality. Further, the study also examines how state ownership, representing a formal institution, moderates the relationship between religion and the CSRD quality. The investigation focuses on the pharmaceutical industry in China, an ancient country where religion has an impact on the life of the society. The country is also the leading producer and consumer in pharmaceutical products. Thus, the decisions (including CSRD) of the pharmaceutical companies have a significant impact on both domestic and international stakeholders. This research is conducted by employing the panel data regression method. The results demonstrate that pharmaceutical companies with the higher CSRD quality are positively correlated with religion, which weakens when the state owns these companies, indicating that state ownership moderates the relationship between religion and the CSRD quality. Further, the findings suggest that Buddhism, Taoism, and Catholicism

are found to be positively related to the CSRD quality, whereas Islam and Protestantism are not associated with the CSRD quality. The findings of this research contribute theoretically to understanding the influence of religion and state ownership on the CSRD quality in the pharmaceutical industry in China. Practically, the findings established in this study provide evidence on determinants of the CSRD quality in China's pharmaceutical companies that can assist various stakeholders (managers of pharmaceutical companies, investors, regulators, and the public) in making relevant economic decisions.

Keywords: CSR disclosure quality, Religion, State ownership, Pharmaceutical industry, Panel data

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ABSTRAK

Pembangunan penyelidikan yang semakin pesat telah mengenal pasti kepentingan persekitaran institusi dalam menentukan pendedahan CSR (CSRD) syarikat. Perspektif ini menunjukkan bahawa syarikat-syarikat menghadapi kekangan institusi formal dan tidak formal yang mesti mereka ikuti untuk memperolehi kesahihan. Oleh itu, dalam penyelidikan ini, kami memberikan pandangan mengenai kualiti CSRD dengan mempertimbangkan peranan penting dari kekangan institusi. Secara khusus, tujuan utama penyelidikan ini adalah untuk menyelidik pengaruh agama, yang mewakili institusi tidak formal, terhadap kualiti CSRD. Selain itu, kami mengenal pasti kesan agama yang berbeza terhadap kualiti CSRD. Selanjutnya, kajian ini mengkaji bagaimana pemilikan negara, yang mewakili institusi formal, memoderasi hubungan antara agama dan kualiti CSRD. Penyelidikan ini memberi tumpuan kepada industri farmaseutikal di China, sebuah negara purba di mana agama mempunyai kesan terhadap kehidupan masyarakat. Negara ini juga merupakan pengeluar dan pengguna produk farmaseutikal yang terkemuka. Oleh itu, keputusan (termasuk CSRD) syarikat farmaseutikal mempunyai kesan yang signifikan terhadap pihak berkepentingan domestik dan antarabangsa. Penyelidikan ini dilakukan dengan menggunakan kaedah regresi data panel. Hasil kajian menunjukkan bahawa syarikat farmaseutikal dengan kualiti CSRD yang lebih tinggi berkorelasi positif dengan agama, yang melemahkan negara apabila memiliki syarikat-syarikat ini, menunjukkan bahawa pemilikan negara

memoderasi hubungan antara agama dan kualiti CSRD. Selain itu, hasil kajian menunjukkan bahawa Buddhisme, Taoisme, dan Katolik didapati positif berhubungan dengan kualiti CSRD, sedangkan Islam dan Protestantisme tidak mempunyai kaitan dengan kualiti CSRD. Hasil kajian ini menyumbang kepada teori dalam memahami pengaruh agama dan pemilikan negara terhadap kualiti CSRD dalam industri farmaseutikal di China. Secara praktikal, penemuan kajian ini memberikan bukti penentu kepada kualiti CSRD di syarikat farmaseutikal China yang dapat membantu pelbagai pihak berkepentingan (pengurus syarikat farmasi, pelabur, pengawal selia, dan orang awam) dalam membuat keputusan ekonomi yang relevan.

Kata kunci: Kualiti Pendedahan CSR, Agama, Pemilikan Negara, Industri Farmaseutikal, Data Panel

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LIST OF ABBREVIATIONS

APIs	:	Active pharmaceutical ingredients
CEP	:	Council on economic priorities
CER	:	Corporate environmental responsibility
CPEA	:	Chinese pharmaceutical enterprise association
CSMAR	:	China stock market & accounting research
CSR	:	Corporate social responsibility
CST	:	Catholic social teaching
CSRD	:	Corporate social responsibility disclosure
CSRR	:	Corporate social responsibility reporting
DPDM	:	Dynamic panel data model
GRI	:	Global reporting initiative
GLS	:	Generalized least squares
LR	:	likelihood ratio
NGOs	:	Non-governmental organizations
RKS	:	Rankins CSR ratings
ROs	:	Research objectives
RQs	:	Research questions
SASAC	:	State-owned assets supervision and administration commission of the state council
SEPA	:	State environmental protection administration
SOEs	:	State-owned enterprises

ST	:	Special treatment
SPDM	:	Static panel data model
VIF	:	Variance inflation factor
WHO	:	World health organization

CHAPTER 1: INTRODUCTION

1.1 An Overview

Companies have steadily realized that their businesses should operate in a socially responsible manner to ensure continued existence, which requires disclosure of their CSR information (Alshbili & Elamer, 2020). CSRD is how they present, explain, and share CSR information with their stakeholders in an appropriate form (Moravcikova, Stefanikova, & Rypakova, 2015). It can be seen that more companies are involved in CSRD and considered this practice a critical component of their overall business strategy (Mahoney, Thorne, Cecil, & LaGore, 2013). This practice has attracted significant academic interest (Dhaliwal, Li, Tsang, & Yang, 2011; Grougiou, Dedoulis, & Leventis, 2016), which turned out to be one of the major research areas in accounting (Tilt, 2016).

Various researchers have identified the importance of the institutional environment in determining companies' CSRD decisions (e.g., Alshbili & Elamer, 2020; Coluccia, Fontana, & Solimene, 2018; García-Sánchez, Cuadrado-Ballesteros, & Frias-Aceituno, 2016). The institutional theory suggests that companies in any society facing both formal and informal institutional constraints that they must follow to gain legitimacy (Aguinis & Glavas, 2012). Thus, an understanding of the institutional drivers of pharmaceutical companies' CSRD is important. The pharmaceutical industry is among the most admired and most criticized for all (Nussbaum, 2009). This sector has consistently been viewed as an exceptional sector because they deal with essential consumers' needs (Hemphill, 2010). Its products are necessary, irreplaceable, and

life-saving in a for-profit manner, including complex moral, economic, political, and social issues (Droppert & Bennett, 2015). Hence, this industry creates a high ideal standard that companies in this sector have to live up to to be perceived as responsible corporate citizens (Smith, 2008). Notably, many pharmaceutical companies have started incorporating CSRD as a significant component of their business strategies (Droppert, & Bennett, 2015; Min, Desmoulins-Lebeault, & Esposito, 2017). They have embraced and published CSR reports. KPMG has conducted an international survey on the CSRD performance for the one hundred largest pharmaceutical companies in 34 countries for 2008 and 2011 and found that CSR reports had improved tremendously (KPMG, 2011). However, the continuous incidents and scandals in this industry globally have raised public concern and lead to the impression that pharmaceutical companies are profiteering unethically in matters of life and death. Hence, an investigation of the possible role of the institutional factors in influencing pharmaceutical companies' CSRD quality (representing a better CSR commitment to stakeholders) contributes to a better understanding of drivers of CSRD performance of pharmaceutical companies. It can assist various stakeholders in making relevant economic decisions.

Therefore, this study aims to provide insights into the CSRD quality in the pharmaceutical industry by considering the vital role of institutional factors. Specifically, the primary purpose of this research is to investigate the influence of religion, an informal institution, on the CSRD quality of pharmaceutical companies in China. The study additionally examines the effect of the top five religions on CSRD quality, which aims to identify whether different religions show different impacts on

CSRD quality. Further, the study examines the way that state ownership, representing a formal institution, moderates the relationship between religion and the CSRD quality. The study focuses on the China context, an ancient country where religion has influenced the life of the society but is often ignored in academia. The country is also the leading producer and consumer in pharmaceutical products in which the corporate decisions (including CSRD) of the pharmaceutical companies have a significant influence on both domestic and international stakeholders (Pan, Huang, & Qi, 2016).

This chapter outlines the introduction of this dissertation. The next section describes the research background. Section 1.3 discusses the problem statement, followed by research questions and objectives of the study in Section 1.4. A brief account of the research methodology adopted in conducting this research present in Section 1.5. Section 1.6 highlights the motivations for and significance of this research, and the final section describes the organization of chapters in this dissertation.

1.2 Research Background

In a different country context, companies are embedded in a different institutional environment (Aguinis & Glavas, 2012; Brammer, Jackson, & Matten, 2012; Campbell, 2007). The institutional environment in which companies operate mostly influences their CSRD practices (Ali & Rizwan, 2013; Alshbili & Elamer, 2020; Khan, Luckhart, & Bathurst, 2018). Companies are forced to follow society's institutions (both formal and informal) where they are operating to maintain survival and obtain legitimacy (North,1990).

Religion, as an informal institution, has a profound influence on shaping issues and activities in society for centuries. However, the importance of religion has been generally ignored by business and management scholars, and businesses are expected to behave responsibly from a religious point of view (Van Buren III, Syed, & Mir, 2020). Notably, China is an ancient country that has a long history of practicing religious beliefs. The five officially recognized religions are Buddhism, Taoism, Catholicism, Protestantism, and Islam (Xiong, 2013). During the periods of ideological oppression (the Great Leap in the 1950s and the Cultural Revolution in the 1960s), people cannot openly practice their religious beliefs (Du, Du, Zeng, Pei, & Chang, 2016). Until the policy of opening up in 1978, there has been a considerable relenting regarding religious practices and worship places were re-opened (Xiong, 2013). Since then, many people worship, pray, perform rituals, and hold certain beliefs, and even sometimes, their views are officially recognized and institutionalized by the state (Laliberté, 2011). Modern religion in contemporary China is reviving, therefore, it is of significance for scholars to notice the religious development and its impacts on corporate decision-making (Du, Jian, Du, Feng, & Zeng, 2014).

On the other hand, state ownership (representing the formal institution) has an enormous influence on companies' behaviors in China (Tian & Lau, 2001). Unlike most countries in the world, China is only governed by one Party (the Communist Party). The government is dominant in every aspect of life in society. Therefore, it is crucial to consider the authoritative role of the government in influencing companies' decision-making (including CSRD). From 1949 to1976, almost all companies in China

were state-owned, and private ownership of any companies was prohibited. Until the opening-up policy in 1978, private companies were legalized, but state-owned enterprises (SOEs) continued to dominate the economy. The proportion of SOEs is still around sixty percent of the listed companies (Li, Luo, Wang, & Wu, 2013). The state directly governs all SOEs, and the government assigns the top management for the companies. Top managers of SOEs often belong to the Communist Party members that employ atheism as the essential belief (Du et al., 2014). Hence, it will be interesting to investigate whether the influence of religion on CSRD decisions shows differences between state-owned and non-state-owned companies.

In addition, an understanding of the institutional drivers of pharmaceutical companies' CSRD is essential. Compared to other industries, the pharmaceutical products affect human lives' health, making CSR efforts particularly important as no other sector has such a tremendous life and death impact on stakeholders (Cook, LaVan, & Zilic, 2018). The primary CSR of pharmaceutical companies towards stakeholders is to develop drugs and vaccines and making it accessible for all (Lee & Kohler, 2010; Leisinger, 2009). Notably, this industry has placed considerable emphasis on building socially-responsible profiles through the development of insulin in the 1920s, the introduction of antibiotics in the 1940s, the development of the polio vaccine in the 1950s (Folland, Goodman, & Stano, 2006), and many other drugs and vaccines to preserve the health of people.

This sector has been considered a CSR leader (Frederiksborg & Fort, 2014). Many pharmaceutical companies have made CSR a fully integrated element of their business

strategies (Droppert & Bennett, 2015; Min et al., 2017). For example, Pfizer instituted the Global Health Fellows Program in 2003 to utilize the employees to work with various non-governmental organizations (NGOs) to help designated people. GlaxoSmithKline has an international CSR program to offer discounted prices to make people in developing countries access anti-malarial medications. The Mectizan Donation Program of Merck intent to alleviate river blindness. Also, the company has a distinct focus on donating HIV/AIDS drugs to developing nations. Many pharmaceutical companies go beyond their primary obligations and help solve health issues for impoverished people worldwide (Leisinger, 2009).

The survey of KPMG (2011) illustrates an increasing number of pharmaceutical companies disclose their CSR information to demonstrate them as socially responsible corporate citizens; however, the quality of CSRD became a concern. For a CSR report to be perceived as high quality, it must fulfill the criteria of credibility, completeness, significance, and appropriate form to serve stakeholders' judgments towards companies' commitment to society (Moravcikova et al., 2015). In China, CSRD is still a voluntary practice except for SOEs. Quality lack and means of image management are usually characterized by CSR reports of the companies (Marquis & Qian, 2014). Hence, an understanding of the role of institutional factors on the pharmaceutical companies' CSRD decisions contributes to a better understanding of drivers of CSRD and provides a clearer picture of the CSRD performance of the pharmaceutical companies in China.

1.3 Problem Statement

Conventional CSRD literature usually focused on the disclosure's content and benefits (Coluccia et al., 2018). More recent research extended to the drivers or determinants of CSRD and its practices associated with that of theoretical foundation (Gray, Ower, & Adams, 2009). Although both scholars and practitioners show interest in the real drivers behind companies' socially responsible actions and their respective disclosure, the literature predominantly focused on the link of CSRD with companies' internal characteristics and corporate governance (Ali, Frynas, & Mahmood, 2017), and the drivers remain unclear (Coluccia et al., 2018; Sobhani, Zainuddin, & Amran, 2011). Therefore, researchers have shifted to explore the influence of the institutional drivers on CSRD (e.g., Ali & Rizwan, 2013; Alshbili & Elamer, 2020; Coluccia et al., 2018; Khan et al., 2018). This perspective of looking at institutional determinants suggests that companies perform CSR not just as a voluntary behavior but also influenced mostly by political and historical factors (Brammer et al., 2012). From this point of view, the researchers seek to make sense of whether institutional elements that lie beyond the immediate control of managers affect the instigation of CSRD.

Some of the existing works have examined the association between institutional factors and CSRD. Othman, Darus, and Arshad (2011) found that regulatory efforts are a significant means to support CSRD practices in Malaysia. Beddewela and Herzig (2013) found that subsidiary companies in Sri Lanka are prodigiously motivated by their need to achieve internal legitimacy and comply with the formal institutionalized processes to disclose CSR information. The study of Pedersen, Neergaard, Pedersen,

and Gwozdz (2013) found that the CSRD performance of Danish companies is forced by coercive pressures. Based on Palestine and Jordan companies, the study of Barakat, Pérez, and Ariza (2015) determined the influence of formal institutional factors on companies' CSRD. Garcia-Sanchez et al. (2016) examined the influence of the institutional environment on CSRD and observed the effect of normative and regulative institutions on CSRD. Likewise, Coluccia et al. (2018) investigated the influence of institutional factors on CSRD among European companies and found that institutional factors affect the level of CSRD. Alshbili and Elamer (2020) performed an interview to examine the effect of the institutional environment on CSRD in Libya. They perceived the impact of coercive, mimetic, and normative pressures on CSRD. In the China context, Yin (2015) concluded that globalization pressure, political embeddedness, and normative social pressure affect the likelihood of China's companies to act socially responsible. Luo, Wang, and Zhang (2017) viewed CSRD as companies' response to governmental regulations.

However, the existing literature has predominantly paid attention to the influence of the formal aspect of institutions on CSRD. The study of informal institutions is also essential (Jain & Jamali, 2016); in cases where the formal institutions do not work effectively, the informal institution works as an alternative (Allen, Qian & Qian, 2005). Informal institutions, such as culture, religion, and tradition, are deeply rooted in people's minds. It guides every aspect of people's life. Formal institutions can breach easily; thus, their influences may be changeable, whereas informal institutions' change is difficult as it is culturally derived (Su, 2019).

Religion, as an informal institution, has a profound influence on shaping issues and activities in society for centuries. The importance of religion in influencing economic activity has long been discussed in academia (e.g., Alon, Li, & Wu, 2017; Coulter, Hermans, & Parker, 2013; Hopkins, Shanahan, & Raymond, 2014). But the influence of religion on corporate decision-making has gained attention by scholars only recently through debates and discussions (McPhail, 2011; Minton, Johnson, & Liu, 2019) as well as empirical investigation (e.g., Chantziaras, Dedoulis, Grougiou, & Leventis, 2020; Griffin & Sun, 2018; Leventis, Dedoulis, & Abdelsalam, 2018; Su, 2019). The empirical studies have illuminated that piety to religious norms promotes ethical behaviors; thus, religious piety is associated with ethical business choices (Callen & Fang, 2015; McGuire, Omer, & Sharp, 2012). In this context, limited research has been conducted thus far to make sense of the relationship between religion and CSRD (Aribi & Gao, 2011; Chantziaras et al., 2020; Griffin & Sun, 2018). A more nuanced investigation of how religion influences CSRD in different societies can clarify the motivational factors or drivers of CSRD (Tilt, 2016). Therefore, this study aims to contribute to this group of studies by highlighting religion's influence on CSRD quality in the China context.

In addition, the pharmaceutical industry is purposely chosen. The rationale for selecting this sector is that this sector is accountable for a wide range of stakeholders who have strong incentives to screen their CSRD performance (high public scrutiny). This makes companies in this industry face more institutional constraints than any other sector. The pharmaceutical industry is among the most admired and most criticized for

all (Nussbaum, 2009). Its products affect human lives' health, making CSR efforts particularly important as no other sector has such a tremendous life and death impact on stakeholders-specifically patients (Cook et al., 2018). Its products are life-saving but in a for-profit manner, including complex moral, economic, political, and social issues (Droppert & Bennett, 2015). Hence, the industry presents a unique opportunity to investigate the nature and patterns of CSR and its disclosure (Cheah, Chan, & Chieng, 2007). Another reason for choosing the pharmaceutical industry is that CSRD of this sector is mostly under-researched in developing countries (Azim & Azam, 2013).

Therefore, to fill in these gaps, the primary purpose of this research is to investigate the influence of religion, an informal institution, on the CSRD quality in the pharmaceutical industry in China. Additionally, the study also identifies the effect of the five different religions (Buddhism, Taoism, Catholicism, Protestantism, and Islam) on the CSRD quality. The differentiation among religions is interesting. This is because previous studies demonstrate that different religions show different impacts on corporate behaviors (Du, 2013; Su, 2019). However, these studies are only focused on Buddhism and Taoism and concluded that only in the case of Buddhism that religion has impacts whereas Taoism is not (Du, 2013; Su, 2019). Inspired by their findings, this study examines the role of the five main religions which provides a more comprehensive picture of the possible role of religion in business and management in China.

This study further examines the way that state ownership, a formal institution, moderates the relationship between religion and the CSRD quality in China's

pharmaceutical industry. The reason to assess the influence of religion on the CSRD quality against state ownership is that none of the existing studies had done so. It is important as prior literature has proved that companies owned by the state have a better CSRD quality due to their strong political connection with the government (Lau, Lu, & Liang, 2016; Wang, Zhou, Lei, & Fan, 2016). Further, SOEs are often managed by the Communist Party members that employed atheism as the essential belief that may challenge religious practices (Du et al., 2016). Hence, when a pharmaceutical company is controlled or owned by the government, the influence of religion on their CSR-related decisions is expected to be weak. Their CSRD performance is less likely to be religiously influenced compared to non-SOEs. Thus, state ownership could play a moderating role in the relationship between religion and the CSRD quality in China's pharmaceutical industry.

1.4 Research Questions and Objectives

The existing literature emphasized the important role of the institutional environment in determining CSRD. This research follows this theory and aims to fill in the gaps discussed in Section 1.3. Thus, this research investigates the influence of religion on the CSRD quality of pharmaceutical companies in China and how different religions play their role. Further, the study assesses the influence of religion on the pharmaceutical companies' CSRD quality against state ownership. More specifically, the research questions (RQs) are posed as follows:

RQ1: Does religion influence the CSRD quality in the pharmaceutical industry in China?

RQ 2: Does the state ownership moderate the influence of religion on the CSRD quality in the pharmaceutical industry in China?

In line with the above research questions, two research objectives (ROs) are specified for RQ1 and one RO for RQ2:

RO1: To investigate the influence of religion on the CSRD quality in the pharmaceutical industry in China.

RO2: To identify whether different religions show different influences on the CSRD quality in the pharmaceutical industry in China.

RO3: To examine whether the state ownership moderates religion's influence in promoting the CSRD quality in the pharmaceutical industry in China.

1.5 Research Methodology

This research follows the positivist philosophy and adopts a quantitative method to achieve the objectives. The sample contains a total of 304 firm-year observations. The data is mainly secondary, and panel data regression analysis is employed to test the hypotheses.

CSRD quality is the dependent variable. Many independent agencies developed measuring systems to rate CSR report and judge its quality (Dhaliwal et al., 2011; Fifka, 2013). The higher the rating scores, the better the quality of CSRD (Marquis & Qian, 2014; Zheng, Balsara, & Huang, 2014). In this research, the CSR scores are provided by an agent called Rankins CSR Ratings (RKS). The RKS CSR scores are widely applied

in CSR studies in China (Dai, Du, Young, & Tang, 2018; Marquis & Qian, 2014; Zheng et al., 2014).

The independent variable of the study is religion. It is measured in terms of the number of worship places within a certain distance of a company's headquarter (Du, 2013; Du et al., 2014; Du et al., 2014; Du et al., 2016; Jin et al., 2019; Su, 2019). In addition, five religions (including Buddhism, Taoism, Catholicism, Protestantism, and Islam) are also considered as the independent variables. State ownership is the moderating variable, and it is measured as a dummy. One is coded if the company is state-owned; otherwise, zero is coded. A set of control variables is also included based on existing literature to counter the probability of bias in the results and capture other possible factors that influence the CSRD quality. This research includes variables that play a vital role in determining CSRD. Specifically, The study includes board size, independent board, gender diversity, company size, leverage, and cash.

1.6 Motivations for and Significance of Research

Many studies have investigated the drivers or determinants of CSRD; however, something remains to be explored (Coluccia et al., 2018; Sobhani et al., 2011). A growing number of studies aim to contribute to the development of research in this area by investigating the possible role of the institutional environment that drives companies disclosing their CSR information (Alshbili & Elamer, 2020; Barakat et al., 2015; Beddewela & Herzig, 2013; Coluccia et al., 2018; Garcia-Sanchez et al., 2016; Luo et al., 2017; Othman et al., 2011; Yin, 2015). But existing studies mainly paid attention to institutions' formal aspects and neglected the critical role of informal institutions.

Therefore, this study is to provide evidence for a better understanding of drivers of CSRD by investigating religion (representing an informal institution) in influencing pharmaceutical companies' CSRD quality. Sobhani et al. (2011) examined the influence of religion on the CSRD in the banking sector in Bangladesh. Likewise, Chantziaras et al. (2020) investigated the impact of religion on the CSRD in the banking sector in the U.S. This research is being carried out to focus on the pharmaceutical industry in China. This sector presents a unique opportunity through which the nature and patterns of CSR and its disclosure can be investigated (Cheah et al., 2007), and is largely under-researched in terms of CSRD in developing countries (Azim & Azam, 2013). This industry is considered the key player in CSR (Frederiksborg & Fort, 2014). However, the industry frequently breaches CSR and is in charge of many corporate incidents and scandals. Hence, an investigation of the possible role of the institutional factors (religion in this study) in influencing pharmaceutical companies' CSRD quality (representing a better CSR commitment to stakeholders) contributes to a better understanding of drivers of CSRD of pharmaceutical companies. It can assist various stakeholders in making relevant economic decisions.

To the best of my knowledge, this research is the first study investigating the influence of religion on the CSRD quality in the pharmaceutical industry in China. Further, extant literature about the important role of religions in influencing companies' decisions in China only focused on Buddhism and Taoism (Du, 2013; Du et al., 2014; Du et al., 2014; Du et al., 2016; Jin et al., 2019; Su, 2019). This research examines the five dominant religions. Thus, the study provides additional information about the

influence of religion on corporate behaviors, and it provides insights into people interested in understanding religious status in China.

Further, it is also the first study exploring the moderating role of state ownership against the relationship between religion and the CSRD quality. When studying business operations, it is suggested to consider the political environment where SOEs operate (Du et al., 2014). It is interesting as the government directly controls SOEs, and the top management that is assigned by the government often belongs to the Communist Party members that adopted atheism as the essential belief. The influence of religion on CSRD decisions may be different for SOEs and non-SOEs. Hence, this research supplements existing studies that solely investigate the relationship between religion and CSRD and offers additional evidence on the possible moderating role of state ownership.

1.7 Organization of Chapters

This dissertation is organized into six chapters, and a brief summary of the chapters is illustrated as follows:

CHAPTER 1: INTRODUCTION

The first chapter is about the introduction of this research. It starts with an overview of the chapter and then includes the research background, the problem statement, the research questions and objectives, a brief account on research methodology, the motivations for and significance of this research, and the final section describes the organization of the dissertation.

CHAPTER 2: LITERATURE OVERVIEW

Chapter two provides a critical overview of relevant literature. It presents an overview of CSRD, religion, and state ownership. Further, scholars from different theoretical perspectives have investigated the determinants of CSRD. Thus, the justification of theory is also discussed. This study proposes an institutional theory as the theoretical foundation. In the final section, the conceptual framework is to explain the connections among the variables.

CHAPTER 3: HYPOTHESES DEVELOPMENT

Chapter three presents the hypotheses development of the study. Existing studies have highlighted the important role of religion in influencing economic decisions. This research investigates the influence of the five main religions in China in influencing the quality of CSRD in the pharmaceutical industry. It also develops a hypothesis based on state ownership's moderating role in the relationship between religion and the CSRD quality.

CHAPTER 4: RESEARCH METHODOLOGY

Chapter four outlines the research methodology of this research. It firstly presents the research paradigm, followed by explaining research approaches. Further, the rationale for using a quantitative method is discussed. The sample and data collection, the measurement of variables, the empirical models applied in the statistical analysis, and a brief discussion on how data is to be analyzed are also included in this chapter.

CHAPTER 5: RESULTS

Chapter five provides research results. It presents the descriptive statistics, the correlation analysis, and the panel data regression results. Under the regression results, four subsections are included, which are: (1) stationarity testing; (2) panel data model selection; (3) regression results; and (4) robustness checks.

CHAPTER 6: DISCUSSIONS AND CONCLUSION

Chapter six presents the discussions of the findings and conclusions drawn from the research. The chapter also includes possible theoretical and practical implications. Further, it outlines the limitations of the study and contains suggestions for future research. The road map of this study is shown in Figure 1.1.

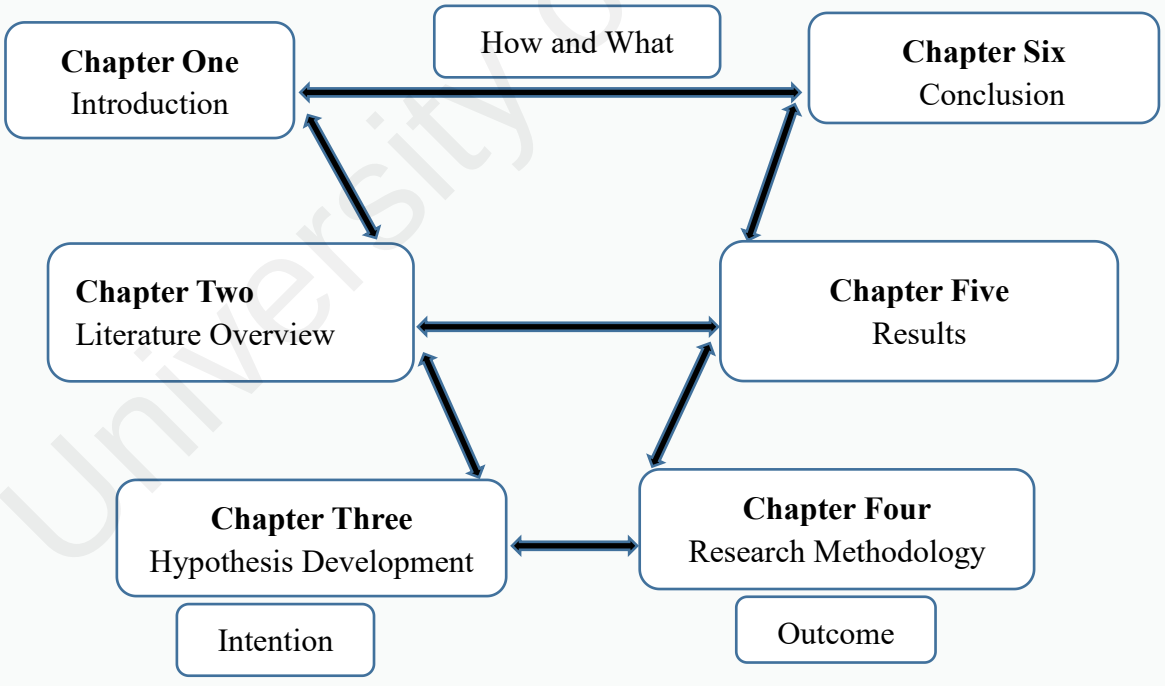

Figure 1.1: Road Map of the Study

CHAPTER 2: LITERATURE OVERVIEW

2.1 Introduction

This chapter provides a critical overview of the relevant literature. After this introduction, the first section presents an overview of CSRD. Section 2.3 illustrates an overview of religion and how religion is situated in China. An overview of state ownership in China is presented in Section 2.4. Section 2.5 explains the theoretical foundation of the study. The conceptual framework of the research is shown in Section 2.6. Section 2.7 presents a summary of this chapter.

2.2 An Overview of CSR Disclosure

Five subsections are included under this theme. The first part presents the evolution of CSRD, followed by the evolution of CSRD in the China context. The third part illustrates how CSRD is manifested in the pharmaceutical industry, followed by discussing how CSRD is situated in the pharmaceutical industry in China. The final part illustrates the measurement of CSRD in the academia.

2.2.1 The Evolution of CSR Disclosure

The roots of having a responsibility towards society for companies can be traced back to the Industrial Revolution (Carroll, 2008). A tremendous inequality existed in the early industrial society; some businessmen conducted philanthropic activities to consolidate their image (Carroll, 2008). Thus, in the early period, CSR remained mostly with a philanthropic character. The modern era of CSR should spring from the early 1950s (Carroll, 2008). Today, CSR has risen as an unavoidable need for business pioneers in almost all countries and involves social, economic, and environmental issues.

Although different researchers give different definitions in terms of CSR, and there is a lack of a universally accepted definition, one of the widely accepted explanations is that CSR serves as a self-regulating mechanism by which the activities of companies comply with the law, standards, and moral expectations (Carroll, 1999). It is a process that companies involving to positively influence their stakeholders (Campbell, 2007).

For companies to communicate CSR activities with various stakeholders, a CSR report is the tool (Moracvikova et al., 2015). Disclosing CSR information is the process of communicating the influence of companies' economic actions on the society and the environment to particular interest groups (Gray, Owen, & Maunders,1987). It is a voluntary disclosure to inform a range of audiences beyond companies' traditional roles that only concern their shareholders (Mathews,1997).

The beginning of CSRD originated in the 1970s, where western countries with large companies started to publish information regarding CSR, and the information was mainly disclosed in the annual report (Fifka, 2013). According to Ali et al. (2017), the work by Wiseman (1982) is the earliest research on CSRD, and the increase in the interest of disclosure substantially came from the late 1980s. In the 1980s, the disclosing mainly focused on social issues (Fifka, 2013). A decade later, as companies gradually realized the comparative advantages of introducing environmentally friendly production, the disclosing focus turned from social to environmental efforts (Fifka, 2013). In line with that change, researchers also shifted their attention accordingly from disclosing social to environmental information.

After the millennium turn, disclosing non-financial information in the report came out under names such as sustainability report, CSR report, or corporate citizenship report (Fifka, 2013). Also, following the approach of John's "triple bottom line" (1997), which is based on the concept of sustainability, the economic dimension was also included. The trend indicates many older studies had assessed either social or environmental report, and sustainability report or CSR report exists in more recent studies (Kolk, 2008; Morhardt, 2010). This change becomes visible in the six international surveys by KPMG since 1993. The survey was named as an environmental report in the first three studies, a sustainability report in the fourth survey, and a CSR report in the last two surveys. This modification of survey names indicates the increasing variety of non-financial information disclosing.

Besides, over the last two decades, CSRD spreading from developed countries to developing countries. In addition to CSRD in the geographical spread, the media in use also appears on the internet (Fifka, 2013). This new online communicating form minimizes disclosing costs with updated information, and most importantly, it allows interactions between companies and their stakeholders. On the whole, current CSRD is practiced by businesses globally, and it has various forms and names (Fifka, 2013). Companies often refer to the Global Reporting Initiative (GRI) guideline to prepare their CSR reports (Noronha, Tou, Cynthia, & Guan, 2013). There are still significant differences between companies from different institutional environments concerning CSR reports' content and quality (Kolk, 2011).

2.2.2 The Evolution of CSR Disclosure in China

The western concept of CSR was first introduced to China in the mid-1990s' (Myllyvainio & Virkkala, 2006). It was initially defined by Yuan (1990) that "CSR is an obligation of businesses to consider the interests of the society, the country, and the human being." Since China was established in 1949, the government adopted a centrally planned economic system. The economic system reform in 1993 aims to shift the system to a market-oriented economy. However, the reform only expedites economic development, and the social responsibility of the business sectors has been ignored (Noronha et al., 2013). The rapid economic growth has been accompanied by severe business immorality. Therefore, the government has progressively put efforts to promote CSR and its disclosure. The government-led concept of "Harmonious Society" (Wang & Juslin, 2009) aims to achieve not only economic growth but also to ensure that resources in society are allocated in a sustainable way (Noronha et al., 2013).

The Chinese government and its relevant authorities are promoting CSR practices among Chinese companies. In 2006, the Chinese Company Law was revised to provide some recognition of CSR. It is considered the beginning year of the CSR era. In the same year, the State Grid Corporation of China issued the first-ever CSR report. In 2007, the State Environmental Protection Administration (SEPA) regulated heavily polluting companies to disclose information about environmental issues. In early 2008, the State-Owned Assets Supervision and Administration Commission of the State Council (SASAC) released a guideline for the SOEs, revealing the government's attitude towards CSR. There were approximately 150 SOEs listed in both Shanghai and

Shenzhen stock exchanges subject to the guidance in 2008. In 2009, during a meeting with the SOEs' leaders, SASAC mandated that all SOEs under their management set up a CSR mechanism within their governance structures. SASAC further mandated that all SOEs under its supervision publish their first CSR report by the end of 2012 if they had not already done so. In the 19th Party Congress in 2017, the government emphasized the concept of CSR and required all companies to assure more social responsibility.

After the government's progressive regulations and guidelines, companies that publish CSR reports in China have increased year by year (Wang & Li, 2016). The quantity of CSR report has risen sharply and reached 1451 in 2015 (SynTao Ltd, 2016). However, compared to other countries, Chinese companies' CSRD practices are still below the global average level, with the least communicative on many CSR issues (Alon, Lattemann, Fetscherin, & Schneider, 2010). CSR reports in China are characterized by quality lack and means of image management (Marquis & Qian, 2014). More importantly, empirical research on CSRD in China is urgently needed (Noronha et al., 2013).

2.2.3 CSR Disclosure and the Pharmaceutical Industry

The pharmaceutical industry plays an immense role in the world as this sector deals with developing and producing drugs that directly affect people's health (Demir & Min, 2019). Meanwhile, like for-profit businesses, pharmaceutical companies' managers have obligations to increase profits for their shareholders (Lee & Kohler, 2010). On the other hand, pharmaceutical companies are also expected by the public to take all possible actions to improve their operations and services complement the notion of CSR

to achieve the goal of health for all (Esteban, 2008; Smith, 2008). Bringing both ends together requires pharmaceutical companies to integrate all the social, economic, and environmental dimensions in their daily operations and disclose their CSR information accordingly (Demir & Min, 2019).

The constitution of the World Health Organization (WHO) in 1946 stated that the CSR foundation of the pharmaceutical sector is "human beings have a fundamental right to attain a standard of health," and the United Nations also supports this statement. Further, compared to other industries, the pharmaceutical sector has a moral obligation (Azim & Azam, 2013). According to Chang (2006), five reasons for pharmaceutical companies to bear moral obligation: (1) the companies produce medicines at a low cost that alone makes them help those in need; (2) the companies gain supports from both the government and the public, and they should appreciate this support and help those in need; (3) the companies can share the intellectual property rights on products which can help people in the developing countries without influencing their for-profit products. It is the distinct feature of pharmaceutical companies over others; (4) the companies from the developed world often ignored the impoverished world as their stakeholders. If this is the case, why should the impoverished world be required to follow the procedures and rules of the developed world, such as the strictly banned access to medicines built on intellectual property rights? (5) the companies have consistently profited compare to others; thus, they have a moral obligation to help those who have less. Thus, CSR's foundation in the pharmaceutical sector has been formed in both human rights and ethical arguments (Lee & Kohler, 2010).

However, the pharmaceutical sector has often been criticized as it frequently breaches CSR. For example, pharmaceutical companies are regarded with suspicion of overcharges for their products and the testing carried out on animals (Esteban, 2008). The opioid crisis, drugs such as OxyContin, and illegal opioids such as heroin, were linked to a record of 200,000 deaths in the United States since 1999 (Thompson, 2019). The increasing scandals of pharmaceutical companies and the severe impacts on stakeholders have caused vitriol and mistrust (Min et al., 2017). These public relations setbacks have potentially enormous repercussions on the profitability and sustainability of pharmaceutical companies. Therefore, pharmaceutical companies should embrace responsible practices and effectively broadcast their efforts by disclosing their CSR information to counter these negative public perception and skepticism (Demir, & Min, 2019).

CSRD is the vehicle for pharmaceutical companies to publish CSR efforts to be perceived as good corporate citizens (Smith, 2008). However, CSRD is a voluntary nature in most countries, making managers of the reporting companies frequently involved in using CSRD an image management tactics to manage the expectations of different groups of stakeholders, and often neglecting the negative information and highlighting the positive one (Marquis & Qian, 2014). It may lead to stakeholders' misjudgment in terms of their CSR commitment and offer a false impression that their businesses' actions are sociably responsible. Hence, pharmaceutical companies' CSRD quality is a new concern and should be evaluated carefully.

2.2.4 CSR Disclosure and the Pharmaceutical industry in China

The pharmaceutical industry in China has become the pillar sector contributing to the economic growth in recent years. This sector is regarded as the leading producer and exporter of Active Pharmaceutical Ingredients (APIs) in the world, and China is the biggest emerging market for pharmaceutical products that dominated both as a maker and consumer (Pan et al., 2016). As one of the most rapidly growing sectors during the "Eleventh Five-year Plan" (2006-2010), the pharmaceutical companies also put their efforts into achieving better CSR and disclose high quality CSR information.

However, the unethical behavior of pharmaceutical companies is evident in China. For instance, many pharmaceutical companies engaged in the toxic capsule scandal; they used industrial gelatin to take over edible gelatin for gel capsule use to gain a higher profit, and the industrial gelatin contains chromium with a far higher level than that of edible gelatin (Feng, Keller, Wu, & Xu, 2014). Though no death is reported caused by taking the tainted capsules, chromium can cause severe damage to organs. More recently, Changsheng Biotech, the second-largest vaccine producer, reportedly sold 250,000 faulty vaccines for babies (Meixler, 2018); a baby girl dies one day later after vaccinated. Although pharmaceutical companies' CSR breaches are frequently reported in China, not all pharmaceutical companies are practicing CSR badly; some companies may behave responsively in some aspects but need improvement in others (Liu & Cai, 2012). Referring to the data offered by the Hexun professional CSR rating agency, among all the industries, the pharmaceutical sector rated as one of the top in CSR performance in 2017 (Hexun, 2018).

Listed pharmaceutical companies, especially the SOEs, produce CSR reports following the Chinese government's rules and regulations. Due to the pharmaceutical sector's critical CSR-related issues, the Chinese Pharmaceutical Enterprise Association (CPEA) released the "Guidelines of CSR Practices for Chinese Pharmaceutical Companies" in September 2017. It aims to guide companies to acknowledge CSR and understand their responsibility to society, thus actively involving CSR activities and disclosing their CSR information.

In 2009, Fosun Pharma issued a CSR report, which is considered the first non-financial report by pharmaceutical company in China. Although the CSR reports disclosed by this sector increase year by year, it only concentrated on the large pharmaceutical companies. Given the special role of this sector as it produces life-saving products and the environmental pollution caused by its manufacturing processes, there are high expectations from various stakeholders that require more pharmaceutical companies in China to disclose their CSR information. Hence, an investigation of institutional factors' (both formal and informal) possible role in influencing pharmaceutical companies can provide information on their CSR motivation. It can benefit various stakeholders to make relevant economic decisions.

2.2.5 CSR Disclosure Measures

This subsection briefly outlines the techniques used in accounting research to measure the quantity and quality of CSRD. Unlike the measurement of companies' CSR performance sourced from the database, researchers widely employed content analysis of hand-collected CSR information to measure CSRD performance. Due to the lack of a

database, this method is well-suited to analyze CSRD quantity and quality in most cases. In recent years, independent agencies started to develop CSRD measuring systems such as the Bloomberg ESG ratings to measure companies' CSR reports. It is also expected that future research should consider different CSRD measures as CSRD evolve. The following two sections discuss the measurement of CSRD. Firstly, the section presents CSRD quantity measurement, followed by a discussion of CSRD quality measures.

2.2.5.1 Measurement of CSR Disclosure quantity

CSRD quantity is the number of reports that have been reported by companies. It is historically measured by employing the content analysis method. It often quantifies the portion of the annual report devoted to CSRD. For example, some scholars count a line-by-line of text devoted to CSR and divided by the total numbers of text (Bowman &Haire,1976; Neu, Warsame, & Pedwll, 1998; Trotman & Bradley, 1981). Further, the study of Adams and Harter (1998) applied content analysis to examine the extent of the disclosure by comparing companies' annual reports over an extended period of time instead of quantifying the portion of the text of reports.

Occasionally, researchers use independent data sources to measure the extent level of CSRD other than content analysis by themselves. For instance, the study of Cowen, Ferreri, and Parker (1987) adopted the CSRD survey data provided by Ernst & Whinney in 1978 to present the extent of CSRD of Fortune 500 companies. In later decades, CSRD guidance came out gradually, researchers started to rely on the external guidelines and frameworks to measure the extent or quantity of CSRD (e.g., Clarkson, Richardson, & Vasvari, 2008). Based on the *Sustainability Reporting Guideline*s by

GRI, the study of Clarkson et al. (2008) constructed an index across 95 items with 79 classified as hard and 16 as soft disclosure items to assess the environmental disclosure level.

2.2.5.2 Measurement of CSR Disclosure quality

CSRD quality is the judgement of the content of CSR reports. It is suggested that the measurement of CSRD quality in the literature includes the reporting extent, negative information, timeliness, and accuracy (Zahller, Arnold, & Roberts, 2015). Further, according to Moravcikova et al. (2015), for a CSR report to be considered as high quality, it must meet the four main criteria: credibility, completeness, significance, and appropriate form.The adoption of content analysis measuring CSRD quality uses scoring methods. For instance, by assigning one to three points to 18 disclosure topics, Wiseman (1982) identified the quality of environmental disclosure. If the report disclosed the quantitative item, it receives three points, two points when it is specifically described, and one point when the report is discussed in general. The same method is widely used in later researches (e.g., Aerts & Cormier, 2009; Al-Tuwaijri, Christensen, Hughes, 2004; De Villiers & Van Staden, 2006).

Some researchers seek improvements to the scoring method developed by Wiseman (e.g., Patten, 2005; Richardson & Welker, 2001; Roberts, 1992). For example, Roberts (1992) uses a zero to two scoring method to stand for poor, good, or excellent disclosure levels based on evaluation of CSRD from the Council on Economic Priorities (CEP). According to him, this measurement of the CSRD quality is more reliable as CEP evaluates many alternative sources of information. The study of Richardson and Welker

(2001) use the score from the University of Quebec and the joint Society of Management Accountants of Canada to assess the CSRD quality of Canadian companies. Further, Patten (2005) judges disclosure quality by examining the accuracy of projected future expenditures.

The more recent content analysis develops newer techniques to measure the qualitative aspects of CSRD. For example, the DICTION software is used by Cho, Roberts, and Patten (2010) to identify the disclosure quality. The study of Cho, Michelon, and Patten (2012) reviewed the content of CSR reports measuring for image management in graphs included in the reports.

In general, content analysis has been used by researchers to study both the extent and quality of CSRD. Overall, the studies mainly focused on the quantitative aspects rather than the qualitative aspects of CSRD. Further, In China, CSRD is still a voluntary practice except for SOEs. Quality lack and means of image management are usually characterized by CSR reports of the companies (Marquis & Qian, 2014). Therefore, this study aims to fill in the gap by focusing on the qualitative aspects of CSRD. Compare to CSR performance measures sourced from the database; a database did not exist to allow researchers to measure CSRD of a large number of companies until the coming up of the Bloomberg ESG rating score. Since then, many independent agencies developed measuring systems to rate CSR reports and judge its quality (Dhaliwal et al., 2011; Fifka, 2013). The higher the rating scores, the better the quality of CSRD (Marquis & Qian, 2014; Zheng et al., 2014).

In the context of China, the CSR scores provided by RSK are widely applied in the study of CSRD quality (Dai et al., 2018; Marquis & Qian, 2014; Zheng et al., 2014). In a comparative study of the measurement of CSR in China, Zhong, Xu, Liao, and Zhang (2019) concluded that the RKS database is sufficient in measuring the quality of CSRD whereas HeXun rating scores are more suitable for measuring the CSR performance. Therefore, the measurement of the CSRD quality of this study is based on the rating scores provided by the RKS database. Its measurement is based on the GRI 3.0 guidelines but adapted to the China context (the detailed discussion on how RKS measure CSRD quality is illustrated in Chapter four-dependent variable measure). Therefore, it can be concluded that the use of RKS scores to judge CSRD quality is appropriate.

2.3 An Overview of Religion in China

Religious beliefs play an essential role in guiding people's everyday lives around the world since religion offers moral codes (Farooq, Hao, & Liu, 2019). Religion is supernatural forces that can be shared beliefs, activities, and institutions premised upon faith (Iannaccone, 1998). As such, religion is embedded in societies; and acts as part of informal institutions (North, 1990). In the materialistic world, the influence of religion has declined (Schirmer & Michailakis, 2016). However, in the study of social responsibility, the role of religion cannot be ruled out (Van Buren III et al., 2020). Although there are various religions, the majority of religions can lead people's values in altruism and charity; this concept is coincident with CSR (Brammer, Williams, &

Zinkin, 2007). Hence, a religious perspective can offer a rational justification for implementing CSR practices (Mir & Sair, 2014).

China is an ancient country with a long history of religious practice. The five dominant religions (Buddhism, Taoism, Protestantism, Catholicism, and Islam), together with other minority religions, have an influence on every aspect of people's life (Xiong, 2013). Taoism is the local religion with a long history, and the other four religions are from outside (Du et al., 2014). Buddhism is the oldest foreign religion compared with Catholicism, Protestantism, and Islam (Su, 2019).

As China was founded in 1949, the country followed the former Soviet Union to adopt Marxism and Leninism philosophies, and the Communist Party employed atheism as the essential belief (Madsen, 2019). The atheism ideology treats religion as an anti-revolutionary force, as such, it should be eliminated. The party tried to impose the Communist ideology on the people and suppress all religions, however, the government failed to keep religion at a reduced level during the reform era and realized the difficulties to eliminate the major religions (Yang, 2010). In the 1950s, the Religious Affairs Bureau was established by the government to regulate and control religious activities (Schak, 2011). In the 1954s, the China Protestant Three-Self (i.e., self-administration, self-support, and self-propagation) Patriotic Movement Committee was established. This was followed by the China Buddhist Association in 1955, the China Islamic Association in 1957, the China Taoist Association in 1957, and the China Catholic Patriotic Committee in 1957 (Yang, 2006). Uniformity was imposed upon each of the five religions. When the Cultural Revolution began in 1966, all religious sites

were closed down. Having seen state eradication measures during the Cultural Revolution, many scholars once pronounced the death of religion in China (Lambert,1994; Treadgold, 1973). However, religion disappeared only from the public scene, many people maintain their faith in secrecy and believers also gathered for worship at home or in the wilderness (Yang, 2006). Until the policy of "reform and opening-up" in 1978, the government began to loosen control over various aspects of life and Chinese society has been more open, tolerating more differences in civilization (Xiong, 2013). The Party started to adopt an appropriate approach to religious activities (Du et al., 2016). Since the 1980s, many worship places are repaired and re-opened for religious activities.

A global survey by Pew Research Center estimated the religious population in China as of 2010, including 21.9% Chinese folk religions (including Taoism), 18.25% Buddhism, 1.8% Islam, and 1% undefined religion (Pew Research Center, 2012). Another report estimates there are more than 200 million religious believers and 380,000 clerical personnel in China (China SCIO, 2018). However, there are no precise religious demographic statistics in China, as large portions of religious activities are practiced underground and are not authorized legally (Liu, Scharffs, & Hllan, 2016). One reason behind this is that the Communist Party members may be unwilling to publicly expose their religious beliefs. It is in contrast to the Party's belief. Another reason may be due to the consequence of the Great Leap and the Cultural Revolution (1950-1976), non-party people may also refuse to reveal their religious beliefs publicly, which may cause inconvenience to their life (Du et al., 2016).

Today religious activities are flourishing beyond expectations. A large number of people worship, pray, perform rituals, and hold certain beliefs. Even sometimes, their views are officially recognized and institutionalized by the state (Laliberté, 2011). This can be seen as many scholars have started to attach importance to the development of religion in China (Ashiwa & Wank, 2009; Du et al., 2014; Du et al., 2016; Goossaert & Palmer, 2011; Jin et al., 2019; Su, 2019). The Chinese Spirit Life Survey showed that the proportion of people in China has a religious belief of 85%, and the population that is thorough atheists is 15% (Du, 2017). Modern religion is reviving, and the impact on individual behaviors and corporate decision-making is strongly increasing (Du et al., 2014). At least, serious scholars should not arbitrarily ignore the influence of religions in China (Du et al., 2016).

2.4 An Overview of State Ownership in China

State ownership is the percentage of the ownership controlled by the government. If the government controls more than twenty percent cash flow of a listed pharmaceutical company, and the company is also not controlled by any other entity, it is an SOE (Wang, & Xiao, 2009). In China, SOEs are the only market player during the period of 1949-1976. During that period, it was strictly prohibited to have private ownership. It was until 1978 when president Deng Xiaoping took power, and the government legalized private ownership, but state ownership continued to dominate the economy. Over the years, the function of SOEs has altered due to several reforms in China. Some SOEs were privatized, merged, and even closed. However, The proportion of SOEs is still around sixty percent among the listed companies (Li et al., 2013).

State ownership has an enormous influence on companies' behaviors in China (Tian & Lau, 2001). The government appoints the managers of SOEs; thus, managers of SOEs are quasi-government officials. The government will nominate those willing to serve the political and social objectives (Kato & Long, 2006). Meanwhile, managers who invest heavily in CSR are more likely to enhance their reputation; therefore, they achieve promotion within the government (Cao & Dou, 2007). Therefore, companies that are state-owned invest more heavily in CSR initiatives and emphasize pursuing social goals rather than maximizing profits (Xu & Zeng, 2016).

Unlike CSR reports voluntarily disclosed by companies in the western countries, it is mainly a government-initiated practice in China (Xu & Zeng, 2016). The Chinese government has been particularly influential in guiding CSRD, and SOEs are expected to be the "Leading examples" for non-SOEs. Thus, the employment of CSR is critical for SOEs to meet the expectations of the government. Besides, SOEs in China have monopolies over certain strategic sectors. They enjoy monopolies of the strategic industry and receive strong state support, including subsidies, preferential loans, and lower rates of taxation. SOEs' strategic and political objectives are broader, leading those companies to be involved in and actively report upon their CSR-related activities (Hu, Zhu, Tucker, & Hu, 2018).

All SOEs come under the authority of the SASAC. Since 2008, SASAC released a guideline that implicitly required SOEs to be actively involved in CSR and effectively broadcast to the public. Additionally, the CSR guidelines provided by Shanghai and Shenzhen stock exchanges also impose demands on SOEs that report CSR details for

legitimacy. The combined formal institutional pressures from both the government and the stock exchanges force managers of SOEs to actively involve in CSRD. Existing literature found that CSR performance is positively correlated with state ownership (Lau et al., 2016; Li & Zhang, 2010; Wang, Sewon, & Claiborne, 2008; Xu & Zeng, 2016; Zheng et al., 2014). However, Li, Zhang, and Foo (2013) also found that CSR quality is not affected by state-ownership.

2.5 Theoretical Foundation of the Study

Scholars from different theoretical perspectives have investigated the determinants or drivers of CSRD. Generally, these perspectives can be summarized into "Economic Theories," which pay attention to the economic outcomes of CSR practices, and "Social Theories," which look at the social consequences of CSR practices on stakeholders (Fernando & Lawrence, 2014). Extant literature from either perspective puts its efforts to fill the gaps, yet, something remains to be explored (Sobhani et al., 2011). Recently, by exploring the support of the social theory, there are new attempts by scholars to shed light on the outcomes produced by institutional factors on CSRD (Coluccia et al., 2018). According to this paradigm, a company's activity does not necessarily follow a business rationale but is oriented to the institutionalized expectations of the environment (Meyer & Rowan, 1977). According to North (1990), institutional variables include both formal and informal institutions. The formal institutions include legal, financial, and political systems, and the informal institutions comprise cultures, values, norms, and religious beliefs.

Institutional theory is becoming one of the dominant approaches to understanding organizations today (Scott, 2014). Institutions were analyzed quite early by social scientists, but organizations did not become a focus of study (Scott, 2014). March (1965) dates the origins of institutional theory to meet organizational studies to the period of 1937 by Guilick and Urwick (1937). However, it was widely adopted in the study on organization and its broader institutional context since the beginning of the 1970s (Avetisyan & Ferrary, 2013), thereby influencing areas such as management theory, organization sociology, and institutional economics (Scott, 2014). Institutionalism is complex and covers many fields. It is complex because it can be separated into old and neo-institutionalism (Greenwood, Oliver, Sahlin, and Suddaby, 2008). The old institutional theory emphasized the processes involving in shared social meaning and values (Selznick, 1996). The neo institutionalism has put greater efforts on these processes' nature and diversity (DiMaggio & Powell, 1983; Meyer & Rowan, 1977).

Companies may develop various strategies to maintain legitimacy as the institutional pressures cannot be deterministic. For instance, CSRD can help companies legitimize themselves in society (Marquis & Qian, 2014). In this way, institutional theory can be considered a viable route to put CSR at the center of the relationship between business and society, contributing to the real determinants of CSR practices (Coluccia et al., 2018). Thus, adopting institutional theory to study CSR may highlight the complexities and uniqueness of institutions that companies face, and offer opportunities to develop conceptual and empirical CSR studies (Brammer et al., 2012).

2.6 Conceptual Framework

As mentioned in Chapter One, the purpose of this research is to investigate the possible role of institutional factors (both formal and informal) in influencing the CSRD quality of pharmaceutical companies in China. This study adopts an institutional theory perspective developed by North (1990) which defines institutions as the "rule of the game in a society" (North, 1993:3). The rules include both formal and informal institutional forces. The formal institutions include legal, financial, and political systems, and the informal institutions comprise cultures, values, norms, and religious beliefs. Therefore, religion, as social norms, representing the informal institution. Corporate governance, state ownership in this research, accentuate rule-setting, monitoring, and sanctioning activity, thus representing the formal institution.

For clarity, Figure 2.1 presents the conceptual framework of the study. CSRD quality is the dependent variable, religion (representing a formal institution) is the independent variable, and state ownership (representing an informal institution) is the moderating variable.

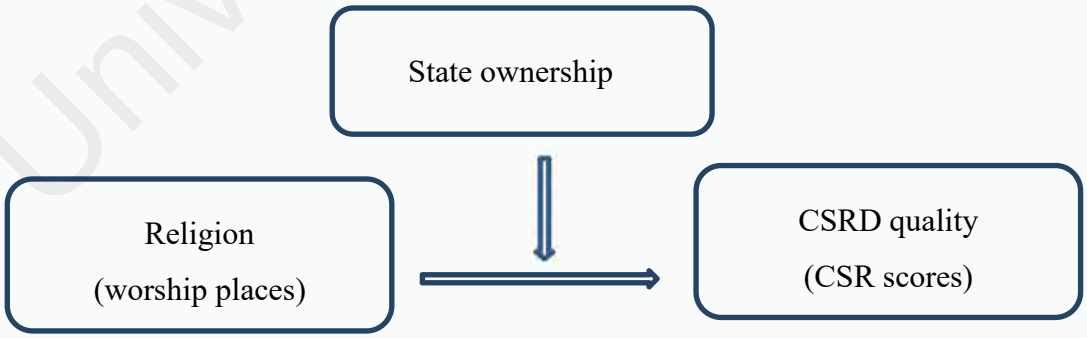

Figure 2.1: Conceptual Framework

2.7 Summary of the Chapter

This chapter presented the relevant literature of the study. An overview of CSRD indicated that disclosing CSR information has already become an important business strategy of companies today. In the case of pharmaceutical companies, they are considered as the leader in CSR (Frederiksborg & Fort, 2014). On the other side, they are often involved in scandals that violate the notion of CSR. Further, an overview of religion in China indicated that modern religion is reviving, and the influence of religion on decision-making is strongly increasing. Moreover, an overview of state ownership in China illustrated that the government plays an important role in influencing companies' CSRD performance. Companies that are owned by the state are often active in CSRD.

Lastly, the chapter also justified the importance of institutional theory in the study of CSRD and included the conceptual framework of the study to explain the roles of the variables included. The next chapter provides hypotheses development of the study.

CHAPTER 3: HYPOTHESES DEVELOPMENT

3.1 Introduction

The primary purpose of this chapter is to develop hypotheses based on existing literature. After this introduction, the next section discusses the relationship between religion and the CSRD quality, followed by explaining the relationship between Buddhism and the CSRD quality. Section 3.4 presents the association between Taoism and the CSRD quality, followed by explaining the relationship between Catholicism and the CSRD quality in Section 3.5. The relationship between Protestantism and the CSRD quality is outlined in Section 3.6. Section 3.7 shows the association between Islam and the CSRD quality. Section 3.8 constructs the hypothesis for the moderating role of state ownership against the relationship between religion and the CSRD quality. The final section summarizes the chapter.

3.2 Religion and CSR Disclosure Quality

Religion is supernatural forces that can be shared beliefs, activities, and institutions premised upon faith (Iannaccone, 1998). As such, religion is embedded in societies; and acts as part of informal institutions (North, 1990). In general, religiosity comprises of cognitive (people's religious beliefs), affective (people's feelings about religious beings), and behavioral components (people's religious commitment) (Cornwall, Albrecht, Cuningham, & Pitcher, 1986). Although there are various religions, most religions can lead people's values in altruism and charity, and this concept is coincident with CSR (Brammer et al., 2007). The advocating of religion is that all life forms

interdependence and interrelation; thus, people must take responsibility for their behaviors to provide good social and environmental effects (Marques, 2012).

Existing literature has demonstrated that religion plays a determining role in companies' CSR-related decisions. Angelidis and Ibrahim (2004) indicated a significant relationship between the degree of religiousness and the economic and ethical aspects of CSR. Brammer et al. (2007) concluded that positive perceptions of CSR exist among people with religious denominations. Sobhani et al. (2011) found that Islamic banks in Bangladesh tend to report more in terms of sustainability than conventional banks, and Islam is the motivational factor behind the incentive. The study of Shinnaranantana, Dimmitt, and Siengthai (2013) evidenced the influence of Buddhism on the development and practice of CSR in Thailand. Jamali and Sdiani (2013) classified extrinsic and intrinsic religiosity and concluded that both influence management's CSR orientations. Specifically, they suggested that extrinsic religiosity is associated with a broader CSR perspective, while intrinsic religiosity is correlated with a narrow perspective of CSR. The study of Mazereeuw-van der Duijn Schouten, Graafland, and Kaptein (2014) found that attitudes towards CSR mediate the influence of religiosity on CSR behavior. Griffin and Sun (2018) examined the relationship between a company's CSRD and local religious norms and concluded that voluntary CSRD intensity varies negatively with religious adherence and positively with religious affiliation. The study of Chantziaras et al. (2020) found that CSRD of the U.S. banking sector is positively associated with religion. In contrast, McGuire, Newton, Omer, and Sharp (2012) found a negative association between local religiosity and CSR initiatives. They explained that

personal beliefs might not manifest in the company because religious people can separate their personal responsibility from corporate responsibility.

The above literature mainly examines the manager's personal belief system's influence on companies' CSR orientation variations. Some studies go beyond personal religious beliefs to explain CSR efforts (Chantziaras et al., 2020; Griffin & Sun 2018; McGuire et al., 2012). These scholars emphasized the importance of local religiosity at the regional level or country-level (well-developed archival data) to measure religious impacts. Chantziaras et al. (2020) sourced from the American Religion Data Archive provided by the Glenmary Research Center. McGuire et al. (2012) used the national survey data provided by the Gallup organization. Griffin and Sun (2018) obtained the data from Religion Census Religious Congregations and Membership Study.

However, both measurements are not applicable in China. The first-hand data through direct interviews or questionnaires cannot reflect decision-makers' real story, as religious belief is a sensitive and complicated issue in China, as mentioned earlier (Section 2.3). Most Chinese people chose to protect their privacy even though they are religiously influenced, and they chose to keep silent in their beliefs (Du et al., 2016). Besides, religious research in China is still in its infancy, and authoritative statistics are also scant (Du et al., 2014). Hence, archival data is also unavailable. This study looks at religion as an informal institution, and it represents the social norms of a society. Hence, following prior literature, the worship place is used as a proxy of the influence of religion on pharmaceutical companies' CSRD quality; this is the best measurement of religion in the China context (Du, 2013; Du et al., 2014; Du et al., 2014; Du et al., 2016;

Jin et al., 2019; Su, 2019). Compared to the regional or country-level measurement, which could lead to the serious self-correlation issue in the regression result due to all the companies in the same region having an identical religion (Wines & Napier, 1992), the firm-level measurement of religion overcome the above limitation (Du, 2013; Du et al., 2014; Su, 2019).

One may argue that such a measure may not be persuasive; however, Mead (1934) argued that people's religious self is always linked with worship places (Du et al., 2016). Attachment of worship places plays an important role in perusing religious beliefs (Mazumdar & Mazumdar, 2004), in which believers join religious activities and have interaction with their religious peers. Religious worship places lead people to pray, to venerate, to meditate, and to be religiously educated (Mazumdar & Mazumdar, 2004) through channels like "touch the sacred artifacts, see sacred sights, smell specific aromas, hear sacred sounds, eat special food," thus, people can obtain religious experiences (Eck, 1981). It can lead to their strong religious beliefs and CSR awareness (Su, 2019). Hence, the interaction with worship places can enable companies to fulfill CSR (Du et al., 2016), and their decisions on the disclosure of CSR information. It is expected that companies surround by worship places; their commitment to CSR is strong (Su, 2019). The more number of worship places around the companies can result in a higher quality of CSRD (Du, 2013; Du et al., 2014; Du et al., 2014; Du et al., 2016; Jin et al., 2019; Su, 2019).

One can also argue that if companies' decision-makers are non-believers, there is no influence of religion on those managers' CSR-related decisions. Marquis, Glynn, and

Davis (2007) proposed that the pressures from the institutional environment at the community level influence the CSR performance within a community. Specifically, they stated that the local communities shape the institutional environment. It can serve as touchstones to legitimate companies' existence. Hence, once religion arises as a social norm (informal institution) despite individual belief, the religiousness of a community will influence the companies' decisions and behaviors (Du et al., 2016). It can be perceived as the community's religious environment (Du et al., 2016). From an institutional perspective, an environment with strong religious cognition influence even non-believers because they are supposed to interact with local religious stakeholders (Du et al., 2014; El Ghoul, Guedhami, Pittman, & Saadi, 2013).

Existing literature in China context that has investigated the influence of religion (measured in terms of numbers of worship places within a certain distance of a company) on owner-manager agency costs (Du, 2013), philanthropic giving (Du et al., 2014), corporate environmental responsibility (CER) performance (Du et al., 2014), CSR deficiency disclosure (Jin et al., 2019) and CSR performance (Du et al., 2016; Su, 2019), and observed a positive influence of religion. Based on their findings, this research extends to examine the influence of religion on CSRD quality and consider the pharmaceutical industry as the case. Hence, the first hypothesis is:

H1: There is a positive relationship between religion and the CSRD quality in the pharmaceutical industry in China.

3.3 Buddhism and CSR Disclosure Quality

Buddhism is a way of life and an epistemological way of thinking (Marques, 2010). The history of Buddhism in China can be traced back as early as 2,000 years ago. The teaching of Buddhists, translated from Sanskrit to Hanzi, has compatible with Chinese local religions. The beliefs and practices Buddhism underlying; specifically, the three core tenets and Four Immeasurables as essential preachings of Buddhism are consistent with the notion of CSR (Pace, 2013), which subsequently influence CSRD quality. The first tenet is to reach *nirvana.* Buddhism emphasized people's desires can cause suffering (Brazier, 2003; Pace, 2013). Hence, Buddhists should be less materialistic (Wiese, 2011) and control themselves in pursuing materialistic desires (Barnhill, 2004). Consequently, it is expected that Buddhists or being influenced by Buddhist teachings should motivate CSR as the excess property is viewed as a sin of desire. Under this circumstance, companies should contribute to their societies in terms of social welfare. The second tenet is interdependence and impermanence. This perspective emphasizes that everything is caused by everything else and is also one of everything else (Brazier, 2003; Pace, 2013). Thus, Buddhists are encouraged to share the wealth (Gill & Lundsgaarde, 2004; McCleary & Barro, 2006; Scheve & Stasavage, 2006), such as donation, which is also part of CSR. The last tenet is *anatman*, which illustrates a strong interdependence between causes and results (If you do something good/bad, it returns to you) (Harris, 2011; Pace, 2013). This philosophy emphasizes altruism; thus, it can also motivate CSR.

Concerning the Four Immeasurable in Buddhism, both compassion and loving-kindness emphasize that Buddhists should consider the feelings of other people; in this regard, Buddhists should do what they can do to help others (Pace, 2013), which is coincident with the idea of CSR. Further, under the concept of altruistic joy, Buddhists are required to share their happiness with others (Pace, 2013); this also echoes CSR consciousness. The last is equality, which indicates fair equidistance against the extreme; therefore, one is not supposed to strive to reach a level beyond others (Pace, 2013). It can be understood that the management of companies should not only consider shareholders but also other stakeholders. In this regard, this ideal embodies the thought of CSR.

To sum up, the three core tenets and the Four Immeasurables in Buddhism are compatible with CSR. Buddhist preachings encourage companies to involve in CSR and disclosing their CSR information. The study of Brammer et al. (2007) presented that the conceptions of CSR exist in Buddhists than non-religious groups of people, and groups of Buddhisms have a potential role to fill the gap between the deficiencies and effectiveness of CSR. In other words, Buddhism motivates CSR. Du et al. (2014) found that Buddhism is significantly positively correlated with CER in the context of China. From an institutional theory perspective, companies must follow the institutional forces to gain legitimacy in society. Thus, Buddhism (representing an informal institution) plays a role in guiding pharmaceutical companies' CSRD decisions in China. When pharmaceutical companies are located around the Buddhist Monasteries, they are affected by the teachings of Buddhism, which leads them to be more likely to disclose

their CSR information. Therefore, the quality of the CSRD of pharmaceutical companies is also expected to be influenced by Buddhist values. We hypothesize the second hypothesis as follows:

H2a: There is a positive relationship between Buddhism and the CSRD quality in the pharmaceutical industry in China.

3.4 Taoism and CSR Disclosure Quality

Taoism was built by Laozi 2500 years ago; a famous Chinese philosopher discovered what Tao, the purpose in life is. Tao Te Ching (the Book of the Way) is a classic in Taoism (Lau, 1974). The book communicates a philosophy that closely resembles sustainability attitudes (Zoeteman, 2012), and provides an ancient Chinese concept of sustainability (Wang & Juslin, 2009). Tao Te Ching has powerfully affected Chinese philosophy, culture, and society (Roberts, 2001). It is rooted deeply in the Chinese tradition. Taoism views the universe as interconnected, and nothing exists separately from anything else (Zu, 2019). The universe is governed by a set of natural and unalterable laws that manifest as a flow of continuous change; this is referred to as the Tao (Zu, 2019). Thus, for companies to maintain survival in the long run, they should obey these rules and follow nature's law and do good to society. Tao is the universe's origin and the law and a force throughout people's life. Tao forms enormous energy within the universe permeating all individuals, which guide peoples' life (Zu, 2019). The same energy can also help people live a life filled with meaningful contributions to themselves, their family, their community, their nation, and the world.

Taoism is the local religion combined with Buddhism after the introduction of Buddhism belief in ancient China. Many teachings of Taoism are interrelated with Buddhism (Du et al., 2016). A critical belief of Taoism is Wu Wei (doing nothing), which means do not do too much when it is not needed; just do what suits the universe's law (Wang & Juslin, 2009). We can explain this perspective from Taoism's main emphasis: naturalness, spontaneity, simplicity, and detachment from desires (Chan, 1963). One should free oneself from selfishness and appreciate simplicity (Fowler, 2005), suggesting that Taoists are inclined to undervalue their material possessions and are more likely to engage in CSR to pursue these virtues from desires, subsequently disclosing CSR information.

Further, Tao is expressed in Chinese as a word that means virtue (Sharot, 2001). The basic virtue of Taoism is the treasures of Ci (compassion), Jian (Moderation), and bugan wei tianxia xian (Humility) (Waley, 1985), which echoes with the concept of CSR. In this regard, we can propose a positive connection between virtue and CSR, thus, CSRD quality. Taoism's thought forms a sustainable life throughout levels of individuals, organizations, and societies, and guides leaders' decision to not only do good but also be good (Zu, 2019). Doing good is an outward response, but being good is an intrinsic reaction. Studies highlighted the important role of Taoism (combined with Buddhism) in influencing companies' CSR performance (Du et al., 2014; Du et al., 2016), and CSR deficiency disclosure (Jin et al., 2019). From an institutional theory perspective, Taoist teachings, an informal institution, impact on companies' CSRD decisions. Therefore, being primarily influenced by Taoist teachings in China, we can

logically infer the positive correlation between Taoism and the CSRD quality in the pharmaceutical industry in China. The third hypothesis is :

H2b: There is a positive relationship between Taoism and the CSRD quality in the pharmaceutical industry in China.

3.5 Catholicism and CSR Disclosure Quality

Catholic Social Teaching (CST) emphasizes the view that a marketplace is a group of people with the aim of participating in the society's common good (Costa & Ramus, 2012). Hence, part of the western concept of CSR is said to originate from the teaching of Catholicism (Harjoto & Rossi, 2019). The encyclical named *De Rerum Novarum*, which was issued by Pope Leo XIII in 1891, describes the CST associated with CSR's spirit (Abela, 2001) and underlines the impact of CST on CSR. Further, The ideal of CSR is also illustrated by other Popes. Pope John Paul II issued the *Centesimus Annus* (CA), Pope Benedict XVI issued the *encyclical Caritas in Veritatem*, and Pope Francis issued the *Evangelii Gaudium* and the *Laudato Si*, all suggested that CSR is the ethical component of companies (Rousseau, 2017).

Some existing studies have highlighted the essential role of the CST on CSR. The study of Sethi and Steidlmeier (1993) emphasized the significant role of CST (CA in specific) works as an ethical guideline for businesses. Likewise, Abela (2001) revealed that CA emphasizes profit, and explicitly states that balancing between profit and social needs is the role of business, which is acknowledged by the Catholic Church. Further, some studies examined the role of *Caritas in Veritate* on how CST is conceptualized and applied in businesses' ethical conduct (Goodpaster, 2011; Grassl & Habisch, 2011;

Vaccaro & Sison, 2011). Finally, by examining the vital role of the encyclical *Laudato Si*, Rousseau (2017) highlighted that companies should care about the environment and sustainably run their businesses.

Therefore, we can conclude that Catholic teachings play a role in guiding businesses from a moral compass. Information disclosure as a way to show transparency to companies' stakeholders is likely to be influenced by CST. From the institutional perspective, Catholic teachings, as an informal institution, play a role in influencing how and to what extent companies disclose their CSR activities. Although the influence of Catholicism in China context may be different from the western countries, it is still the dominant religion. Therefore, influencing power cannot be ignored. Referring to existing literature, we hypothesize that:

H2c: There is a positive relationship between Catholicism and the CSRD quality in the pharmaceutical industry in China.

3.6 Protestantism and CSR Disclosure Quality

The Old and New Testaments of the Churches inspired people's consciousness of responsibility, which was later termed social responsibility. Decades ago, Bowen (1953) noted that CSR came from the old doctrine called paternalism. Their views, such as "public service" and "stewardship," which implore the support of elites and aristocrats, have helped shape society. The goal of these two philosophies, which the Protestant groups taught, highlighted the importance of collective well-being in a society. Therefore, it can be concluded that paternalism among the religious group is the old doctrine of social responsibility (Bowen, 1953; Tounés, Savoie, Chakroun, & Gribaa,

2011), which waned at a certain period until scholars, environmentalists, and practitioners reawakened it in the contemporary times as CSR (Tounés et al., 2011). Further, the Protestants' religious philosophies connected with CSR, also noted by John Howard Yoder：Our responsibility is to be faithful, not successful in worldly pursuits (Niebuhr, 1941).

Therefore, it can be concluded that companies being influenced by Protestantism beliefs have done their best to involving in socially responsible businesses. The intense power of Protestantism is mainly in western countries, where CSR's most active companies came from. The progressive worldviews and attitudes of Protestantism contribute to the development of the business world (Nayab, 2011; Weber, 1930) and deliver the concept of CSR. The western concept of CSR in China was brought by western multinational companies in the earlier 1990s (Yang & Guo, 2014). Though the power of Protestantism in China may not be as apparent as in Western countries. However, this informal institutional force is still strong when it came to business decisions. This is because Protestantism is mainly settled in the southern cities, such as Shanghai, where most economic activities happen, and most Protestantism is settled. Therefore, it is expected that Protestantism and the CSRD quality of pharmaceutical companies form a significantly positive correlation. We propose the fifth hypothesis :

H2d: There is a positive relationship between Protestantism and the CSRD quality in the pharmaceutical industry in China.

3.7 Islam and CSR Disclosure Quality

CSR is one of the main concepts in Islamic teaching (Beekun & Badawi, 2005; Graafland, Mazereeuw, & Yahia, 2006). Islam aims to build a justice socio-economic order, and the *Holy Qur'an* and *Sunah* provide insights on business ethics (Zinkin, 2007). Islamic business activities are conducted compatible with the value of CSR (Ebrahim & Joo, 2001). *Khilafah* concerns the responsibility of a person to himself and society. This concept is different from private ownership in a materialistic perspective, as the person is considered the trustee for God's resources (Sulaiman, & Willett, 2003). In a covenant with God, the man ultimately is responsible to God and agree to assume their responsibility (Lewis, 2001). In an Islam society, how businesses are conducted will be influenced by Islamic teachings. One of the fulfillment of being a responsible business is that companies are expected to disclose their efforts in terms of CSR (Aribi & Gao, 2011). Further, the concept of *Zakah* in Islam requires Muslims to pay to people in need, and the primary purpose of *Zakah* is for the interest and welfare of the community (Barizah, Rahim, & Rahman 2007). There is a social objective of *Zakah*, which is to redistribute wealth (Lewis, 2001). Muslims keep in mind the virtue of sharing wealth through *Zakah* that endows with a more moral purpose (Mohammed, 2007).

Existing literature has highlighted the link between Islamic teaching with CSR and CSRD (Aribi & Gao, 2011; Hassan and Harahap, 2010; Kamla, Gallhofer, & Haslam, 2006; Mohammed, 2007; Sobhani et al., 2011; Ullah & Jamali, 2010; Williams and Zinkin, 2010). The literature has generally shown a theoretical consensus in terms of

Islam's role in influencing CSR and CSRD. Compliant to the institutional perspective, in this study, Islam (representing an informal institution) is expected to influence pharmaceutical companies' decision-making (including CSRD quality decisions) in China. Hence, we hypothesize:

H2e: There is a positive relationship between Islam and the CSRD quality in the pharmaceutical industry in China.

3.8 State ownership, Religion, and CSR Disclosure Quality

The government plays a vital role in the success of businesses and their survival through direct and indirect intervention. When the government controls a certain percentage of a company, it is state-owned. The presence of state ownership is the main characteristic of corporate governance that has an enormous influence on the behaviors of companies in China (Tian & Lau, 2001). SOEs act as agencies of the government that carry out the policies and regulations of the state. From an institutional perspective, state-owned companies have more formal institutional pressures (Wang et al., 2016; Lau et al., 2016).

Existing literature has proved that companies owned by the state performed better in CSRD quality due to their strong political connections with the government in China (Lau et al., 2016; Li & Zhang, 2010; Wang et al., 2008; Wang et al., 2016; Xu & Zeng, 2016; Zheng et al., 2014). Their better CSRD performance could be viewed as a response to mandatory pressures and may not religiously be influenced compared to non-SOEs. This is because state-owned companies have a broader strategic and political objective, leading those companies to involve in and report upon their CSR-related

activities (Hu et al., 2018). Further, the top managers of SOEs are usually the Communist Party members who hold an atheist view while the top managers of non-SOEs are unlikely to be (Due et al. 2014). As the sold owner of SOEs, the top managers' atheist views influence the beliefs of the SOEs; thus, SOEs and non-SOEs may face different institutional motivations.

Hence, when a pharmaceutical company is controlled or owned by the state, religion's influence is weak as the Communist Party Members often lead state-owned pharmaceutical companies with an atheist view. Concerning our research, we examine the moderating role of state ownership (representing a formal institution) against the relationship between religion and the CSRD quality in the pharmaceutical industry. The reason is that none of the existing studies had done so. It is important because state ownership of a pharmaceutical company challenges the influence of religion on their CSRD performance.

The study of Du et al. (2014) indicated the catalytic role of state ownership in affecting the influence of religion has over corporate philanthropic giving. Hence, we hypothesize that state ownership moderates the influence of religion on CSRD quality. In other words, religion has an insignificant relationship with the CSRD quality if the state owns the pharmaceutical companies. If the companies are non-SOEs, there is a significantly positive relationship between religion and CSRD quality. So the final hypothesis is:

H3: The positive relationship between religion and the CSRD quality in the pharmaceutical industry in China is weaker for SOEs than for non-SOEs.

3.9 Summary of the Chapter

This chapter developed the hypotheses of the study to achieve the research objectives. China is an ancient country with multiple religious beliefs. Scholars often ignore the important role of religion when evaluating companies' decision-making. This study highlights the importance of religion in influencing the pharmaceutical companies' CSRD quality. The hypotheses are formulated based on the top five religions (Buddhism, Taoism, Catholicism, Protestantism, and Islam). Further, the existence of state ownership in companies' ownership has a large impact on companies' decision-making. Existing literature has proved that companies owned by the state performed better in CSRD quality due to their strong political connections with the government; their better CSRD performance could be viewed as a response to mandatory pressures and may not religiously be influenced compared to non-SOEs. Hence, we also assess state ownership as a moderating variable against the relationship between religion and the CSRD quality of the pharmaceutical industry in China. The next chapter presents the research methodology of the study.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

The purpose of this chapter is to provide an overview of the research methodology of the study. It is organized into eight subsections after this introduction. Section 4.2 illustrates the research paradigm. Section 4.3 illustrates the research approach, followed by a discussion of the research method in Section 4.4. The sampling and data collection are presented in Section 4.5. Section 4.6 discusses the measurement of the variables. Section 4.7 shows the empirical models employed to test the hypotheses. The mode of data analysis of this study is then briefly discussed in Section 4.8. Finally, Section 4.9 offers a brief summary of the chapter.

4.2 Research Paradigm

The research paradigm is the cornerstone that enables researchers to deliver their research suitably. It also helps researchers to define the way the world is organized. Therefore, in the process of researchers' engagement with the world, it leads researchers to understand the phenomenon of the world (Johnson & Duberley, 2000). Two assumptions have existed in the study of social science; one is to understand the nature of the social world (ontology), another is to examine the grounds of knowledge (epistemology).

In concerning the nature of the world, the ontological assumption leads to either an objectivist or constructivist approach. The former provides a viewpoint that people live in a world that is objective and independent from their actions, and the latter present that

people live in a world constructed by scholars (Collis & Hussey, 2003). Further, the concern of epistemological assumption is about how researchers chose methods to explain the nature of the world, and it includes two perspectives: positivism or interpretivism (Collins & Hussey, 2003). Phenomena observed and measured scientifically from an objective viewpoint is termed to be positivism. The research output can be presented with figures and numbers (Collins & Hussey, 2003). In contrast, interpretivism focuses on the subjective interpretation of a phenomenon.

4.3 Research Approach

Deduction and induction are the two research approaches (Saunders, Saunders, Lewis, & Thornhill, 2011). Studies begin with a theory and hypotheses is deductive research, and the purpose is to test the proposed hypotheses. In inductive research, the study starts with data collection. After the findings are generated and then develop a theory. The choice of using either approach or both depends on the purpose of the research. If the main purpose is to test hypotheses, then the deductive approach should be considered (Saunders et al., 2011). Also, if the research topic is new and lacks support from existing literature, then the inductive approach is appropriate (Saunders et al., 2011).

4.4 Research Method

Research can be conducted by adopting quantitative, qualitative, or mixed methods (Teddlie & Tashakkori, 2009). This research followed the positivist philosophy and adopted a quantitative method to meet the objectives and test the theories and hypotheses. The quantitative method enables researchers to observe phenomena in a

statistical way (Goertzen, 2017). It also helps researchers to verify the research hypotheses (Given, 2008). This method is widely adopted by social scientists. There is no single method that is intrinsically better than others. The best method is that it helps to study the problem under consideration. Adopting the quantitative method to conduct this research can develop a deeper understanding of drivers of CSRD quality in China's pharmaceutical companies.

4.5 Sample and Data Collection

The sample filtering procedure and the sample distribution by year are revealed in Table 4.1. Initially, all pharmaceutical companies listed in both Shanghai and Shenzhen stock exchanges in China are counted. Samples are excluded if they were (a) companies that are in "Special treatment" (ST) because they are in abnormal financial conditions in the sample period, which will cause them with high financing constraints; (b) companies with unavailable data for any variables. Importantly, the CSRD scores for listed companies were firstly provided by RKS in 2009; thus, data for this research is gathered from 2009 to 2018. The ending year of 2018 is because it is the latest year with available data. This leads to a total of 304 firm-year observations for the period of 2009-2018. The sample includes 41 companies in total as shown in Table 4.2.

Table 4.1: Sample

Panel A: Sampling	
	Number of observations
Initial observations from 2009 to 2018	306
Excluding observations whose transaction status are ST	(1)
Excluding observations with unavailable data for any variables	(1)
Final firm-year observations	304

Table 4.1, continued

Panel B: Distribution by year	
Year	Number of observations
2009	17
2010	25
2011	27
2012	31
2013	32
2014	33
2015	34
2016	34
2017	35
2018	36
Total	304

Notes: Panel A is the sample selection process. Panel B presents the sample distribution by year.

The data for religion is from council websites, and this study only includes officially listed large worship places of Monasteries, Temples, Churches, and Mosques. China is an ancient country with a long history of religious practices; thousands of religious worship places exist. Only the large and officially registered worship places are considered to make it measurable. This measurement is supported by prior religious research in China (Du, 2013; Du et al., 2014; Du et al., 2014; Du et al., 2016; Jin et al., 2019; Su, 2019). Hence, following these studies, the data for 141 Buddhism monasteries and 21 Taoism temples are from a list issued in 1983 by the State Council. However, existing studies only focused on Buddhism monasteries (Du et al., 2014) or Buddhism monasteries and Taoism temples (Du, 2013; Du et al., 2014; Du et al., 2016; Jin et al., 2019; Su, 2019). This research further includes the sample of Catholic Churches from www.chinacatholic.cn, Protestant Churches from www.ccctspm.org, and Islamic Mosques from www.chinaislam.net.cn. These produce 244, 141, and 34 worship places, respectively. Therefore, it results in a final sample of 581 worship places. Table 4. 2

summarized the distribution of worship places and pharmaceutical companies' headquarters in 31 provinces of mainland China. The rest of the financial data are from the China Stock Market & Accounting Research (CSMAR), a leading database for the Chinese stock market.

Table 4. 2: Distribution of Worship Places and Headquarters in 31 Provinces

Provinces	Buddhism monasteries	Taoism temples	Catholicism churches	Protestantism churches	Islam mosques	Location of H.Q
Anhui	14	0	10	0	1	0
Beijing	7	1	1	2	1	8
ChongQing	0	0	43	0	0	0
Fujian	14	0	0	2	1	1
Gansu	0	0	0	1	1	0
Guangdong	6	1	0	2	1	4
Guangxi	1	0	0	0	0	1
Guizhou	2	0	7	1	0	0
Hainan	0	0	0	0	0	1
Hebei	2	0	2	2	0	0
Henan	2	1	0	2	6	1
Heilonjiang	1	0	0	2	2	1
Hubei	4	3	22	2	2	1
Hunan	6	0	0	1	0	0
Jilin	3	0	0	1	0	2
JiangSu	13	1	18	1	0	2
JiangXi	4	1	11	1	0	1
liaoNing	2	2	0	1	0	0
Neimenggu	0	0	0	0	0	0
NingXia	1	0	9	0	2	0
QingHai	0	0	0	0	3	0
ShanDong	2	2	2	1	2	2
ShanXi	14	0	3	0	2	1
ShaanXi	8	5	53	1	1	1
ShangHai	5	0	2	113	0	5
SiChuan	12	3	8	2	1	1
TianJin	1	0	0	0	0	3
XiZang	0	0	0	0	0	0
XinJiang	0	0	0	0	7	0
YunNan	5	0	53	2	0	2
ZheJiang	12	1	0	1	1	3
Total (31)	141	21	244	141	34	41

4.6 Measurement of Variables

This subsection provides detailed explanations of measures of variables. Subsection 4.6.1 presents the dependent variable's measurement, followed by the measurement of independent variables in Subsection 4.6.2. Subsection 4.6.3 discusses the measurement of the moderating variable. The final subsection briefly shows the measurement of control variables.

4.6.1 Dependent Variable Measure

CSRD quality is the dependent variable. RKS and HeXun are the two most used databases in China that its CSR rating scores are widely adopted in measuring CSR performance and CSRD quality. This study takes the data from the RKS database. This is because the CSRD scores from RKS have been widely applied in CSRD studies in China (Marquis & Qian, 2014; Zheng et al., 2014; Dai et al., 2018). Most importantly, the study of Zhong et al. (2019) concluded that RKS DataStream is sufficient in measuring the quality of CSRD in China while Hexun rating scores are more suitable for measuring CSR performance.

The measurement of CSRD quality by RKS is based on the GRI 3.0 guidelines but adapted to the China context. RKS assigns a score scale of 0-100 to each CSR report along the four dimensions. Marks are calculated based on: Macrocosm (30%); Content (50%); Technique (20%); Industry (10%). First, a Macrocosm evaluation includes CSR strategies of a company, its corporate governance mechanism considering CSR, and its consideration of stakeholders; The second evaluation is based on the content of CSR reports of a company, considering its environment, community participation, economic

performance, fair business practices, labor and human rights, and customer issues; Third evaluation is about transparency, regularity, comparability, and availability of CSR information of a company; The last is industry evaluation that identifies specialized indicators of each industry. Therefore, it can be concluded that the measurement is free from researchers' personal bias and subjectivity.

4.6.2 Independent Variable Measure

Religion is the independent variable. This study looks at religion as an informal institution, and it represents the social norms of a society. There are two main types of measurements to quantify the influence of religion as social norms. One is measuring at the regional-level or country-level, which is the influence of religion depending on the number of religious adherents or how often religious participation in the area of concern (Hilary & Hui, 2009; McGuire et al., 2012). Another measure is at the firm-level counting on numbers of religious worship places (e.g., monasteries, temples, churches, mosques) within a certain radius of a company's headquarter as a proxy for the effect of religion (Du, 2013; Du et al., 2014).

Following Du (2013), the worship places are considered a proxy of the influence of religion on pharmaceutical companies' CSRD quality in this study. Specifically, at first, I sourced the registered addresses of the listed pharmaceutical companies (headquarters) from CSMAR and the hand-collected registered worship place of the five religions from both the list issued in 1983 by the State Council for Buddhism and Taoism and council websites for the other three religions. Second, I determined the latitude and longitude of worship places and pharmaceutical companies using "Google-earth" and "Baidu-map."

Third, the distance between a pharmaceutical company and worship places is calculated as follows:

I finalized the longitude and latitude of the headquarters of a pharmaceutical company (religious worship places), λF and ΦF (λR and ΦR), where the angle between the pharmaceutical company' headquarters and the worship places through the center of the earth, and the earth's surface is θ.

$$\cos\theta = \sin\Phi_R \times \sin\Phi_F + \cos\Phi_R \times \cos\Phi_F \times \cos(\lambda_R - \lambda_F).$$

The formula for the radius is :

$$Radius = \frac{40075.04}{360} \times \frac{180}{\pi}.$$

Note that the distance between two points equals the length of the minor arc across the surface of the earth (Du, 2013). Therefore, the below formula was used to measure the distance between a pharmaceutical company and the religious worship places:

$$Distance = rad \times \left(\frac{\pi}{2} - \arctan\left(\frac{\cos\theta}{\sqrt{1-\cos^2\theta}}\right)\right).$$

Finally, following Du (2013), 100km (REL100), 200 km (REL200), and 300 km (REL300) were used to defining the influence of religion on CSRD quality of the pharmaceutical companies. The reason to select 100km, 200km, and 300 km as the

distances because the criterion is only based on mainland China's area by the equation below:

$$\sqrt{\frac{961.03 \times 10^4}{3.14 \times 31}} \approx 271.71,$$

Where 961.03 $\times 10^4$ indicates mainland China (unit: km^2), 3.14 denotes the ratio of circumferences, and 31 shows the number of provinces, municipalities, and autonomous regions in mainland China. According to the calculated result of 271.71, 200km was considered the basic distance to defining the influence of religion. For the consideration of robustness, The geographical parameters were both relaxed and tightened to identify the number of registered worship places within other distances around the company's headquarter. Particularly, 100km and 300km were defined. That is, three main independent variables are attained, which are REL100, REL200, and REL300.[1] Additionally, each individual religion is also treated as an independent variable to test the influence of each religion on the CSRD quality. The purpose is to identify whether all of the five religions influence the CSRD quality of pharmaceutical companies or not.

4.6.3 Moderating Variable Measure

State ownership is the moderating variable in this study. If the government controls more than twenty percent cash flow of a listed pharmaceutical company, and the company is also not controlled by any other entity, it is SOEs (Wang, & Xiao, 2009). This research considers state ownership a dummy variable to explore whether state

[1] Note that we also use other distance (REL150 and REL 250) as robustness check

ownership has a moderating effect on the relationship between religion and the CSRD quality in the pharmaceutical industry. One is coded if the company is state-owned; otherwise, zero is coded.

4.6.4 Control Variable Measure

This research includes a set of control variables based on existing literature to counter the probability of bias in the results and to capture other possible factors that influence the CSRD quality. Specifically, this research takes variables from prior studies which play a vital role in determining CSRD, and are from both categories of board characteristics and companies' characteristics. The rationale for selecting this combination of control variables is because prior literature examining the drivers of CSRD is predominantly focused on variables from these two groups (Ali et al., 2017).

The study firstly includes three variables under the category of board characteristics. The first variable is board size (BSIZE). Although mixed results are found in the empirical studies, the majority of the findings supported that larger boards have a significantly positive impact on companies' CSRD (Barakat et al. 2015; Brown, Helland, & Smith, 2006; Esa, & Ghazali, 2012; Jizi, 2017; Kaymak & Bektas, 2017; Sadou, Alom, & Laluddin, 2017). This is because a larger board represents not only the benefits of the shareholders but also the interests of other stakeholders from a stakeholder theory point of view. In this study, it is measured by the total number of directors on the board (Oh, Chang, & Jung, 2019). The second variable is board independence (IB). The function of the independent board is to make sure that companies behave adequately, which results in higher quality and quantity of CSR information (Rodrígue-Ariza,

Frías-Aceituno, García-Rubio, 2014). In this regard, more independent directors on the board encourage companies to disclose more CSR information (Abdullah, Mohamad, & Mokhtar, 2011; Cheng & Courtenay, 2006). It is measured by the ratio of independent directors to total directors (Su, 2019). The final variable under this theme is gender diversity (GENDER). It evidenced that women's appointments to boards can significantly influence CSRD (Liao, Luo, & Tang, 2014). This is because women directors are more democratic than males directors in the decision-making process (Davis, Capobianco, & Kraus, 2010). Gender diversity denotes the ratio of women directors, and it is measured as the number of women directors to the number of total directors on board (Williams, 2003).

Further, three variables from the company's characteristics are widely studied. First, company size (LnSIZE) is purposely chosen. Existing studies found that large company has more resources to conduct CSR (Chiu & Wang, 2014; Haji, 2013; Kansal, Joshi, & Batra, 2014). The natural logarithm of total assets measures it (Coluccia et al., 2018; Siregan & Bachtiar, 2010; Su, 2019). Second, leverage (LEV) is included and is measured by the ratio of a firm's total liability to total assets (Wen & Song, 2017). We also include cash holding (CASH) (Harjoto & Rossi, 2019; Su, 2019). Cash is measured by the ratio of a company's cash and cash equivalents to net assets (Cheung, 2016). For the purpose of clarity, Table 4.3 summarizes the measurement of all variables.

Table 4.3: Measurement of Variables

Variables		Measurement	Sources
Dependent variable	CSRD Quality	Measured on the basis of CSR score, where the RKS assigns a score scale 0-100. Marks are calculated based on: Macrocosm (30%); Content (45%); Technique (15%); Industry (10%) (Marquis & Qian 2014; Zheng et al., 2014).	RKS CSR rankings
Independent variable	Religion 100	The number of registered worship places within a 100 km radius around a pharmaceutical company's headquarters (Du et al., 2013)	Council website
	Religion 200	The number of registered worship places within a 200 km radius around a pharmaceutical company's headquarters (Du et al., 2013)	Council website
	Religion 300	The number of registered worship places within a 300 km radius around a pharmaceutical company's headquarters (Du et al., 2013)	Council website
		The measurement of each religion is the same as the religion above	
Moderating variable	State ownership	A dummy variable, which equals one if owned by the state, and it equals to zero otherwise (Wen & Song, 2017).	CSMAR
Control variable	Board Size	Measured by the total number of directors on the board (Oh, Chang, & Jung, 2019).	CSMAR
	Board independence	Measured by the ratio of independent directors to total directors (Su, 2019).	CSMAR
	Gender	Measured by the ratio of the number of women directors to the number of total directors on board (Williams, 2003).	CSMAR
	Leverage	Measured by the ratio of a firm's total liability to total assets (Wen & Song, 2017).	CSMAR
	Cash	Measured by the ratio of cash and cash equivalent divided by the book value of net assets (Cheung, 2016).	CSMAR
	Company size	Measured by the natural logarithm of total assets (Su, 2019).	CSMAR

4.7 Empirical Model

The empirical models are constructed to run the regressions. Two models are developed, including the model link to H1 and H2, and the model link to H3.

4.7.1 Empirical Model Link to H1 and H2

The first empirical model is formulated based on H1 and H2. H1 is to test the relationship between religion and the CSRD quality in the pharmaceutical industry. The H2a, H2b, H2c, H2d, and H2e is to identify the influence of each religion (Buddhism, Taoism, Catholicism, Protestantism, and Islam) on the CSRD quality of the pharmaceutical companies. These hypotheses aim to identify whether all religions in the sample have a significantly positive influence on the CSRD quality or not. Hence, we adopted model (1) to examine the first six hypotheses.

$$CSRD_{i,t}=\alpha_0+\beta_1 REL_{i,t}+\beta_2 STATE_{i,t}+\beta_3 BSIDE_{i,t}+\beta_4 IB_{i,t}+\beta_5 GENDER_{i,t}+\beta_6 LEV_{i,t}+\beta_7 CASH_{i,t}+\beta_8 LnSIZE_{i,t}+\text{Year fixed effect}+\varepsilon_{i,t} \quad (1)$$

Where

CSRD =quality of CSR disclosure

REL=religion

STATE=ultimate owner, SOEs vs non-SOEs (Dummy variable)

BSIZE=board size

IB=board independence

GENDER= gender diversity

LEV=leverage

CASH=cash holdings

LnSIZE=company size

α_0 is the intercept, β represents the regression coefficients, and ε is the model error. We also control year fixed effect.

4.7.2 Empirical Model Link to H3

H3 is to test the moderating effect of state ownership against the relationship between religion and the CSRD quality in the pharmaceutical industry. Moderating variable is a variable that affects the strengthen of the association between an independent variable and a dependent variable. Thus, model (2) below is constructed.

$$CSRD_{i,t}=\alpha_0+\beta_1 REL_{i,t}+\beta_2 REL_{i,t}\_STATE_{i,t}+\beta_3 STATE_{i,t}+\beta_4 BSIDE_{i,t}+\beta_5 IB_{i,t}+\beta_6 GENDER_{i,t}+\beta_7 LEV_{i,t}+\beta_8 CASH_{i,t}+\beta_9 LnSIZE_{i,t}+\text{Year fixed effect}+\varepsilon_{i,t} \quad (2)$$

Where

REL_STATE = representing the moderating variable

4.8 Data Analysis

In an empirical analysis, data are generally divided into times series, cross-section, and panel data. Observations examined over multiple time periods but containing the same observations is called time series. Further, in cross-sectional data, data is collected for several sample units at the same point in time. Data that consists of both time series and cross-sectional data is called panel data. This research employed unbalanced panel data, which considers the transversal information and the period of ten years to determine whether religion affects the CSRD quality of the pharmaceutical companies.

When analyzing panel data, econometric panel models are the method that is widely used. The benefit of panel data is controlling individual heterogeneity compared to time

series and cross-section analysis (Coluccia et al., 2018). Panel data have three modeling techniques: the fixed effects regression model, the random effects regression model, and the pooled regression model. The detailed model selection results for the panel data are illustrated in the next chapters. It can be concluded that the primary statistical analysis of the data is based on panel data analysis. Specifically, the study employs a fixed effect panel data analysis. The STATA software is used to process data, which is an integrated statistical software package. Additionally, descriptive statistics and Spearman correlation analysis are also presented to describe and analyze the data.

In general, the first six hypotheses (H1, and H2a to H2e) are supported if β_1 in the regression model 1 is significantly greater than zero, demonstrating a positive relationship between religion (each religion) and the CSRD quality of pharmaceutical companies in China. If the coefficient of β_2 in model 2 is negative and significant, H_3 is supported, indicating state ownership plays an important moderating role in influencing the relationship between religion and the CSRD quality of the pharmaceutical companies.

4.9 Summary of the Chapter

This chapter outlined the research methodology used in conducting the research. A discussion on the research methodology included three themes which are: research paradigm, research approach, and research method. There is no single method that is intrinsically better than others. The best method is that it helps to study the problem under consideration. The main purpose of this research is to investigate the determinants of CSRD quality. Thus, this study follows the positivist philosophy and adopt a

quantitative method to achieve the objectives.

The details of the sampling and data collection are also described. It leads to a final of 304 firm-year observations (unbalanced panel data) across ten years. The source of religious worship places are from the council websites, and this study only included the officially registered worship places. It leads to a total number of 581 worship places across China. Further, the measurement of the dependent variable (CSRD quality), the independent variable (religion as a whole & each religion), the moderating variable (state ownership), and the control variables (board size, independent board, gender diversity, company size, leverage, and cash) are also explained.

The panel data models are also included in this chapter. The first model is to test the first six hypotheses, and the second model is to test the moderating role of state ownership against the relationship between religion and the CSRD quality of pharmaceutical companies. In general, the first six hypotheses (H1, and H2a to H2e) are supported if β_1 in the regression model 1 is significantly greater than zero, demonstrating a positive relationship between religion (each religion) and the CSRD quality of pharmaceutical companies in China. If the coefficient of β_2 in model 2 is negative and significant, H_3 is supported, indicating state ownership plays an important moderating role in influencing the relationship between religion and the CSRD quality of the pharmaceutical companies. Finally, a brief discussion on procedures of data analysis is also included. The following chapter presents the results of this study.

CHAPTER 5: RESULTS

5.1 Introduction

This chapter presents the empirical results of the study. After this introduction, it shows the variables' descriptive statistics in Section 5.2. Section 5.3 demonstrates the results of the correlation analysis. The detailed regression results are presented in Section 5.4. The final section summarizes the chapter.

5.2 Descriptive Statistics

The descriptive statistics of the main variables are summarized in Table 5.1. It includes the number of observations, mean, standard deviation, minimum, percentile, and maximum. All the continuous variables are winsorized at the 1% level to control the extreme values (Du et al., 2014). Briefly, concerning the dependent variable, the results indicate that the CSRD quality's mean value is 40.18, suggesting that pharmaceutical companies' CSRD quality is relatively low as the maximum rating score is 100. The minimum CSRD score is 20.06, and the maximum is 86.64. These results demonstrate that the range of the pharmaceutical companies' CSRD scores is quite extensive; some companies have high CSRD quality, whereas some companies are still at their preliminary stage disclosing CSRD.

Further, concerning the main independent variables, REL100 experiences a mean value of 6.07 with a standard deviation of 4.89, REL200 has a mean value of 10.64 with a standard deviation of 8.37, and REL300 has a mean value of 14.09 with a standard deviation of 12.51. It can be concluded that, on average, there are bout 6.07, 10.64, and 14.09 registered worship places are around pharmaceutical companies' headquarters

within a radius of 100km, 200km, and 300km, respectively. In addition to the main independent variables, the table also describes each religion.

First, Buddhism100 has a mean of 3.74, with a standard deviation of 2.72. The mean of Buddhism200 is 6.64, with a standard deviation of 5.23. Buddhism300 experiences a mean of 8.24 with a standard deviation of 7.40. These results illustrate that, on average, there are about 3.74, 6.64. and 8.24 registered Buddhism Monasteries surround pharmaceutical companies' headquarters within a radius of 100km, 200km, and 300km, respectively.

Second, Taoism100 has a mean of 0.44, with a standard deviation of 0.34. Taoism200 has a mean of 0.77, with a standard deviation of 0.47. The mean value of Taoism300 is 0.96, with a standard deviation of 0.58. These statistics indicate that, with a radius of 100km, 200km, and 300kn, the average number of Taoism Temples located around pharmaceutical companies' headquarters is around one.

Third, the Catholic Churches' average values are 1.25, 1.96, and 3.03. These results illustrate that, on average, pharmaceutical companies' headquarters are surrounded by 1.25, 1.96, and 3.03 Catholic Churches in a radius of 100km, 200km, and 300km, respectively.

Fourth, the mean values of Protestant Churches are 0.03, 0.08, and 0.09. It demonstrates a limited number of Protestant Churches around the pharmaceutical companies within a radius of 100km, 200km, and 300km. As shown in Table 4.2 (Chapter four), the total number of registered Protestant Churches is 141; however, the mean values show that the headquarters of pharmaceutical companies is far away from the Protestant Churches.

Fifth, the mean values for Islam100, Islam200, and Islam300 are 0.35, 0.96, and 1.63. It represents a limited number of Islamic Mosques around the headquarters of pharmaceutical companies on average. Taking together, it can be concluded that among the number of worship places around the headquarters of pharmaceutical companies, Buddhism has the most worship places, followed by Taoism, Catholicism, Islam, and Protestantism accordingly.

Concerning moderating variable and control variables: the mean value of state ownership is 0.54, presenting that about 54% of listed pharmaceutical companies in the sample are SOEs. Further, board size has a mean value of 9.05, indicating that there are around nine directors on the pharmaceutical companies' board on average. The mean value of board independence is 3.37. It concludes that the board of pharmaceutical companies consists of about three independent directors on average. Regarding gender diversity in the board, the statistics show that the pharmaceutical companies are male-dominated, as female directors' mean value is only 21%.

Furthermore, the percentage of leverage is about 31% on average, implying a relatively balanced capital structure presented in the pharmaceutical companies. The average cash holding is 0.19, illustrating that, on average, pharmaceutical companies held 19 % of the cash and cash equivalents in their assets. Regarding company size, after logarithm, it has a mean value of 22.50. The minimum size level is 20.24, and the maximum is 24.89. These indicate that there is no big difference in terms of their sizes among the sample pharmaceutical companies.

Table 5.1: Descriptive Statistics

Variable	N	Mean	Std. dev	Min	25%	Median	75%	Max
Dependent variable								
CSRD	304	40.18	14.00	20.06	30.63	36.77	46.59	86.64
Independent variables								
REL100	304	6.07	4.89	0	3	6	7.50	18
REL200	304	10.64	8.37	1	5	10	11	33
REL300	304	14.09	12.51	3	7	12	14	50
Buddhism100	304	3.74	2.72	0	1	4	6	9
Buddhism200	304	6.64	5.23	0	3	6	7	19
Buddhism300	304	8.24	7.40	0	5	6	10	28
Taoism100	304	0.44	0.34	0	0	0	1	2
Taoism200	304	0.77	0.47	0	0.5	1	1	2
Taoism300	304	0.96	0.58	0	1	1	1	2
Catholicism100	304	1.25	2.85	0	0	0	0	9
Catholicism200	304	1.96	3.71	0	0	1	1	12
Catholicism300	304	3.03	5.68	0	0	1	2	19
Protestantism100	304	0.03	0.18	0	0	0	0	1
Protestantism200	304	0.08	0.38	0	0	0	0	2
Protestantism300	304	0.09	0.40	0	0	0	0	2
Islam100	304	0.35	0.58	0	0	0	1	2
Islam200	304	0.96	1.18	0	0	1	1	4
Islam300	304	1.63	1.16	0	0	1	3	5
Moderating variable								
STATE	304	0.54	0.50	0	0	1	1	1
Control variable								
BSIZE	304	9.05	1.32	6	9	9	9	11
IB	304	3.37	0.62	2	3	3	4	5
GENDER	304	0.21	0.11	0	0.12	0.19	0.28	0.54
LEV	304	0.31	0.16	0.04	0.18	0.30	0.44	0.63
CASH	304	0.19	0.12	0.04	0.10	0.15	0.26	0.58
lnSIZE	304	22.50	1.00	20.24	21.81	22.37	23.22	24.89

Note: Continuous variables are winsorized at the 1% level.

5.3 Correlation Analysis

Correlation is a statistical method used to assess a possible linear association between two continuous variables (Mukaka, 2012). This study uses correlation coefficients to determine the strength and direction of the linear relationship between pairs of variables. When both variables are normally distributed, use Pearson's correlation coefficient, otherwise using Spearman's correlation coefficient (Mukaka, 2012). Therefore, I firstly conducted the Skewness and Kurtosis tests to check data normality before correlation analysis. The data is not entirely but approximately normally distributed; thus, Spearman correlation analysis is employed, which is more robust to outliers than is Pearson's correlation coefficient (Mukaka, 2012).

The results of the Spearman correlation analysis are summarized in Table 5.2. As expected, CSRD has a positive correlation with REL100 (with the coefficient of 0.254), REL200 (with the coefficient of 0.128), and REL300 (with the coefficient of 0.161) at the 1% level, respectively. It suggests that religion has an essential effect on pharmaceutical companies' CSRD quality. Thus, it provides preliminary support to H1.

Furthermore, Buddhism100 has a coefficient of 0.231 (significance level of 1%), Buddhism200 has a coefficient of 0.128 (significance level of 5%), and Buddhism300 has a coefficient of 0.131 (significance level of 5%). It demonstrates that Buddhism is significantly positively related to CSRD. This provides preliminary support to H2a.

Moreover, CSRD is significantly associated with Taoism100 (with the coefficient of 0.065), Taoism200 (with the coefficient of 0.029), and Taoism300 (with the coefficient of 0.039) at the 5% level, respectively. This indicates preliminary support to H2b.

Besides, Catholicism100, Catholicism200, and Catholicism300 have a coefficient of 0.109, 0.105, and 0.069, respectively, at the 10% level. It can be concluded that Catholicism and CSRD quality forms a significantly positive correlation. This provides preliminary support to H2c. In contrast, Protestantism and Islam are not linked with CSRD. Thus, it can be concluded that H2d and H2e are rejected regarding Spearman's correlation analysis.

In addition, STATE has a significantly negative association with REL100 (with a coefficient of -0.138) at a 5% level, REL200 (with a coefficient of -0.164) at the 1% level, and REL300 (with a coefficient of -0.124) at the 5% level. These results reveal that state ownership may become a moderating variable in the relationship between religion and the CSRD quality, preliminarily supporting H3.

Relationships between the control variables and the CSRD quality are also significant. Regarding board characteristics, Board size (BSIZE) has a coefficient of 0.040 at the 5% significance level. Independent board (IB) has a coefficient of -0.139 at the 5% level. It indicates that the independent board and the CSRD quality forms a significantly negative correlation. Female directors on board (GENDER) has a coefficient of 0.008 at the 5% significance level. Concerning companies' characteristics, leverage (LEV) has a coefficient of 0.125, and company size (LnSIZE) has a coefficient

of 0.231 at the 5% significance level, respectively. Cash (CASH) has a significantly negative correlation with CSRD quality. It can be concluded that all of the chosen control variables based on prior literature play a role in influencing the pharmaceutical companies' CSRD quality in this study.

Finally, to consider the multicollinearity problem, it was suggested that if the coefficients of pairwise correlation among explanatory variables are less than 0.70 (in the absolute sense), it is not an issue to counter all variables in the regression (Jin et al., 2019). In the Spearman correlation analysis, other than the measurement of religions themselves, none of the correlation is greater than 0.70 demonstrating that the regressions are free from multicollinearity issues (Jin et al., 2019). To be more precise, I also performed the variance inflation factor (VIF) test after the regression, and the results are shown in Table 5.3 to Table 5.9. The VIF has been widely applied in scientific literature to diagnose multicollinearity (Mela & Kopalle, 2002; Jou, Huang, & Cho, 2014). It indicates inconsequential multicollinearity if the VIF values are less than ten (Hair, Anderson, Tatham, & Black 1995). Therefore, it can be concluded that both the Spearman correlation coefficient and the VIF results indicate no multicollinearity issues.

Table 5.2: Spearman Correlation Matrix

		1	2	3	4	5	6	7	8	9	10	11	12
1	CSRD	1											
2	REL100	0.254***	1										
3	REL200	0.128**	0.733***	1									
4	REL300	0.161***	0.613***	0.923***	1								
5	Buddhism100	0.231***	0.838***	0.657***	0.564***	1							
6	Buddhism200	0.128**	0.548***	0.746***	0.794***	0.766***	1						
7	Buddhism300	0.131**	0.492***	0.666***	0.746***	0.748***	0.981***	1					
8	Taoism100	0.065**	0.393***	-0.051	-0.184***	0.231***	-0.139**	-0.192***	1				
9	Taoism200	0.029**	0.596***	0.619***	0.435***	0.425***	0.354***	0.220***	0.529***	1			
10	Taoism300	0.039**	0.578***	0.644***	0.603***	0.463***	0.474***	0.398***	0.250***	0.743***	1		
11	Catholicism 100	0.109*	0.441***	0.511***	0.507***	0.235***	0.260***	0.212***	-0.175***	0.352***	0.582***	1	
12	Catholicism200	0.105*	0.721***	0.596***	0.495***	0.475***	0.332***	0.268***	0.265***	0.582***	0.617***	0.750***	1
13	Catholicism300	0.069*	0.666***	0.588***	0.490***	0.440***	0.281***	0.217***	0.276***	0.601***	0.69***	0.716***	0.941***
14	Protestantim100	-0.102	0.026	0.174***	0.190***	-0.122**	-0.121**	-0.196***	-0.155***	0.095*	0.015	0.319***	0.251***

Table 5.2, continued

		1	2	3	4	5	6	7	8	9	10	11	12
15	Protestantim200	0.032	0.118**	0.236***	0.259***	-0.127**	-0.166***	-0.218***	-0.134**	0.021	-0.059	0.259***	0.171***
16	Protestantim300	0.077	0.156***	0.269***	0.291***	-0.076	-0.114**	-0.163***	-0.150***	0.033	-0.008	0.304***	0.208***
17	Islam100	0.039	0.379***	0.009	-0.116**	0.297***	0.025	0.012	0.594***	0.190***	-0.058	-0.333***	0.257***
18	Islam200	-0.038	0.389***	0.338***	0.176***	0.324***	0.246***	0.216***	0.343***	0.396***	0.305***	0.023	0.498***
19	Islam300	-0.072	0.277***	0.096*	0.021	0.102*	0.106*	0.067	0.379***	0.349***	0.244***	-0.119**	0.374***
20	STATE	-0.117**	-0.138**	-0.164***	-0.124**	-0.141**	-0.173***	-0.181***	0.124**	-0.083	0.008	0.029	0.109*
21	BSIZE	0.040**	-0.017	0.027	0.102*	0.067	0.050	0.073	-0.072	-0.096*	-0.110*	-0.033	-0.097*
22	IB	-0.139**	-0.035	0.005	0.035	0.067	0.080	0.086	-0.079	-0.059	-0.099*	-0.053	-0.180***
23	GENDER	0.008**	-0.045	-0.108*	-0.166***	-0.035	-0.142**	-0.159***	0.087	-0.057	-0.206***	-0.296***	-0.153***
24	LEV	0.125**	0.012	0.141**	0.207***	0.127**	0.234***	0.243***	-0.117**	-0.071	0.124**	0.001	-0.008
25	CASH	-0.153***	0.231***	0.144**	0.122**	0.163***	0.082	0.069	0.265***	0.227***	0.121**	0.075	0.194***
26	lnSIZE	0.231***	0.093	0.014	0.064	0.177***	0.126**	0.153***	-0.127**	-0.198***	-0.070	-0.006	-0.011

Table 5.2, continued

	13	14	15	16	17	18	19	20	21	22	23	24	25	26
13	1													
14	0.247***	1												
15	0.158***	0.823***	1											
16	0.195***	0.773***	0.941***	1										
17	0.219***	-0.117**	-0.144**	-0.154***	1									
18	0.575***	-0.179***	-0.179***	-0.157***	0.687***	1								
19	0.352***	-0.211***	-0.230***	-0.221***	0.716***	0.746***	1							
20	0.207***	0.172***	0.065	0.031	0.139**	0.226***	0.137**	1						
21	-0.059	0.162***	0.222***	0.252***	-0.114**	-0.178***	-0.226***	0.134**	1					
22	-0.144**	0.088	0.137**	0.164***	-0.195***	-0.205***	-0.294***	0.063	0.660***	1				
23	-0.061	0.028	-0.004	-0.004	0.267***	0.173***	0.151***	0.019	-0.101*	-0.252***	1			
24	-0.014	-0.079	-0.045	-0.007	0.008	0.111*	0.022	0.140**	0.109*	0.116**	-0.288***	1		
25	0.146**	0.107*	0.043	0.017	0.116**	0.001	0.026	0.085	0.197***	0.060	0.039	-0.309***	1	
26	-0.092	-0.162***	-0.032	0.017	-0.062	-0.120**	-0.068	0.031	0.190***	0.272***	-0.183***	0.383***	-0.143**	1

Note: Continuous variables are winsorized at the 1% level.

*Significance level of 10%

** Significance level of 5%

*** Significance level of 1%

Table 5.3: VIF Test for Religion and CSRD Quality

	H1		
Variable	VIF		1/VIF
REL100	1.17		0.856441
STATE	1.07		0.931103
BSIDE	1.76		0.569565
IB	1.78		0.560455
GENDER	1.25		0.801930
LEV	1.49		0.671365
CASH	1.24		0.807024
LnSIZE	1.35		0.738689
Mean VIF		1.39	
REL200	1.17		0.852666
STATE	1.08		0.925006
BSIDE	1.75		0.570653
IB	1.78		0.560446
GENDER	1.26		0.791533
LEV	1.50		0.664914
CASH	1.21		0.828850
LnSIZE	1.33		0.751944
Mean VIF		1.39	
REL300	1.20		0.831237
STATE	1.07		0.935018
BSIDE	1.75		0.572154
IB	1.78		0.560233
GENDER	1.29		0.776981
LEV	1.50		0.668445
CASH	1.20		0.835441
LnSIZE	1.35		0.740417
Mean VIF		1.39	

Table 5.4: VIF Test for Buddhism and CSRD Quality

	H2a	
Variable	VIF	1/VIF
Buddhism100	1.14	0.878074
STATE	1.08	0.927712
BSIDE	1.74	0.574052
IB	1.79	0.558965
GENDER	1.21	0.829566
LEV	1.51	0.660820
CASH	1.24	0.803863
LnSIZE	1.34	0.744539
Mean VIF	1.38	
Buddhism200	1.22	0.820137
STATE	1.12	0.894557
BSIDE	1.74	0.573303
IB	1.79	0.559556
GENDER	1.24	0.804594
LEV	1.54	0.649977
CASH	1.20	0.832447
LnSIZE	1.32	0.755452
Mean VIF	1.40	
Buddhism300	1.22	0.817014
STATE	1.09	0.914218
BSIDE	1.75	0.572625
IB	1.79	0.559983
GENDER	1.27	0.786611
LEV	1.51	0.662212
CASH	1.20	0.836692
LnSIZE	1.34	0.747838
Mean VIF	1.40	

Table 5.5: VIF Test for Taoism and CSRD Quality

	H2b		
Variable	VIF		1/VIF
Taoism100	1.19		0.840333
STATE	1.06		0.945940
BSIDE	1.78		0.560543
IB	1.80		0.556836
GENDER	1.20		0.831529
LEV	1.49		0.671550
CASH	1.36		0.733582
LnSIZE	1.32		0.758602
Mean VIF		1.40	
Taoism200	1.16		0.862184
STATE	1.05		0.949218
BSIDE	1.78		0.561836
IB	1.80		0.557011
GENDER	1.22		0.818873
LEV	1.49		0.669325
CASH	1.30		0.767844
LnSIZE	1.34		0.746310
Mean VIF		1.39	
Taoism300	1.13		0.883211
STATE	1.04		0.957438
BSIDE	1.77		0.564048
IB	1.78		0.560423
GENDER	1.26		0.794456
LEV	1.52		0.657684
CASH	1.24		0.803875
LnSIZE	1.31		0.762573
Mean VIF		1.38	

Table 5.6: VIF Test for Catholicism and CSRD Quality

	H2c	
Variable	VIF	1/VIF
Catholicism100	1.19	0.843421
STATE	1.05	0.947928
BSIDE	1.76	0.568391
IB	1.79	0.560188
GENDER	1.34	0.745091
LEV	1.49	0.673180
CASH	1.20	0.831830
LnSIZE	1.33	0.753241
Mean VIF	1.39	
Catholicism200	1.17	0.853366
STATE	1.05	0.950718
BSIDE	1.76	0.567714
IB	1.79	0.560068
GENDER	1.33	0.754521
LEV	1.49	0.672985
CASH	1.21	0.828454v
LnSIZE	1.33	0.753778
Mean VIF	1.39	
Catholicism300	1.14	0.878978
STATE	1.05	0.955094
BSIDE	1.76	0.567878
IB	1.78	0.560407
GENDER	1.30	0.771921
LEV	1.49	0.672985
CASH	1.20	0.834783
LnSIZE	1.33	0.752296
Mean VIF	1.38	

Table 5.7: VIF Test for Protestantism and CSRD Quality

	H2d	
Variable	VIF	1/VIF
Protestantism100	1.09	0.917744
STATE	1.07	0.931152
BSIDE	1.78	0.562477
IB	1.79	0.560163
GENDER	1.20	0.831449
LEV	1.49	0.670223
CASH	1.19	0.837113
LnSIZE	1.33	0.752073
Mean VIF	1.37	
Protestantism200	1.07	0.931015
STATE	1.06	0.946330
BSIDE	1.80	0.554396
IB	1.79	0.559578
GENDER	1.20	0.830960
LEV	1.50	0.668069
CASH	1.20	0.835654
LnSIZE	1.31	0.761832
Mean VIF	1.37	
Protestantism300	1.07	0.932289
STATE	1.05	0.952768
BSIDE	1.82	0.549596
IB	1.79	0.559579
GENDER	1.20	0.831712
LEV	1.49	0.668978
CASH	1.20	0.834266
LnSIZE	1.31	0.764559
Mean VIF	1.37	

Table 5.8: VIF Test for Islam and CSRD Quality

	H2e	
Variable	VIF	1/VIF
Islam100	1.17	0.855978
STATE	1.08	0.925520
BSIDE	1.75	0.570581
IB	1.79	0.558375
GENDER	1.26	0.791661
LEV	1.52	0.656641
CASH	1.22	0.821645
LnSIZE	1.31	0.762702
Mean VIF	1.39	
Islam200	1.27	0.788094
STATE	1.16	0.863409
BSIDE	1.77	0.563504
IB	1.80	0.556668
GENDER	1.25	0.801202
LEV	1.52	0.659242
CASH	1.20	0.831774
LnSIZE	1.32	0.759514
Mean VIF	1.41	
Islam300	1.13	0.887847
STATE	1.06	0.941098
BSIDE	1.76	0.568903
IB	1.81	0.552000
GENDER	1.22	0.820613
LEV	1.49	0.670803
CASH	1.20	0.832077
LnSIZE	1.31	0.764632
Mean VIF	1.37	

Table 5.9: VIF Test for State ownership, Religion, and CSRD Quality

	H3		
Variable	VIF		1/VIF
REL100_STATE	2.07		0.482659
STATE	1.93		0.519339
BSIDE	1.90		0.527091
IB	1.89		0.529508
GENDER	1.20		0.830452
LEV	1.51		0.664382
CASH	1.25		0.797174
LnSIZE	1.36		0.737181
Mean VIF		1.64	
REL200_STATE	2.02		0.495716
STATE	1.92		0.520797
BSIDE	1.86		0.538851
IB	1.82		0.549387
GENDER	1.20		0.831743
LEV	1.52		0.658435
CASH	1.22		0.819396
LnSIZE	1.34		0.746908
Mean VIF		1.61	
REL300_STATE	1.86		0.536971
STATE	1.77		0.566378
BSIDE	1.83		0.546841
IB	1.81		0.551577
GENDER	1.20		0.831432
LEV	1.52		0.656960
CASH	1.22		0.822973
LnSIZE	1.34		0.748314
Mean VIF		1.57	

5.4 Regression Results

This subsection presents the regression analysis. It firstly explains the stationarity issue in data analysis, followed by panel data model testing and the hypotheses regression results. The final section presents a robustness check for results.

5.4.1 Stationarity Testing

For time-series data analysis, the spurious regression problem usually occurs when the data are not stationary; the same is true to panel data analysis. Previous scholars have suggested it is nothing serious for spurious regression problems in panel data analysis than time-series data analysis (Baltagi, 2008). It also has been presented that the panel data spurious regression gives a consistent estimation of the true value of the parameter as both numbers of observation (N) and time (T) tending toward infinity (Baltagi, 2008). It is because an estimator in panel data makes an average across all individuals. The information within the panel's independent cross-section data delivers more reliable signals than the pure time series case.

The stationarity of panel data is not examined by the unit root test and cointegration test in this research. This is because this study has a number of observations of 304 (N), which is extremely larger than the time of period, ten years (T), indicating a shorter time period and large cross-sectional data sets. Under this condition, stationarity testing is not an essential pre-requisite.

5.4.2 Panel Data Model Testing

Broadly, Static Panel data models (SPDM) and Dynamic Panel data models (DPDM) form two models of panel data. As the independent variables do not contain the lagged dependent variable in this research, this study adopts the SPDM. There are three independent approaches in panel data analysis which are: independently pooled model, the fixed-effects model, and the random-effects model. In selecting a specific panel data model, Table 5.10 and Table 5.11 summarized the test results of model selections.

Specifically, the F test is most often used to identify which statistical model best fits the sample data. It has a role in the decision of whether the pooled regression model or fixed-effects model is suitable. The result of Prob > F = 0.0000 at the 95% confidence interval ($P < 0.05$) indicates that fixed effects model is superior to pooled regression model. Further, the LM test of Breusch-Pagan is used to test whether the pooled regression model or random-effects model is proper, and the LM test is statistically significant (Prob > chibar2 = 0.0000), which indicates that the random-effects model is proper. Finally, the Hausman test is developed, and the result where $P < 0.05$ in all the regression tests suggests that the fixed-effect model is suitable for the regression analysis. Thus, the final decision is to use the fixed-effects model technique to run the regressions.

Besides, the maximum likelihood estimates do not produce by the iterated generalized least squares (GLS) when test autocorrelation, the likelihood-ratio test is not suggested. Instead, as proposed by Wooldridge (2002), a simple test ca be used. The result of the Wooldridge test ($p<0.05$) shows the test statistics are significant at 0.05,

which realized an autocorrelation issue in the panel data (the null hypothesis was that there was no serial autocorrelation). Also, the likelihood ratio (LR) test ($p<0.05$) for heteroskedasticity suggested a heteroskedasticity issue in the panel data (the null hypothesis homoskedasticity was rejected). Cluster-robust variance and covariance estimators were used to resolve the issue of heteroskedasticity (Wooldridge, 2002). The test results of the robust fixed-effect model show in the next section.

Table 5.10: Model Selection Results for H1, H2a, H2b, and H2c

	H1 Religion & CSRD	H2a Buddhism & CSRD	H2b Taoism &CSRD	H2c Catholicism & CSRD
	Model test:			
F test	Prob > F = 0.0000			
Panel model	Fixed effect			
BP-LM test	Prob > chibar2 = 0.0000			
Panel model	Random effects			
Hausman test	Prob>chi2= 0.0000			
Final Model	**Fixed effect**			
	Additional test:			
Wooldridge test (Autocorrelation test)	Prob > F = 0.0000			
LR test (Heteroskedasticity test)	Prob > chi2 = 0.0000			

Table 5.11 : Model selection Results for H2d, H2e, and H3

	H2d Protestantism & CSRD	H2e Islam & CSRD	H3 STATE, Religion & CSRD
	Model test:		
F test	Prob > F = 0.0000		
Panel model	Fixed effect		
BP-LM test	Prob > chibar2 = 0.0000		
Panel model	Random effects		
Hausman test	Prob>chi2= 0.0000		
Final Model	**Fixed effect**		
	Additional test:		
Wooldridge test (Autocorrelation test)	Prob > F = 0.0000		
LR test (Heteroskedasticity test)	Prob > chi2 = 0.0000		

5.4.3 Regression Results

This subsection presents the panel data regression results of this research. The first part shows the results for religion and the CSRD quality, followed by the testing results between each religion and the CSRD quality. The moderating role of state ownership in influencing the relationship between religion and the CSRD quality is illustrated in the final part.

5.4.3.1 Religion and CSR Disclosure Quality

Table 5.12 presents the regression results of religion and CSRD quality. Values were computed through robust standard errors adjusted for clustering at the company level and the year level (Du et al., 2014). For cross-section analysis, R^2 represents the fraction of the variation that is explained by the model, and there is no unanimous agreement on which R^2 to report in panel modeling; the interpretation of R^2 is the "squared correlation between the actual and fitted values of the dependent variable" (Cameron & Trivedi, 2005). The R^2 concludes that in the regression model of the influence of REL100, REL200, and REL300 on the pharmaceutical companies' CSRD quality, about 38%, 33%, and 34% of the regression model fits the data. This is similar to prior literature in measuring religious influence on CSR with an R^2 of 32% using panel data analysis (Su, 2019). Most importantly, the regression results in the table indicate REL100 ((1.071 with t =6.03), REL200 (0.484 with t =4.31), and REL300 (0.350 with t =4.36) have a significantly positive relation with CSRD quality at the 1% level, respectively. It concludes religion has an essential effect on the CSRD quality of pharmaceutical companies in China. These results suggested that the more worship places around pharmaceutical companies' headquarter, there will be a higher intention to perform better CSR, subsequently, better CSRD quality. Thus, H1 is supported.

Concerning control variables, from an institutional theory perspective, the state has coercive powers to scrutinize and regulate companies' activities. SOEs often have broader strategic and political objectives regarding CSR-related activities (Hu et al., 2018). The finding contrasts with existing literature proving state-owned companies in

China are more likely to be involved in CSRD (Lau et al., 2016; Wang et al., 2016). In the result, state ownership has a significant but negative correlation with CSRD quality. This finding is consistent with studies of Dam and Scholtens(2012), and Zhang, Rezaee, and Zhu (2010). It can be understood that pharmaceutical companies owned by the state are less likely to invest in the quality of CSRD. This is because they are often forced by the government to engage in CSR and report CSR information, and their motivation is not from the ethical components. They involve in CSR, but they may not put their efforts into the quality of the reports. They intend to respond to governmental requirements. The benefits of investing in CSR reports are more attractive for non-SOEs, as SOEs already have more resources (such as financing) from the government.

As expected, board size is significantly positively correlated with the CSRD quality in the case of pharmaceutical companies in China. The finding is consistent with existing studies (Barakat et al., 2015; Brown et al., 2006; Esa, & Ghazali, 2012; Jizi, 2017; Kaymak & Bektas, 2017; Sadou et al., 2017). This is because larger boards have diversified backgrounds and knowledge that lead companies to better engage in CSR activities. Further, a larger board represents not only the interests of shareholders but also other stakeholders, which may force managers of companies to disclosure high-quality CSR information.

Furthermore, the independent board has a significantly negative correlation with CSRD quality. This is because, among other things, members of the independent board are appointed due to their financial expertise (Fligstein, 1991) and their good reputation and professional background (Pucheta-Martínez & Gallego-Álvarez, 2019). In addition,

they do not have any investment relations with the company; thus, they will not compromise their independence (Pucheta-Martínez & Gallego-Álvarez, 2019). Their knowledge of finance allows them to care more about financial information better than CSR information (Pucheta-Martínez & Gallego-Álvarez, 2019). Also, their concern for a career may influence their behaviors, and there is always a reputational risk in the case of CSRD decisions. Independent directors source CSR information from the companies' managers and they may get manipulative information (Kravet & Muslu, 2013). CSRD increases the independent directors' reputational concern, and they could act in their interest (Ravina & Sapienza, 2010), and may put fewer efforts for CSR-related performance. Therefore, independent directors may show some opposition to CSR information and may negatively influence the CSRD quality of a company (Bansal, Lopez-Perez, & Rodriguez-Ariza, 2018; Eng & Mak, 2003; García-Sánchez & Martinez-Ferrero, 2018; Haniffa & Cooke, 2005).

Furthermore, despite the small percentage of women directors, having female directors on board in the pharmaceutical companies still appears to have a positive effect on CSRD quality. The finding is consistent with prior researches, and the presence of women on boards is associated with higher levels of CSRD (Alonso-Almeida, & Intxaurburu-Clemente, 2015; Liao et al., 2015). It suggests that women and men differ in values when it comes to social responsibility (Post, Rahman, & Rubow, 2011). This is because female directors are more democratic than males directors in the decision-making process, and they have a higher orientation towards interpersonal relations (Davis et al., 2010; Hillman, Cannella, & Harris, 2002). Hence,

female directors are more attentive to the demand of stakeholders (Nielsen & Huse, 2010).

Furthermore, company leverage does not show any effects on the CSRD quality in the regression. The result is in line with existing studies that were not able to find any significant relationship between leverage and disclosures (Alsaseed, 2006; Aksu and Kosedag, 2006; Chau & Gray, 2002; Mia & Al Mamun, 2011). It happens due to a good relationship that has been made between the company and debt-holders; it makes debt-holders do not take care of companies' leverage. Furthermore, cash holding is significantly negatively correlated with companies' engagement in CSR and CSRD; it is in line with the existing study by Harjoto and Rossi (2019). Companies with enough cash holding are less likely to invest in CSRD quality. Inversely, companies with limited cash are more likely to invest in CSRD quality to gain trust from their stakeholders, which may increase their future cash reserves. As expected, company size is significantly positively associated with CSRD quality. The result is consistent with prior literature (Coluccia et al., 2018; Siregan & Bachtiar, 2010; Su, 2019). This is because large companies are subject to pressure from both public and governmental regulatory bodies (Abbott & Monsen, 1979). Also, large companies have more resources available for social activities, and they can cover the costs of CSRD.

Table 5.12: Regression Results of Religion and CSRD Quality

	(1)	(2)	(3)
VARIABLES	CSRD	CSRD	CSRD
REL100	1.071***		
	(6.03)		
REL200		0.484***	
		(4.31)	
REL300			0.350***
			(4.36)
STATE	-2.989**	-3.208**	-3.343**
	(-2.39)	(-2.41)	(-2.54)
BSIZE	2.996***	2.843***	2.802***
	(4.32)	(3.88)	(3.85)
IB	-5.512***	-5.463***	-5.381***
	(-3.82)	(-3.60)	(-3.46)
GENDER	0.929***	0.916***	0.931***
	(5.14)	(4.74)	(4.83)
LEV	0.021	0.010	0.013
	(0.50)	(0.23)	(0.31)
CASH	-21.616***	-16.340***	-14.576**
	(-3.68)	(-2.71)	(-2.44)
lnSIZE	2.586***	3.077***	2.757***
	(3.28)	(3.68)	(3.36)
Year fixed effect	YES	YES	YES
Constant	-33.947*	-42.903**	-35.931*
	(-1.89)	(-2.27)	(-1.95)
Observations	304	304	304
R^2	0.38	0.33	0.34
Adjusted R^2	0.34	0.29	0.30
F statistic	32.01***	22.31***	22.69***

Note: Continuous variables are winsorized at the 1% level.
Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5.4.3.2 Buddhism and CSR Disclosure Quality

Table 5.13 illustrates the regression results of Buddhism and CSRD quality. The results indicate that there is a significantly positive relationship between Buddhism100 and CSRD (1.340 with t = 4.59), Buddhism200 and CSRD (0.530 with t = 2.92), and Buddhism300 and CSRD (0.438 with t = 3.29) at the 1% level, respectively. Overall, these results indicate that Buddhism has a significant influence on the pharmaceutical companies' CSRD quality. It also demonstrates the more Buddhist Monasteries around pharmaceutical companies' headquarters; there will be a higher intention to produce high-quality CSR reports. Thus, H2a is supported. In addition, the impact of the control variables on the CSRD quality of pharmaceutical companies is consistent with existing literature and has already been explained in the earlier section.

Table 5.13: Regression Results of Buddhism and CSRD Quality

	(1)	(2)	(3)
VARIABLES	CSRD	CSRD	CSRD
Buddhism100	1.340***		
	(4.59)		
Buddhism200		0.530***	
		(2.92)	
Buddhism300			0.438***
			(3.29)
STATE	-3.492**	-3.320**	-3.328**
	(-2.53)	(-2.31)	(-2.36)
BSIZE	2.710***	2.667***	2.716***
	(3.87)	(3.63)	(3.71)
IB	-5.738***	-5.614***	-5.629***
	(-4.29)	(-3.90)	(-3.80)
GENDER	0.764***	0.782***	0.778***
	(3.66)	(3.71)	(3.73)

Table 5.13: continued

	(1)	(2)	(3)
VARIABLES	CSRD	CSRD	CSRD
LEV	0.015	0.012	0.016
	(0.34)	(0.25)	(0.35)
CASH	-19.417***	-14.569**	-13.485**
	(-2.97)	(-2.32)	(-2.18)
lnSIZE	3.154***	3.386***	3.130***
	(3.64)	(3.75)	(3.57)
Year fixed effect	YES	YES	YES
Constant	-41.093**	-46.136**	-41.384**
	(-2.13)	(-2.31)	(-2.13)
Observations	304	304	304
R^2	0.32	0.29	0.30
Adjusted R^2	0.28	0.25	0.26
F statistic	13.61***	14.94***	17.82***

Note: Continuous variables are winsorized at the 1% level.
Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5.4.3.3 Taoism and CSR Disclosure Quality

Table 5.14 indicates the regression results of Taoism and CSRD quality. It clearly shows that CSRD quality is significantly positively correlated with Taoism100 (4.338 with t=2.85), Taoism200 (3.070 with t=2.20), and Taoism300 (2.217 with t=1.44). These results conclude Taoism has an essential impact on the pharmaceutical companies' CSRD quality. It further suggested that the more Taoism Temples around pharmaceutical companies' headquarters, they are more likely to engage in CSRD; hence, a higher quality of their CSR reports. Therefore, it can be concluded that H2b is supported. The control variables are as expected.

Table 5.14: Regression Results of Taoism and CSRD Quality

	(1)	(2)	(3)
VARIABLES	CSRD	CSRD	CSRD
Taoism100	4.338***		
	(2.85)		
Taoism200		3.070**	
		(2.20)	
Taoism300			2.217***
			(1.44)
STATE	-5.092***	-4.545***	-4.713***
	(-3.32)	(-3.11)	(-3.27)
BSIZE	2.754***	2.648***	2.840***
	(3.83)	(3.54)	(3.85)
IB	-5.511***	-5.443***	-5.431***
	(-4.22)	(-3.94)	(-3.89)
GENDER	0.649***	0.685***	0.865***
	(3.00)	(3.36)	(4.24)
LEV	0.049	0.047	0.017
	(1.01)	(0.98)	(0.36)
CASH	-18.007***	-15.384**	-17.448***
	(-2.84)	(-2.44)	(-2.77)
lnSIZE	3.957***	3.936***	3.909***
	(3.92)	(3.79)	(4.02)
Year fixed effect	YES	YES	YES
Constant	-57.240***	-57.314**	-59.495***
	(-2.67)	(-2.52)	(-2.74)
Observations	304	304	304
R^2	0.27	0.26	0.29
Adjusted R^2	0.23	0.22	0.25
F statistic	10.84***	11.66***	16.78***

Note: Continuous variables are winsorized at the 1% level.
Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5.4.3.4 Catholicism and CSR Disclosure Quality

Table 5.15 presents the results of Catholicism and CSRD quality. It can be seen that the pharmaceutical companies' CSRD quality is significantly positively correlated with Catholicism100 (1.526 with t=4.58), Catholicism200 (1.169 with t=4.54), and Catholicism300 (0.729 with t=4.22) at the 1% level respectively. It demonstrates that the quality of pharmaceutical companies' CSRD quality is influenced by Catholicism. These results also suggest that the more Catholic Churches around pharmaceutical companies' headquarters, the better quality in their CSR reports. Thus, H2c is supported. The control variables are as expected.

Table 5.15: Regression Results of Catholicism and CSRD Quality

	(1)	(2)	(3)
VARIABLES	CSRD	CSRD	CSRD
Catholicism100	1.526***		
	(4.58)		
Catholicism200		1.169***	
		(4.54)	
Catholicism300			0.729***
			(4.22)
STATE	-3.681***	-3.833***	-4.164***
	(-2.79)	(-2.91)	(-3.14)
BSIZE	2.920***	2.947***	2.930***
	(4.02)	(4.06)	(4.03)
IB	-5.349***	-5.311***	-5.396***
	(-3.50)	(-3.47)	(-3.51)
GENDER	0.804***	0.819***	0.816***
	(4.03)	(4.14)	(4.15)
LEV	0.038	0.033	0.036
	(0.86)	(0.75)	(0.82)
CASH	-15.400***	-16.313***	-14.465**
	(-2.65)	(-2.78)	(-2.45)
lnSIZE	2.852***	2.901***	2.922***
	(3.33)	(3.38)	(3.39)

Table 5.15, continued

Year fixed effect	YES	YES	YES
	(1)	(2)	(3)
VARIABLES	CSRD	CSRD	CSRD
Constant	-37.445**	-38.694**	-38.746**
	(-1.98)	(-2.04)	(-2.04)
Observations	304	304	304
R^2	0.35	0.35	0.34
Adjusted R^2	0.31	0.31	0.30
F statistic	20.84***	22.15***	23.14***

Note: Continuous variables are winsorized at the 1% level.
Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5.4.3.5 Protestantism and CSR Disclosure Quality

Table 5.16 presents the regression results of Protestantism and CSRD quality. Surprisingly, the pharmaceutical companies' CSRD quality appeared to be unaffected by Protestant Churches as the coefficients' P-values are insignificant. Hence, H2d is rejected. The control variables are as expected.

Table 5.16: Regression Results of Protestantism and CSRD Quality

	(1)	(2)	(3)
VARIABLES	CSRD	CSRD	CSRD
Protestantism100	-1.687		
	(-0.44)		
Protestantism200		1.695	
		(0.83)	
Protestantism300			3.254
			(1.52)
STATE	-4.611***	-4.861***	-4.919***
	(-3.04)	(-3.23)	(-3.30)
BSIZE	2.533***	2.364***	2.210***
	(3.45)	(3.21)	(3.04)

Table 5.16, continued

VARIABLES	(1) CSRD	(2) CSRD	(3) CSRD
IB	-5.167***	-5.136***	-5.101***
	(-3.73)	(-3.71)	(-3.68)
GENDER	0.586***	0.627***	0.663***
	(2.69)	(2.94)	(3.15)
LEV	0.056	0.060	0.062
	(1.15)	(1.23)	(1.28)
CASH	-12.444**	-12.256**	-11.907*
	(-2.05)	(-2.02)	(-1.97)
lnSIZE	3.660***	3.775***	3.785***
	(3.54)	(3.68)	(3.72)
Year fixed effect	YES	YES	YES
Constant	-50.145**	-51.614**	-50.922**
	(-2.31)	(-2.39)	(-2.38)
Observations	304	304	304
R^2	0.26	0.26	0.27
Adjusted R^2	0.21	0.22	0.22
F statistic	10.27***	10.42***	10.46***

Note: Continuous variables are winsorized at the 1% level.
Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5.4.3.6 Islam and CSR Disclosure Quality

Table 5.17 shows the influence of Islam on the pharmaceutical companies' CSRD quality. Similar to Protestantism, the results demonstrate no association between Islam and the CSRD quality in the pharmaceutical industry. Hence, H2e is rejected. The control variables are as expected. Therefore, this research provides support that H1 (religion is significantly positively correlated with CSRD quality in the pharmaceutical industry in China) is only supported in the case of Buddhism, Taoism, and Catholicism, whereas Protestantism and Islam have no influence.

Table 5.17: Regression Results of Islam and CSRD Quality

	(1)	(2)	(3)
VARIABLES	CSRD	CSRD	CSRD
Islam100	0.607		
	(0.49)		
Islam200		0.166	
		(0.25)	
Islam300			-0.675
			(-1.57)
STATE	-4.848***	-4.837***	-4.413***
	(-3.16)	(-2.82)	(-2.93)
BSIZE	2.519***	2.514***	2.369***
	(3.46)	(3.39)	(3.26)
IB	-5.088***	-5.119***	-5.471***
	(-3.62)	(-3.61)	(-3.89)
GENDER	0.597***	0.601***	0.563***
	(2.69)	(2.74)	(2.61)
LEV	0.054	0.056	0.060
	(1.10)	(1.12)	(1.22)
CASH	-12.815**	-12.555**	-11.679*
	(-2.06)	(-2.04)	(-1.92)
lnSIZE	3.736***	3.732***	3.668***
	(3.67)	(3.61)	(3.58)
Year fixed effect	YES	YES	YES
Constant	-52.019**	-51.808**	-47.422**
	(-2.41)	(-2.31)	(-2.19)
Observations	304	304	304
R^2	0.26	0.26	0.26
Adjusted R^2	0.21	0.21	0.22
F statistic	9.77***	10.10***	11.41***

Note: Continuous variables are winsorized at the 1% level.
Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5.4.3.7 State ownership, Religion, and CSR Disclosure Quality

This section presents the regression results based on model (2) to test state ownership's moderating effect against the relationship between religion and the CSRD quality in the pharmaceutical industry. Table 5.18 indicates that CSRD is still significantly positively correlated with REL100 (1.591 with t=6.83religion), REL200 (0.774 with t=5.17), and REL300 (0.527 with t=4.98). However, all of the coefficients of the interaction terms REL100_STATE (-1.394 with t= -3.76), REL200_STATE (-0.760 with t = -3.39), and REL300_STATE (-0.488 with t= -3.15, respectively) are negative and significant at the 1% level. These results reveal the positive influence of religion on the pharmaceutical companies' CSRD quality is moderated by state ownership. When the state owns pharmaceutical companies, the influence of religion on their CSR-related decisions is weaker. This is because SOEs obtain more resources from the government; meanwhile, they have more pressure. They face more formal institutional constraints than non-SOEs, and are often required to be role models to their counterparts, and be pioneers in socially responsible activities. Therefore, their better CSRD performance is less likely to be influenced by the informal institution. Thus H3 is supported. The control variables are as expected.

Table 5.18: Regression Results of State ownership, Religion, and CSRD Quality

	(1)	(2)	(3)
VARIABLES	CSRD	CSRD	CSRD
REL100	1.591***		
	(6.38)		
REL200		0.774***	
		(5.17)	
REL300			0.527***
			(4.98)
REL100_STATE	-1.394***		
	(-3.76)		
REL200_STATE		-0.760***	
		(-3.39)	
REL300_STATE			-0.488***
			(-3.15)
STATE	5.338**	4.815**	3.414
	(2.58)	(2.10)	(1.60)
BSIZE	2.012***	2.039***	2.108***
	(3.16)	(3.06)	(3.26)
IB	-3.501***	-4.341***	-4.317***
	(-2.81)	(-3.39)	(-3.34)
GENDER	0.832***	0.785***	0.839***
	(4.37)	(3.89)	(4.16)
LEV	0.039	0.028	0.039
	(0.92)	(0.62)	(0.89)
CASH	-17.216***	-12.908**	-10.639*
	(-3.14)	(-2.30)	(-1.91)
lnSIZE	2.753***	3.236***	2.747***
	(3.66)	(4.10)	(3.46)
Year fixed effect	YES	YES	YES
Constant	-41.770**	-49.098***	-38.908**
	(-2.48)	(-2.77)	(-2.21)
Observations	304	304	304
R^2	0.43	0.38	0.38
Adjusted R^2	0.39	0.34	0.35
F statistic	25.11***	22.42***	20.27***

Note: Continuous variables are winsorized at the 1% level.
Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5.4.4 Robustness Checks

This study further conduct robustness checks for the results. Hence, the geographical parameters were relaxed and tightened to identify the number of registered worship places within other defined kilometers radius around the company's registered address. Particularly, REL150 and REL250 were defined. Table 5.19 presents the combined regression results for H1 and H3. The results indicate that REL150 and REL250 have a significantly positive correlation with CSRD in both regressions. The interaction terms of REL150_STATE (-0.928 with t= -3.02) and REL250_STATE (-0.522 with t= -3.27) are significantly negatively associated with CSRD at the 10% level, showing the moderating role of the state against the influence of religion on the CSRD quality. Further, Table 5. 20, Table 5.21, and Table 5.22 show the regression results for H2a, H2b, and H2c. It can be concluded that these findings further support that the earlier results are robust.

Generally speaking, companies' registered address decisions are exogenous (Du, 2013; Su, 2019). However, I also implement robustness tests for the concerns of the potential endogeneity issue between religion and CSRD quality. As mentioned before, the sample's worship places are unequally distributed across 31 provinces in China. Hence, following EL Ghoul et al. (2013), Du (2013), and Su (2019), I delete firm-year observations located in five autonomous regions mainly dominated by minority groups. I re-estimate the results by applying the same regression model. The finding still demonstrates a significant influence of religion on CSRD.

Table 5.19: Robustness Check for H1 and H3

	(1)	(2)	(3)	(4)
	H1		H3	
VARIABLES	CSRD	CSRD	CSRD	CSRD
REL150	0.687***		1.086***	
	(4.92)		(4.73)	
REL250		0.377***		0.569***
		(4.51)		(5.30)
REL150_STATE			-0.928***	
			(-3.02)	
REL250_STATE				-0.522***
				(-3.27)
STATE	-3.837***	-3.261**	3.848	3.481*
	(-2.93)	(-2.47)	(1.62)	(1.68)
BSIZE	2.839***	2.843***	2.032***	2.088***
	(3.97)	(3.89)	(3.12)	(3.19)
IB	-5.023***	-5.435***	-3.772***	-4.247***
	(-3.36)	(-3.50)	(-2.97)	(-3.29)
GENDER	0.902***	0.922***	0.829***	0.840***
	(4.80)	(4.81)	(4.24)	(4.18)
LEV	0.010	0.009	0.031	0.034
	(0.23)	(0.21)	(0.72)	(0.80)
CASH	-17.626***	-14.948**	-14.888***	-11.198**
	(-2.98)	(-2.52)	(-2.69)	(-2.01)
lnSIZE	3.090***	2.715***	3.186***	2.718***
	(3.68)	(3.34)	(4.04)	(3.45)
Year fixed effect	YES	YES	YES	YES
Constant	-44.096**	-35.011*	-49.129***	-38.147**
	(-2.33)	(-1.91)	(-2.79)	(-2.17)
Observations	304	304	304	304
R^2	0.35	0.35	0.39	0.39
Adjusted R^2	0.31	0.31	0.35	0.35
F statistic	26.67***	23.08***	23.49***	20.03***

Note: Continuous variables are winsorized at the 1% level.
Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 5.20: Robustness Check for H2a

	(1)	(2)
	H2a	
VARIABLES	CSRD	CSRD
Buddhism150	0.653***	
	(3.18)	
Buddhism250		0.512***
		(3.44)
STATE	-3.751***	-3.294**
	(-2.61)	(-2.33)
BSIZE	2.638***	2.732***
	(3.61)	(3.71)
IB	-5.473***	-5.725***
	(-3.86)	(-3.86)
GENDER	0.755***	0.802***
	(3.59)	(3.82)
LEV	0.020	0.008
	(0.44)	(0.18)
CASH	-16.045**	-14.076**
	(-2.54)	(-2.27)
lnSIZE	3.334***	3.158***
	(3.62)	(3.62)
Year fixed effect	YES	YES
Constant	-44.486**	-41.663**
	(-2.20)	(-2.15)
Observations	304	304
R^2	0.29	0.31
Adjusted R^2	0.248	0.265
F statistic	13.68***	17.15***

Note: Continuous variables are winsorized at the 1% level.
Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 5.21: Robustness Check for H2b

	(1)		(2)
		H2b	
VARIABLES	CSRD		CSRD
Taoism150	5.437***		
	(3.20)		
Taoism250			3.467***
			(2.50)
STATE	-5.354***		-4.637***
	(-3.49)		(-3.27)
BSIZE	2.927***		2.943***
	(4.01)		(4.03)
IB	-5.646***		-5.444***
	(-4.22)		(-3.91)
GENDER	0.678***		0.939***
	(3.13)		(4.62)
LEV	0.036		0.015
	(0.75)		(0.33)
CASH	-19.136***		-20.002***
	(-3.02)		(-3.10)
lnSIZE	4.074***		3.654***
	(4.07)		(3.99)
Year fixed effect	YES	YES	
Constant	-60.223***		-54.963***
	(-2.82)		(-2.66)
Observations	304		304
R^2	0.27		0.30
Adjusted R^2	0.228		0.255
F statistic	11.01***		22.28***

Note: Continuous variables are winsorized at the 1% level.
Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 5.22: Robustness Check for H2c

	(1)	(2)
	H2C	
VARIABLES	CSRD	CSRD
Catholicism150	1.557***	
	(5.13)	
Catholicism250		1.369***
		(4.77)
STATE	-3.796***	-7.550***
	(-2.91)	(-4.68)
BSIZE	2.964***	2.540***
	(4.09)	(3.62)
IB	-5.381***	-3.661**
	(-3.50)	(-2.43)
GENDER	0.828***	0.869***
	(4.16)	(5.10)
LEV	0.036	0.093**
	(0.82)	(2.10)
CASH	-16.396***	-15.836***
	(-2.79)	(-2.73)
lnSIZE	2.618***	3.894***
	(3.11)	(4.26)
Year fixed effect	YES	YES
Constant	-32.452*	-66.850***
	(-1.74)	(-3.32)
Observations	304	304
R^2	0.36	0.34
Adjusted R^2	0.317	0.299
F statistic	21.97***	22.51***

Note: Continuous variables are winsorized at the 1% level.
Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5.5 Summary of the Chapter

The main purpose of this chapter is to present the results of the study. The descriptive statistics, the correlation analysis, and the regression results are presented accordingly. In summary, both the correlation analysis and regression analysis indicate a positive correlation between religion and the pharmaceutical companies' CSRD quality. The relationship is weakened when the state owns the companies. Further, the results proved that religion's influence on CSRD quality is only supported in Buddhism, Taoism, and Catholicism. Protestantism and Islam showed no influence on CSRD quality in this research. The next chapter discusses the findings and concludes the dissertation.

CHAPTER 6: DISCUSSION AND CONCLUSION

6.1 Introduction

The purpose of this chapter is to discuss the findings and to conclude the study. This chapter comprises seven sections. Subsequent to this introduction, Section 6.2 presents a summary of the findings. Section 6.3 discusses the main findings. Section 6.4 offers theoretical contributions. Section 6.5 illustrates the practical implications. The limitations of and recommendations to future research are organized in Section 6.6. The final section presents a conclusion of the dissertation.

6.2 Summary of Findings

In summary, panel data regression results and the Spearman correlation reveal that religion, as an informal institution, has a significant influence on the CSRD quality of the pharmaceutical companies in China. But the conclusion is only supported in the case of Buddhism, Taoism, and Catholicism, whereas Protestantism and Islam have insignificant influence. Further, state ownership acts as a moderator in affecting the relationship between religion and the CSRD quality. This section illustrates the key findings from the study based on the research objectives stated in Chapter one. The study aims to achieve three objectives:

1. To investigate the influence of religion on the CSRD quality in the pharmaceutical industry in China.

2. To identify whether different religions show different influences on the CSRD quality in the pharmaceutical industry in China.

3. To examine whether the state ownership moderates religion's influence in promoting the CSRD quality in the pharmaceutical industry in China.

6.2.1 Religion and CSR Disclosure Quality

The first objective of this study is to investigate the influence of religion on the CSRD quality in the pharmaceutical industry in China. The panel data regression results presented in Chapter five suggest that religion significantly influences the quality of CSRD of the pharmaceutical companies. The results also depict that the more worship places around pharmaceutical companies' headquarters, there will be higher the intention to perform better CSR, subsequently, the better CSRD quality. In addition, the Spearman correlation analysis showed that Religion100, Religion200, and Religion300 have a significantly positive correlation with the CSRD quality. Hence, Both statistical results indicate that H1 can be accepted.

6.2.2 Different Religions and CSR Disclosure Quality

The second objective is to identify the influence of different religions on the CSRD quality in the pharmaceutical industry in China. The panel data regression results indicate a significant impact of Buddhism on the CSRD quality of pharmaceutical companies. The results also illustrate that the more Buddhism Monasteries around pharmaceutical companies' headquarters, there will be better CSRD quality. Further, the Spearman correlation analysis showed that Buddhism100, Buddhism200, and Buddhism300 forms a significantly positive association with CSRD quality. Thus, H2a is accepted.

Furthermore, the panel data regression results illustrate that Taoism has an essential impact on the pharmaceutical companies' CSRD quality. The results further suggest that the more Taoism Temples around pharmaceutical companies' headquarters, the better the CSRD quality. Moreover, Taoism100, Taosim200, and Taoism300 are positively correlated with the CSRD quality in the Spearman correlation matrix. Hence, H2b is also accepted.

Moreover, the panel data regression results indicate an influence of Catholicism on the pharmaceutical companies' CSRD quality. It further addresses that the more Catholicism Churches around pharmaceutical companies' headquarters, the better the CSRD quality corresponds. Besides, the Spearman correlation presents that Catholicism100, Catholicism200, and Catholicis300 are significantly positively related to the CSRD quality at the 10% level. We can conclude that H2c is accepted.

In contrast, the panel data regression results indicated an insignificant influence of Protestantism on pharmaceutical companies' CSRD quality. The finding is also consistent with Spearman correlation results, which indicated that Protestantism100, Protestantism200, and Protestantism300 are not correlated with the CSRD quality. Thus, H2d is rejected. Also, panel data regression results and the Spearman correlation illustrate an insignificant association between Islam and the CSRD quality. We can conclude that Islam does not influence the CSRD quality of pharmaceutical companies. Therefore, H2e is also rejected. In summary, we can conclude that H1 is only accepted in the case of Buddhism, Taoism, and Catholicism, whereas Protestantism and Islam have insignificant influence.

6.2.3 State Ownership, Religion, and CSR Disclosure Quality

The third objective is to examine whether state ownership moderates the religion's influence in promoting CSRD quality in China's pharmaceutical industry. As expected, SOEs and non-SOEs show differences in CSR-related decision-making. The Spearman correlation analysis indicates that state ownership is significantly negatively correlated with Religion100, Religion200, and Religion300, illustrating a possible moderating role of the state ownership against the relationship between religion and the CSRD quality. It is further supported by the panel data regression results, which found that the influence of religion on CSRD quality is moderated by state ownership. The results indicated that the influence of religion on CSRD quality is less-pronounced when the state owns a pharmaceutical company. The better CSRD quality of SOEs may due to the formal institutions. Hence, H3 is accepted.

For clarity, Table 6.1 presents the summary of the hypotheses testing

Table 6.1: Summary of Hypotheses Testing

Hypotheses	Results
H1: There is a positive relationship between religion and the CSRD quality in the pharmaceutical industry in China.	Accepted
H2a: There is a positive relationship between Buddhism and the CSRD quality in the pharmaceutical industry in China.	Accepted
H2b: There is a positive relationship between Taoism and the CSRD quality in the pharmaceutical industry in China.	Accepted
H2c: There is a positive relationship between Catholicism and the CSRD quality in the pharmaceutical industry in China.	Accepted

H2d: There is a positive relationship between Protestantism and the CSRD quality in the pharmaceutical industry in China.	Rejected
H2e: There is a positive relationship between Islam and the CSRD quality in the pharmaceutical industry in China.	Rejected
H3: The positive relationship between religion and the CSRD quality in the pharmaceutical industry in China is weaker for SOEs than for non-SOEs.	Accepted

6.3 Discussion of Main Research Findings

Findings from the data illustrate that religion plays an important role in influencing the pharmaceutical companies' CSRD quality in China, and the aforementioned relationship is conditioned by state ownership. In addition, the results also show that different religions in China have a different impact on pharmaceutical companies' CSRD quality. This section discusses the key findings in-depth and includes seven subsections with respect to the seven hypotheses.

6.3.1 Religion and CSR Disclosure Quality

The results provide evidence on the significant influence of religion on pharmaceutical companies' CSRD quality. The findings are in line with prior researchers in China, they advocate the impact of religion on corporate CSR-related decision-making, including philanthropic giving (Du et al., 2014), CER performance (Du et al., 2014), CSR deficiency disclosure (Jin et al., 2019) and CSR performance (Du et al., 2016; Su, 2019). Though existing studies have examined various aspects of CSR, none of the studies have focused on religion's possible role in influencing the CSRD quality. Thus, we extend current researches by investigating the impact of religion on

CSRD quality. Compared to prior literature, the empirical results of this study suggested that the influence of religion on the CSRD quality workable in the case of Buddhism, Taoism, and Catholicism. This finding is special in light of prior research in the China context. Their focus is only on Buddhism and Taoism. This research examined the five officially registered religions (recognized by the government) and further explored the possible role of Catholicism, Protestantism, and Islam other than Buddhism and Taoism. Hence, it can provide a clearer picture of religion's influence in China on companies' CSR-related decision-making.

The findings are also consistent with international researchers that present a positive influence of religion on corporate CSR activities and its disclosing (Angelidis & Ibrahim, 2004; Aribi & Gao, 2011; Brammer et al., 2007; Chantziaras et al., 2020; Mazereeuw-van der Duijn Schouten et al., 2014; Shinnaranantana et al., 2013; Sobhani et al., 2011). It is because prominent religions' common preachings bring a sense of social responsibility (Farooq et al., 2019). The major world religions all encourage charity and caring for the poor. Thus, CSR policies are likely aligned with the religious beliefs of the local area (McGuire et al., 2012). Local religious norms are deeply rooted in societal values (Griffin & Sun, 2018). From an institutional theory perspective, when religion rises as a socially accepted norm, it guides in an informal way how companies behave. Thus, such norms represent critical factors for them to seek legitimacy. When the companies are located in an area with a strong religious environment (surrounded by many worship places), religion impacts religious practitioners and non-believers. It is

because non-believers are supposed to interact with local religious stakeholders (Du et al., 2014; El Ghoul et al., 2013).

Furthermore, this study was inspired by Sobhani et al. (2011) and Chantziaras et al. (2020). Their research focused on the banking sector in Bangladesh and the U.S contexts, respectively. They concluded that religion is positively correlated with banks' CSRD practices. Our findings are generated from the pharmaceutical industry in China, a leading producer and consumer in the world (Pan et al., 2016). This study found that religion influence pharmaceutical companies' intention to disclose high-quality CSR information as the companies become familiarized with and internalize local beliefs and values as a result of their interactions with institutions. This process helps companies' attitudes toward social responsibility. Disclosing high-quality CSR information enables pharmaceutical companies to express their respect for the common good, which is highly valued by the local communities. Hence, religion can be an essential factor in promoting CSRD quality in the pharmaceutical sector in China.

6.3.2 Buddhism and CSR Disclosure Quality

The findings of this study evidence the influence of Buddhism on pharmaceutical companies' CSRD quality. The result is consistent with prior research in the China context that examining the influence of Buddhism on CER (Du et al., 2014). Their study highlighted the important role of Buddhism in influencing the environmental aspect of CSR. This study extended their findings by investigating the influence of Buddhism on companies' disclosure performance, specifically, the quality of CSRD.

On the one hand, the beliefs and practices Buddhism in China underlying; specifically, the three core tenets and Four Immearurables as essential preachings of Buddhism are consistent with the notion of CSR (Pace, 2013). Hence, in a religious environment (surrounded by many Buddhism Monasteries), Buddhism (representing an informal institution) can motivate pharmaceutical companies to disclose their CSR information as CSRD is a communication tool that they can show their social responsibility towards communities. Disclosing high-quality CSR information enables pharmaceutical companies to express their respect for the common good, which is highly valued by the local communities. Therefore, it is reasonable to conclude that the more Buddhist monasteries are located around pharmaceutical companies, the stronger intention of the companies to invest in CSR-related performance; hence, there will be better CSRD quality.

On the other hand, the religious revival indicates that Buddhism, as the dominant religion in China, can influence pharmaceutical companies' behavior and decision-making. Buddhism is the oldest foreign religion and is the most influential religion in China (Du et al., 2014). Buddhist monasteries are distributed throughout the country. Buddhism, along with Taoism and Confucian philosophy, permeated Chinese culture and became one of the three pillars of Chinese civilization. The influence of Buddhism teachings not only on Buddhists but also on ordinary citizens, even if subconsciously. For instance, Chinese vocabulary reflects its impact in terms and phrases such as "shijie" (world) and "yinyuan" (karma), commonly used in daily life

(Du et al., 2014). Therefore, this research has proved Buddhism as one of the determinants of the CSRD quality of pharmaceutical companies in China.

6.3.3 Taoism and CSR Disclosure Quality

The results indicate a significant positive relationship between Taoism and the CSRD quality in the pharmaceutical sector. Our finding is in line with existing studies in the China context that evidenced the role of Taoism in influencing companies' CSR-related decision-making (Du et al., 2014; Du et al., 2016; Jin et al., 2019). It is because Taoism's teachings direct leaders to pursue a basic blueprint of not only doing good but also being good (Zu, 2019). Further, similar to Buddhism, Taoism powerfully affected Chinese philosophy, culture, and society (Roberts, 2001). It is rooted deeply in the Chinese tradition. Hence, it is no surprise that pharmaceutical companies in China influenced by Taoism beliefs (representing an informal institution) paid close attention to their CSRD quality.

From the perspective of Taoism, the Tao of a company is the right way to conduct business, where the right way is the "natural way" or the "truth" (Jin et al., 2019). It requires the right way to manage the relationship between man and themselves, man and nature, man and society. The relationships emphasize harmony, which can be understood as "respecting nature and loving people" (Wang & Juslin, 2009). Thus, Taoism proposes that nature works harmoniously according to its ways. The man should not try to harm and master it, and if nature suffers from human beings, it will retaliate against man and cause disasters (Chan & Lau, 2000; Chen, 2003). Therefore,

pharmaceutical companies that are influenced by Taoism require themselves to apply the concept of harmony to their business and harmoniously carry on their business.

Further, the overall goal for a company in implementing CSR is to contribute to the construction of a harmonious society (Wang & Juslin, 2009). Disclosing CSR information is the way that they communicate their accountability towards their communities. Hence, as China's indigenous religion, Taoism can influence pharmaceutical companies' CSRD performance, specifically, the quality of the CSRD in this study.

6.3.4 Catholicism and CSR Disclosure Quality

The findings indicated that Catholicism has a significant impact on pharmaceutical companies' CSRD quality. Although none of the existing studies empirically examine the influence of Catholicism in promoting CSRD quality in China context, we empirically investigated this association. The relationship was found to be significant. Therefore, our finding is in line with international literature that has seen the connection between Catholicism and corporate sustainability (Rousseau, 2017), and Catholicism and CSR (Harjoto & Rossi, 2019). We complemented their studies and focused on the possible role of Catholicism in the China context. Catholic teachings play a role in guiding businesses from a moral compass. Information disclosure as a way to show transparency to companies' stakeholders is to be influenced by CST. From the institutional perspective, Catholic teachings, as an informal institution, play a role in influencing how companies disclose CSR activities. Hence, this study found a significant positive relationship between Catholicism and the CSRD quality.

The western concept of CSR can be seen as originating, in part, from the doctrine of the Catholic Church (Harjoto & Rossi, 2019). The link between Catholicism and CSR is rooted in the principles of CST (Rousseau, 2017). For instance, according to the personalist principle of CST, "No human being should ever be treated as a mere means to an end" (Vaccaro & Sison, 2011). Hence, companies have the moral duty to disclose information to stakeholders (Vaccaro & Sison, 2011). The disclosing information also includes companies' CSR initiatives other than pure economic information. Therefore, Catholicism is proven to has an impact on the quality of CSRD of pharmaceutical companies, as CST encourages companies to take care of individuals' right to seek the truth and access to CSR information and to identify whether or not the pharmaceutical companies acknowledged high standard of CSRD.

In the case of China, Catholics are settled throughout the country, both official and underground. They are now under the leadership of a reconstituted hierarch, which has led to a homogenization of Catholic teaching and practice (Madsen, 2019). Further, Chinese Catholics gained much support from the Pope. Therefore, Catholicism, the imported western religion, has flourished in China in recent years. Catholicism has the most registered worship places compare to the other four religions in China. Therefore, pharmaceutical companies located around Catholic churches are likely to be influenced by Catholic teachings, which affect their corporate decisions making, including their CSRD decisions. Hence, the study's finding supports the institutional theory that Catholicism, as an informal institution, influences pharmaceutical companies' CSRD quality.

6.3.5 Protestantism and CSR Disclosure Quality

The findings indicated that the correlation between Protestantism and the pharmaceutical companies' CSRD quality is insignificant. Although none of the existing studies empirically examine the influence of Protestantism in promoting the CSRD quality, we empirically investigated this association. Protestantism and Catholicism are two denominations of Christianity. In our investigation, the relationship between Protestantism and the CSRD quality was found to be insignificant, whereas Catholicism has a significant influence. The possible reason may be explained based on how Protestantism is situated in the China context. Catholic missions in China that had a lasting impact were initiated earlier than their Protestant counterparts, and Catholicism has become overwhelming eclipsed by Protestantism in terms of membership, vitality, geographic distribution, and other indicators (Sun, 2019).

Further, the government closed churches during the Cultural Revolution period when religious activities were forbidden. Protestantism had experienced a resurgence after the opening-up policy in 1978 when the government began to tolerated religions' practice. However, the increase was underground, with people worshiping in families, with their neighbors. They are colloquially referred to as "house churches" because most are small, and members often meet for worship in a home rather than a chapel (Hunter & Chan, 1993). There are many unregistered Protestantism Churches, which are different from other religions with mostly registered worship places. Many of those who belong to unregistered churches (house churches) are in such churches because they strongly resist cooperating with the government. The unregistered churches take a large

proportion (80%) of Protestant members (Cao, 2011). In other words, the registered worship places only include 20% of the Protestantism in China, and most of Protestantism practice their beliefs underground. Unlike other religions, most of the Protestantism activities are underground; in this regard, the influence of Protestantism values is strictly within their groups. Their pray is not publicly practiced and is often unknown by others who are non-protestants. Further, the insignificant influence may largely due to the unequal distribution of Protestant Churches. In total of 141 Churches, 113 Churches are in ShangHai city. Hence, we evidenced an insignificant influence of Protestantism on companies' decision-making, CSRD decision specifically.

6.3.6 Islam and CSR Disclosure Quality

The findings of this study evidenced an insignificant impact of Islam on pharmaceutical companies' CSRD quality in China. Existing literature has empirically supported that Islamic principles encourage the diffusion of CSRD practices (Aribi & Gao, 2011; Sobhani et al.., 2011). However, the finding of this study is contradicted their conclusion and presented that Islam does not influence the CSRD quality in the pharmaceutical industry in China.

Islam came to China during the Tang Dynasty (7th-10th Centuries). For a long period thereafter, there was no question of the Muslims Sinicizing or the Chinese Islamizing until Mongol rule (14th Century)(Israeli, 1978). Neither did the Muslims in China attempt to spread their faith overtly, because they must have been aware, form the very outset, of the vitality of the Chinese system and of the strength of the unitarian Chinese state attached to that system, which would make any mass Islamization

unlikely if not impossible (Israeli, 1978). Since then, the population of Muslims in China is strictly located in several provinces, which only takes a small proportion of the Chinese population (Dillon, 1994).

Therefore, the insignificance influence of Islam compared to other religions such as Buddhism, Taoism, and Catholicism on the CSRD quality of the pharmaceutical companies may be due to the small proportion of the population. Although Islam is also one of the officially recognized religions in China, the practice of Islam in China is mainly concentrated in several provinces, including the Xinjiang Uygur Autonomous Region, the NingXia Hui (Muslims) Autonomous Region, Qinghai province, and Gansu province. Only a limited number of Muslims live in other locations such as the big cities of Beijing, Shanghai, and Guangzhou, where business activities flourished, or in other words, where the majority of the companies' headquarters are located. Although Muslims and Islamic teachings dominate the four provinces and are the only guidance of their lives, the influence of Islam in China on both individuals and companies is mainly within these four provinces. Therefore, The impact outside these provinces is weak.

6.3.7 State Ownership, Religion, and CSR Disclosure Quality

The results of this study illustrate that state ownership moderates the relationship between religion and CSRD quality. The finding is consistent with a prior study by Du et al. (2014). Their study found that state ownership moderates the relationship between religion and corporate philanthropic giving. Inspired by their findings, this study examined the moderating role of state ownership against the relationship between

religion and CSRD quality. The state acts as both the regulator and the facilitator. It has an essential role in pushing the development of CSRD practice through norms and standards-setting and providing guidance (Hu et al., 2018; Lau et al., 2016; Wang et al., 2016). State-owned companies are forced to be highly involved in CSR activities due to formal institutions. The government has a political expectation that SOEs must act as the "Leading Example" to other non-SOEs. Hence, their better CSRD quality is largely associated with their political connections with the government.

Further, China is a party dominant country, and most of the large companies are state-owned. The Party appoints senior leadership of the companies. Hence, top managers of state-owned pharmaceutical companies are always Chinese Communist Party members who tend to have atheist views, while non-SOEs top management is unlikely to be (Du et al., 2014). As the sold owner of SOEs, the atheist views of the top managers influence on beliefs of the SOEs. As they have broader strategic and political objectives, they are more likely to be active in CSR-related performance (Hu et al., 2018). Hence, state-owned pharmaceutical companies' motivation to produce high-quality CSR reports are less likely to be religiously influenced, but largely due to the constraints of formal institutions, state ownership in specific. Therefore, we conclude that the influence of religion on CSRD quality is less-pronounced if the state owns the pharmaceutical companies. In other words, state ownership moderates the relationship between religion and CSRD quality.

6.4 Theoretical Implications

The importance of this study is to facilitate the understanding of the problems of CSRD in developing countries, which cannot be devalued since the majority of the world's population lives in developing countries that have unique social, cultural, political, and environmental characteristics (Fifka, 2013; Tilt, 2016). The study presents new evidence on the determinants of the CSRD quality in the pharmaceutical industry in China from the perspective of institutional theory. Hence, the study contributes towards a better understanding of drivers of CSRD of pharmaceutical companies in China. Specifically, the research sheds light on the possible consequences of religion (representing informal institution) on pharmaceutical companies' CSRD quality. It is the first study that had done so.

Further, the study evidenced that the impacts of religions on CSRD are different. This is consistent with existing studies in China that found different impacts of different religions on companies' behaviors (Du, 2013; Su, 2019). In this research, Buddhism, Taoism, and Catholicism are the three dominant religions that have a significant impact on the CSRD quality of pharmaceutical companies, whereas Protestantism and Islam have an insignificant effect. Therefore, the study provides additional information about the influence of religion on corporate behaviors (CSRD performance in this study), and it provides insights into people interested in understanding religious status in China.

Further, China is a country governed by one Party that adopted atheism as the essential beliefs. In this circumstance, this study provides useful information in understanding the co-existence of religion and the government in influencing the CSRD

decisions of pharmaceutical companies. Prior literature has proved that state ownership is associated with a better CSRD performance due to their political connections with the government (Lau et al., 2016; Want et al., 2016). Studies have also indicated that religion has an impact on companies' CSR performance (Du et al., 2016; Su, 2019). However, none of the studies thus far to exam the possible moderating role of state ownership against the relationship between religion and CSRD quality. The results suggest that state ownership, represents formal institutions, plays a moderating role in the relationship between religion and CSRD quality. The findings demonstrated that when the government controls the pharmaceutical companies, its CSRD quality is less likely to be influenced by religion. In contrast, the influence of religion is stronger when pharmaceutical companies are not owned by the government. Therefore, the study also contributes theoretically to the study of CSRD practices by testing the moderating variable. This study is also the first attempt.

6.5 Practical Implications

Understanding the determinants of CSRD can improve policy, provide better support, and provide adequate supervision to encourage better CSRD outcomes. Likewise, in China, there is very limited knowledge about disclosure to a large extent and the drivers of, and barriers to, CSRD more specifically. Therefore, this study could initiate knowledge that can help improve policy and motivations for companies to involve in and disclose CSR information.

Particularly, the increasing scandals of pharmaceutical companies lead to a more pressing need for CSR and CSRD investigation of this sector. The findings established

in this study provide evidence on determinants of the pharmaceutical companies' CSRD quality that can assist various stakeholders (managers of pharmaceutical companies, investors, regulators, and the public) in making relevant economic decisions. The study suggests that both formal and informal institutional forces promote CSR practices of pharmaceutical companies. Hence, Analysts and market participants should be aware that the decisions of CSRD may be a strategy dependent on the institutional environment of local societies.

6.6 Limitations of and Recommendations for Future Research.

Following Du et al. (2014), it cannot be denied that the measurement of religion in this study may have a disadvantage in the failure to fully capture the potential spiritual status of Chinese society. Nevertheless, it is challenging to assert people's religious status in China, and there is frequent incongruence between interviewees' claims and actual thoughts. So information from interviews or surveys inevitably suffers some bias. Accordingly, the intensity of the religious worship place is more objective. Future research may measure religion, combining both data sources.

Besides, this research investigated the influence of religion on CSRD quality only in part of the pharmaceutical industry in China, so the results should not be generalized to other countries and societies because of diversified institutional settings. Further study may explore the influence of religion in different countries and different sectors.

Also, the study relied on the RKS scores to measure CSRD quality, although the RKS, like all quantitative measures, has its inherent limitations. Future research may consider other sources of CSRD scores or types of measurement.

6.7 Conclusion

This research empirically examined the determinants of CSRD quality. Specifically, the main goal of the current study is to investigate the influence of religion, an informal institution, on the CSRD quality in China's pharmaceutical industry. In line with the research objectives, the study posed two research questions: **First**, does religion influence the CSRD quality in the pharmaceutical industry in China? **Second**, does the state ownership moderate the influence of religion on the CSRD quality in the pharmaceutical industry in China? The study postulates that institutional factors have an influence on the CSRD quality of pharmaceutical companies in China.

The study adopted an institutional theory to explain the causal linkages between religion and CSRD quality. It specifies three issues. **First**, to investigate the influence of religion, an informal institution, on the CSRD quality in China's pharmaceutical industry. **Second**, to identify the influence of different religions on CSRD quality. **Third**, to examine formal institutions, state ownership in specific, moderate the relationship between religion and CSRD. Consequently, the study developed seven hypotheses. In order to test the hypotheses, it adopted a positivist paradigm and a quantitative approach. The final sample contains 304 firm-year observations. The majority of the data are secondary. The data sources include the RKS database, CSMAR

database, and council websites. The study employed a panel data regression analysis to test the relationships being hypothesized.

Generally, consistent with institutional theory, three conclusions can be drawn based on the empirical results. **Firstly**, the findings indicate that religion, an informal institution, plays a significant role in influencing the quality of CSRD in the pharmaceutical industry. **Secondly**, it can be concluded that different religions in China have a diffident influence on the CSRD quality of pharmaceutical companies. **Lastly**, state ownership, a formal institution, moderates the relationship between religion and the CSRD quality in the pharmaceutical industry. Hence, this research demonstrates that pharmaceutical companies with a higher CSR disclosure quality are positively correlated with religion, a relationship that weakens when the state owns the companies. Further, the results indicate that the influence of religion on CSRD quality is only supported in the case of Buddhism, Taoism, and Catholicism. Protestantism and Islam show an insignificant influence on CSRD quality.

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