Factoring Socially Responsible Investment Strategy Preferences: An

Investigation Based on Chinese Individual Investors

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Declaration

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Signed: Dan Cui

Date: Aug 2024

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Abstract

This thesis examines the factors that influence individual investors' preferences for socially responsible investment (SRI) strategies. The study focuses on the Chinese market and collected 693 responses from various provinces in China through a questionnaire. The questionnaire aims to understand individuals' perceptions of SRI from ethical, financial, and practical viewpoints.

A multinomial logistic regression based on the responses reveals how individuals' perceptions regarding SRI, demographics, and investment features explain their preferences for different ways to incorporate socially responsible information into investing. This study finds that individual investors with ethical considerations are more likely to incorporate SR information into their investment decision-making process through positive and negative screens. Their self-rated SRI knowledge level is essential in differentiating their preferences for positive and negative screening strategies. Young females prefer the positive screening strategy compared with other socio-demographical groups. The study further examines whether provincial cultural values influence individuals' SRI strategy preferences. This study finds no significant relationship between cultural values and SRI strategies either directly or indirectly when interacting with individuals' knowledge levels.

The study contributes both to academic literature and practice by exploring different factors behind individuals' preferences for SRI strategies. Evidence indicates that investors are heterogeneous when considering SRI, and individual differences are more prominent in explaining their preferences for different SRI strategies.

List of Abbreviations

Akaike Information Criterion	AIC
Bayesian Information Criterion	BIC
Chinese Values Survey	CVS
Confirmatory Factor Analysis	CFA
Corporate Social Performance	CSP
Corporate Social Responsibility	CSR
Exploratory Factor Analysis	EFA
Global Sustainable Investment Review	GSIR
Individualism	INV
Indulgence vs. Restraint	IVR
Iterated Principal Factor Analysis	IPA
Long-term Orientation	LTO
Masculism vs Feminism	MAS-FEM
Maximum Likelihood	ML
Perceived Consumer Effectiveness	PCE
Power Distance	PD
Principle Component Analysis	PCA
Short-term orientation	STO
Social, Ethical, and Environmental	SEE
Socially Responsible	SR
Socially Responsible Investment/Investing	SRI
Sustainable Investment Forum	SIF
Uncertainty Avoidance	UA
World Value Survey	WVS

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CHAPTER 1 INTRODUCTION

1.1 Background of the research

Socially responsible investment (SRI), which incorporates non-financial attributes such as social, ethical and environmental issues into the investment process, has drawn significant attention worldwide. As shown by the report [1] from GSIA (Global Sustainable Investment Alliance) in 2022 (GSIA, 2023), the sustainable assets being managed have accounted for about one-third of the total assets under management worldwide and reached the amount of 30.3 trillion US dollars in total within Europe, the United States, Canada, Japan, Australasia. Although still at its preliminary stage, SRI in China has also experienced a rocketing increase. By the end of 2023, the number of ESG mutual funds reached 747, with the total size reaching 500 billion RMB[2] (GSIA, 2023). Socially responsible investors who engage in SRI play a crucial role in promoting its development. In developed markets, the origin of SRI is initiated by religious investors translating their moral principles into investment behaviour. The evolvement of SRI in those markets is majorly promoted by investors with social awareness in addressing those issues through investing (Solomon et al., 2002; Sparkes & Cowton, 2004). The growth of SRI in emerging markets is also influenced by the power of shareholders seeking socially responsible alignment in their international investment.

Therefore, studying socially responsible investors is of particular importance and interest among academics. Understanding human behaviour is difficult, especially in

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[1] A report conducted by Global Sustainable Investment Alliance, a global wide membership-based sustainable investment organisation
[2] Approximately 69.15 billion US dollars with exchange rate of 1 US dollars =7.23 RMB.

the context of SRI. Incorporating non-financial goals complicates investment behaviours because they contradict traditional financial logic. Classical portfolio management theory treats the return-risk profile as the only criterion to gauge investment. The additional screening of SRI using non-financial criteria would prevent investors from forming a fully diversified portfolio that leads to an inferior risk-return profile. Also, the screening of stocks generates additional managerial fees and transaction costs (Barnett & Salomon, 2006; Bauer et al., 2005).

The motivation of individuals to engage in SRI can still be explained with the underlying profit-maximisation logic, where the instrumental application of stakeholder theory (Freeman, 2010) proposes that addressing the environmental, social and governance issues related to stakeholders (employees, suppliers, customers and society) benefit shareholders' financial situation in the long run. Additionally, the motivation to incorporate non-financial pro-social aspects can also be explained through an ethical decision-making perspective, where individuals seek ethical consistency and efficiency through investment activities (Sandberg & Nilsson, 2015), similar to their preferences for socially responsive products as consumers (Glac, 2009).

The complexity of SRI attracts extensive research studying socially responsible investors in mature and developed markets such as the US, UK and European countries (Diouf et al., 2016; Gutsche & Ziegler, 2019; Lewis & Mackenzie, 2000; McLachlan & Gardner, 2004; Nilsson, 2008). Increasing but limited literature is trying to understand SRI and SR investors in emerging markets (Adam & Shauki, 2014; Singh et al., 2021). As mentioned in the study of Sandberg et al.(2009), the cultural

differences and variations in how SRI developed across regions have resulted in heterogeneity in SRI regarding terminologies, concepts and practices. The study of SR investors is more meaningful to both practitioners and policymakers based on a specific country context than generalising SR investors as a homogeneous group. This research aims to understand SR investors in China and investigate the factors behind their SRI behaviour, as explained further below.

1.2 Research question and objectives

As mentioned in the introduction section, the origin of SRI in developed markets such as the UK and European countries has ethical roots. The evolvement of SRI terminologies is adopted according to investors' ethical demands. Incorporating personal values, social and environmental concerns and corporate issues in the investing process has been considered both rival and complementary to conventional investment (Michelson et al., 2004; Sparkes, 2001). The duality of SR investors has been studied mainly in the context of developed markets. Several academics confirm that individual investors are influenced by social considerations when making SRI decisions (Glac, 2009; Nilsson, 2009). Individuals with a pro-social attitude regarding SR issues are more likely to invest in SRI products (Nilsson, 2008). SR investors are more loyal to holding SRI funds and less sensitive to returns (Benson & Humphrey, 2008; Liu & Peifer, 2022). The awareness of the pro-social issues in investment and the willingness to forgo financial returns shows that ethical consideration is a feature of SR investors. In addition, the profiling of SR investors in terms of their social and demographic characteristics shows that they differ from conventional investors (Bauer & Smeets, 2015; Diouf et al., 2016; McLachlan & Gardner, 2004; Rosen et al., 1991).

Age, education and gender are the main variables that have been discussed when separating SR investors from conventional ones. Young females with higher education are more likely to engage in SRI. China Sustainable Forum (China SIF) has been conducting questionnaires to individual investors in China regarding their views on SRI consecutively since 2020. Their latest questionnaire results show that individual investors are motivated by seeking investment in accordance with their personal value, which indicates that the non-financial goal may also influence Chinese individual investors in SRI behaviours. As there is no similar academic research conducted within China, it is necessary to explore the heterogeneity in individuals' perceptions of SRI before addressing the factors behind their SRI behaviours.

Unlike the more mature and developed market, the development of SRI in China is a response to international expectations, government incentives and Chinese societal expectations of business responsibility, among which external influence is the primary force (GSIA, 2021). Investors are less prominent in promoting and directing SRI evolution in China (Hofman et al., 2017). In addition, even with rapid development in terms of SRI funds size and number, there is still concern about the quality of CSR information (Hofman et al., 2017; Marquis & Qian, 2014) and limited knowledge and recognition among investors of SRI concepts (China SIF, 2021). Individual investors in China contribute about 85% of the daily trading volume on the Chinese stock exchange (Jones et al., 2021). The predominant composition in the capital market makes this group crucial for researchers, regulators, and practitioners to understand individuals' investment choices. In addition, SRI in China developed differently from a mature market with ethical roots. It evolved with the international and governmental

requirements regarding social responsibility. It is a top-down process with more socially aware investors and gradually diversified investment sources for SRI. In considering the distinct development of SRI compared with the developed market, the investigation of SR investors' behaviours has to consider the influence of the practice environment of SRI.

Most of the existing research investigates SR investors' behaviour through whether they have SRI holdings (Diouf et al., 2016; Nilsson, 2008), such as their investment level in SRI funds. This typology can only shed light on separating SR investors from conventional investors without considering the heterogeneity within SR investors. Investors' preferences for different strategies reflect their variation on ethical and financial requirements. The negative or positive screening strategy further separates SR investors from each other. However, there is no literature on investors' strategy preferences to classify different groups of SR investors and investigate how different factors influence those investors.

Moreover, according to existing literature, the heterogeneity of SR investors and their behaviours only discusses factors on an individual level (Diouf et al., 2016; McLachlan & Gardner, 2004; Nilsson, 2008, 2009). For instance, personal values and beliefs regarding SRI behaviours are researched (Brodback et al., 2019; Gutsche & Ziegler, 2019). There is a lack of discussion on regional/country-level factors, such as overall economic and cultural differences. The effect of culture is not discussed in the study of individual investors in terms of SRI. Hong and Kacperczyk (2009) provide evidence of the effect of social norms on markets of sin stocks (publicly traded firms in alcohol,

tobacco and gambling industries). Cai et al.(2016) also argue that people's financial choices are determined by their predominant values within the same culture. The institutional theory provides a theoretical baseline to link cultural factors to organisational decision-making by discussing its impact on economic activities as a specific social environment. As for individuals, business ethics literature discussed culture's effect on ethical decision-making (Vitell et al., 1993). In considering the duality of investors' desire for social and financial achievement (Riedl & Smeets, 2017), their decision-making processes are complicated when morality goals have a role to play (Glac, 2009). A deeper examination from a cultural perspective is needed.

Therefore, based on existing literature and the distinctiveness of SRI in China, this research raises the research question:

What is the heterogeneity of Chinese individual investors regarding their perceptions of SRI, and how do peoples' views determine their SRI strategy preferences?

In order to answer the research question, this study has the following research objectives:

1. To explore the heterogeneity of individual investors regarding SRI

2. To investigate the factors that influence people's preferences for different SRI strategies

1.3 Scope of the research

In order to answer the research question, this study analyses primary data collected

from a questionnaire distributed to individual investors across different provinces within China. The sample consists of 693 responses from 30 provinces. This study discusses the heterogeneity of SR investors from ethical, financial and practical perspectives. People's preferences for SRI strategies, which consist of the SR screening strategy of positive and negative screenings and the non-SR strategy of non-screening, are the focus of this study. Investigation of the factors determining the preferences is based on individuals' perceptions of SRI from the questionnaires and also on provincial cultural values. The cultural values are represented by Hofstede's individualism and LTO dimension that is generated based on the World Value Survey (WVS) dataset waves 5,6 and 7 in China.

1.4   Overview of research design

In order to fulfil those two research objectives, this study applies a multi-method quantitative study consisting of multiple data collection techniques and analysing procedures (Saunders, 2023). A research design outline can be found in Chapter 3, Figure 3.1. Firstly, an exploratory questionnaire is designed to provide information on individuals' ethical, financial and practical perceptions related to SRI. The questionnaire instrument is used to better understand how individual investors understand SRI in China. Individuals' SR perceptions include the motivation to incorporate SR information, pro-social concern and the extent of the importance of non-financial value in SRI, which reflects their moral considerations regarding SRI. In addition, individuals' practical perceptions regarding SRI, including their knowledge and SR information access and their preferences for SRI strategies, are also investigated through the questionnaire. A descriptive analysis of questionnaire items

related to people's perceptions and attitudes towards SRI is aimed to fulfil the first research objective.

The second research objective is obtained by investigating factors behind individuals' SRI strategy preferences. People with a pro-social attitude and awareness are more likely to invest in SRI. However, limited literature links their ethical and financial perceptions with how they incorporate SR information in their decision-making process. This research adds this knowledge to the existing literature by linking people's pro-social attitudes with their SRI strategy intentions based on responses to the questionnaire and multinominal logistics regression for causality analysis. The study also considers the current situation of SRI in China. The development of SRI in China is more influenced by external factors of international pressure and government requirements (GSIA, 2021; Hofman et al., 2017), and investors play a less prominent role and are more influenced by the information received from the market. Individuals' perception of their SRI knowledge and SR information quality is added to the analysis. Additionally, this study innovatively introduces cultural factors into the discussion of individual SRI behaviour to further explore the factors that influence SRI strategy preferences. Factor analysis is adopted using the WVS dataset to find prominent cultural dimensions within China across different provinces.

1.5 Thesis structure

This thesis comprises eight chapters. Chapter 1 provides an overall summary of this research, including the background, the statement of research questions and objectives, the overall research design, and a summary of findings and contributions. Chapter 2

comprehensively reviews the literature, including SRI development in both developed markets and in China, the financial and ethical implications of SRI strategies, the heterogeneity of SR investors regarding their financial and non-financial consideration in existing literature based on developed market and based in China, Hofstede' cultural dimension in explaining investment behaviour. This chapter also provides hypotheses based on the literature investigating individual and provincial-level factors in determining people's strategy preferences separately in 2.3.4 and 2.4.4. Chapter 3 outlines the research methodology and methods applied in this study, which includes the questionnaire's design, distribution, and data-collecting, as well as the data analysis methods used to examine factors influencing individuals' SRI strategy preferences. It also includes data analysis for generating culture dimension scores.

Chapter 4 explains the implementation and findings of factor analysis for generating culture scores later used to examine the cultural influence on individual SRI preferences. The factor analysis of selected items in WVS shows that two dimensions, individualism and long-term vs short-term orientation, are proved to be salient in differentiating shared values and norms across provinces.

Chapter 5 provides an implementation of the questionnaire and descriptive findings relating to the items in the questionnaire. Concerning the findings of the questionnaire, this study finds a widespread belief in the importance of SR information in investments. Both financial materiality and social impact are the drivers of incorporating socially responsible information in investment decisions. Overall, people show a high level of concern over different corporate responsibility issues. They also show a high

willingness to sacrifice financial return, especially preferring to reject corporations performing poorly in corporate social aspects. However, their SRI literacy is limited, with most people only knowing the basic meaning of SRI-related terminologies. Regarding SR information sources, people rely more on government releases and research reports to gain SR information for decision-making, which is consistent with the crucial role of government in promoting SRI in China. The firm disclosure rate is relatively low as a reliable source for SR information, which indicates the general concern from the market regarding the reliability of CSR reports within Chinese markets (Wang & Li, 2016).

Chapter 6 analyses individual perception factors behind SRI strategy choices. The chapter finds that screening, compared with the non-screening strategy, reflects ethical considerations among Chinese individual investors. Individuals with more emphasis on the importance of the non-financial aspects of SRI are more likely to incorporate SR information in their investment decision-making, which is consistent with most of the literature (Diouf et al., 2016; Glac, 2009). When non-financial importance is measured as the willingness to forgo financial performance, people are more likely to choose negative screening rather than a positive screening strategy, which suggests that negative screening can realise more ethical requirements for investors. In addition, people with higher SRI knowledge are more likely to adopt the positive screening strategy than the negative screening, which indicates that besides ethical consideration, people's perceived ability impacts how they incorporate SR information. Also, this study concludes that female and younger investors are more likely to choose a positive screening strategy. Equity investors are less likely to choose a negative screening

strategy. These findings contribute to the existing knowledge on profiling SR investors outside developed markets (Diouf et al., 2016; Tippet & Leung, 2001) and understanding how their preferences for SRI strategies are differentiated in the emerging market.

Chapter 7 further investigates the cultural impact on SRI decision-making. Concerning how shared values and norms influence people's preferences for SRI strategies, it examines the interactive effect of provincial culture scores and individual self-rating SRI knowledge and examines their effect on strategy preferences. However, this study does not generate statistically significant results of cultural differences on the provincial level in explaining personal SRI strategy choices. The insignificance may result from a strong explanation power of individual differences such as ethical attitude, demographics of gender and age in factoring people's SRI decision-making process. The shared values and norms that guide specific preferences may arise from gender or age group rather than culture values clustered by geographical regions.

Chapter 8 discusses the results in terms of academic and practical contribution, as well as the limitations and opportunities for future research. Regarding academic contribution, this research fills the gap in understanding SR investors in one of the largest emerging markets and advances the knowledge of how SR investors' behaviour varies. SR investors are regarded as a heterogeneous group in terms of their preferences for different strategies. Their ethical, financial, and practice perceptions facilitate their ways of incorporating SR information. Also, this study innovatively introduces cultural discussion into SRI behaviour, which provides insights for future

research in this area. The findings assist financial service providers and policymakers in targeting those who are more likely to be engaged in SRI and make an impact on the development of SRI in China. Future research can enlarge the sample size to more provinces or conduct a more extensive investigation based on the international market, where national culture discussion may provide more insights into explaining SR investors' behaviour.

1.6 Summary

This chapter provides a summary of the whole research by introducing the background of this study and the research motivation that resulted in the rise of the research questions and objectives. A discussion of the scope of the research, along with an overview of the research design and the structure of the thesis, has been illustrated as well. Chapter 2 now proceeds with a critical review of the relevant literature.

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

This chapter discusses in-depth various aspects related to socially responsible investment: the concepts and development of SRI in the developed markets and in China; SRI strategies with financial and ethical implications; and the heterogeneity of SR investors based on research in developed markets and China. The heterogeneity is focused on their socio-demographic differences, their pro-social and financial considerations in SRI, and the distinctiveness of SRI in China. Another strand of literature discusses how culture influences SRI behaviour in aspects of dimensioning culture using Hofstede's framework, adopting Hofstede's framework to depict China's provincial cultural differences and how culture influences individual SRI behaviour. Hypotheses are developed respectively on factors of individual differences behind SRI behaviour (2.3.4) and factors of provincial cultural differences behind SRI behaviours (2.4.4).

2.2 Socially responsible investment (SRI)-concepts and development

2.2.1 The origin and concept of SRI

Socially responsible investing (SRI) is the investment process that integrates non-financial concerns into investment decisions (Sandberg et al., 2009). The early socially responsible investor base is embedded in the religious community. For instance, the UK church investors played an instrumental role in launching ethical funds. Methodists and Quakers were among them as representatives (Sparkes & Cowton, 2004). Religious investors brought avoidance doctrine into investment behaviours and formed the early version of SRI, known as ethical investing. Sin stocks that are against their religious principles were screened out of their investments.

The investors gradually built a broad base from social movements since the 1960s. SRI was based more on personal, ethical, and social convictions and less on religious beliefs. Thus, the term "socially responsible investing" appeared to replace "ethical investing" (Sandberg et al., 2009). Discussions on social aspects such as civil rights, equality for women, labour issues, and anti-nuclear sentiment were brought to the investment field. Socially concerned investors increased dramatically in power during the 1980s under conditions of fierce protest against the racist system of apartheid in South Africa. They pressured companies to divert their business to countries other than South Africa and urged mutual funds not to include South African or Western firms with South African subsidiaries in their investment portfolios. This campaign even led to legislation alteration, such as in California, state pension funds were required to divest over $6 billion from companies with activities in South Africa. In the 1990s, with the concept of sustainable development, the SRI industry experienced huge growth resulting from environmental protection and ethical consumerism. Together with the misconduct of corporations, the aspects addressed expanded from social dimensions to environmental (E), social (S) and governance (G) aspects.

The last 20 years have witnessed the growing power of institutional investors. During 2000-2002, several countries in continental Europe released their regulation regarding socially responsible investment. The regulations were mainly related to reporting investments that take into account social, ethical, and environmental aspects. Pension funds and charities were the first to be required to disclose non-financial information about their investment (Renneboog et al., 2008). They also started to play a crucial role in spreading this mindset in investment. In the UK, the majority of the capital is

from institutional investors. They have played vital roles in driving SRI and influencing companies' responsible investing activities (Solomon et al., 2004).

Besides social awakening and movements generating investors' pressure to invest socially responsively, the development of SRI is also a reaction to the globalisation of business (Solomon et al., 2002). The weakening of social coherence makes SRI a need for the business-based society to develop further. With internationalisation and free market capitalism overrule the western countries. Businesses are overstepping some functions of governments and social organisations, which creates a need to monitor them so that they can be ethical.

Following the general trend in SRI, the adoption of the SRI strategy also reflects the needs of investors. Early SRIs were mainly straightforward punishments, excluding shareholding in socially irresponsible firms and making moral consideration a priority (Sparkes & Cowton, 2004). Later, with increasing social movements and a broadening social base in investment, fund managers' reactions to how to incorporate SR criteria in investments are subject to pressure from investors (Mccann et al., 2003). The divestment in South Africa during the 1980s is an example. However, the exclusion seems to be hurtful to financial return. Rudd (1979) finds a 4 per cent return loss for portfolios screened out firms with holdings in South Africa. In addition, the exclusion forgoes the possibility of encouraging firms to promote good social, environmental, and ethical practices. Recent decades have witnessed more active actions. SRI funds developed more active criteria by weighting positions to firms with improved corporate social responsibility (CSR) practices. Engagement or dialogues with

investors (also known as shareholder activism) in investee firms become popular, where investors use their ownership rights to influence corporate behaviour and steer it in a more socially responsible direction (Sparkes and Cowton, 2004).

In general, social movements, government promotion and internationalisation jointly push SRI development and evolvement in the developed world, where investors' social awareness and pressure play crucial roles. The development is a bottom-up process, where the conceptions, terminologies, strategies, and policy-making evolve in relation to investor requirements.

2.2.2   The development of SRI in China

The concept of socially responsible investment in China did not share the same religious, church-based roots as in many Western countries. Although there were no ethical roots embedded in the origination, there were traditions embedded in Chinese culture of doing business ethically. Confucianism primarily features Chinese culture and society. There were Confucian traders who adopted Confucian theory and applied it to their business in ancient China. They sought profits with integrity and responsibility for the community's prosperity (Huang, 2007), which can be regarded as the early notion of CSR in business. The recent development of CSR and SRI has been introduced from the Western world. Relatively weak pressures from investors are witnessed compared with movements in ethical and socially responsible investment in the developed world (Slager, 2012). In contrast, 'regulatory and policy drivers play a key role in driving sustainable investment in China, in addition to pressure from overseas shareholders', as mentioned in the Global Sustainable Investment Review in 2020 (GSIA, 2021).

In 2006, the Shenzhen Stock Exchange initiated the Guidelines on Listed Companies'

Socially Responsible Information Disclosure[3], followed by the Shanghai Stock

Exchange releasing Guidelines on Listed Companies' Environmental Information

Disclosure[4] in 2008. These initiatives aimed to encourage companies to report their

situations related to environmental protections voluntarily. According to Marquis &

Qian (2014), the sample of their longitudinal research on CSR in Asia has been

enriched by adding Chinese corporations in their second (2005) and third iterations

(2009) right around the time the above initiatives were released. The increasing CSR

reporting is largely attributed to the regulations set up by the regulatory bodies (Ho,

2013).

 Socially responsible investment has also developed rapidly since 2008, which is a

market response to the increasing CSR reporting. Multiple indexes and funds were

released during the following years. In 2012, the China Banking Regulatory

Commission published the Green Credit Guidelines to promote environmental

protection and energy conservation through the banking system. The concept of

"Green Finance" drew great attention in the investment realm in China. In September

2016, the Guidance on Building the Green Finance System was released, emphasising

the environmental aspect of socially responsible investing. By the end of 2023, the

green credit balance of major domestic banks reached 28.58 trillion RMB[5]. Also, there

were a total of 202 indexes themed on environmental, social, and governance aspects

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[3]See Shenzhen Stock Exchange website: http://www.szse.cn/disclosure/notice/general/t20060925_499697.html
[4]See Shanghai Stock Exchange website: http://www.sse.com.cn/lawandrules/sserules/listing/stock/c/c_20150912_
3985851.shtml
[5] Approximately 3.95 trillion US dollars with exchange rate of 1 US dollars=7.23 RMB.

of corporations, among which more than half of the indexes focused on environmental aspects, including energy preservation and emission reduction.

With international pressure for CSR resulting from the increasing openness to international markets, foreign shareholders require consistency in their CSR policy for their investment in China (Marquis & Qian, 2014), especially after 2001 when China joined WTO. Adopting CSR initiatives helps Chinese firms gain acceptance and access to international markets (Yin & Zhang, 2012). The increasing CSR reporting and policy release enhance individuals' recognition of socially responsible investment. Zou et al. (2020) find that investors respond positively and instantly to the announcement of SRI indexes. They argue that this phenomenon is due to investors in emerging markets' lack of experience in making a complete evaluation of investments and primarily depend on signals or peers to make investment decisions.

The relatively weak influence of investors and the active engagement of government in SRI are argued to result from the distinct financial, educational, labour, and cultural systems in China (Hofman et al., 2017). The financial system is dominated by state-owned banks (Newman et al., 2012). This system limits the influence of other types of investors, including individual investors. The role of government in capital allocation (Colonnelli et al., 2024) constrains investors' influence on incorporating their social considerations into firms to promote CSR. On the other hand, it provides channels for the government to influence firms' CSR conduct in the capital market (Hofman et al., 2017). Therefore, there is a more active response from firms and investors to the policy and signals released by the government regarding CSR agendas.

Like other emerging markets, the increasing economic growth has put significant pressure on environmental and social issues, such as air pollution, product safety and income inequality (Zou et al., 2020). People started to pay attention to corporate social responsibility. Recently, there has been social awareness and willingness to be involved in CSR agendas (Hofman et al., 2017) due to public awareness of the environment and active social media influence. Societal awareness of CSR may further promote SRI development, especially through environmental channels. Gao et al. (2020), by comparing returns between stocks in responsible investment indexes with ordinary stocks, find that stocks in responsible indexes perform better on days with heavy air pollution. There is also more buyer-initiated trading during those days. This paper indicates that Chinese individual investors' environmental awareness has an impact on their investment behaviour. The awakening of public awareness of environmental and social issues may ignite ethical motivation for investors to engage in SRI (Hofman et al., 2017).

Besides the increasing social awareness of investors, rapid digital finance development reduces barriers for corporations to access financial resources. Mu et al. (2023) study the effect of digital finance on corporate ESG performance using a large sample of Chinese-listed firms from 2011 to 2020. The results demonstrate that digital finance has a positive impact on corporate ESG performance by mitigating financial constraints. The finding indicates that the external change of financial systems with the engagement of digital finance can provide opportunities for investors to be more impactful in CSR.

In terms of screening strategies in China, by comparing reports released by China SIF during 2020-2023, the construction of SRI indexes primarily adopts a positive screening strategy, where ESG criteria are used positively for those who perform better in those areas. The exclusion process is mentioned in the most recent report of 2023, which excludes firms with poor performance regarding ESG criteria (China SIF, 2023). However, no absolute exclusion of entirely unethical industries or sectors exists. The recently added exclusionary strategy may indicate a market response to investors' social awakening and pro-social requirements through investing.

In general, SRI in China is a co-product of strong global investors' demand and the active engagement of the government. It is a top-down process, where individual investors respond to the changes rather than initiate the change in investment philosophy. The discussion on the development of SRI in developed markets such as the US, the UK, and Europe implies firstly that a similar religious origin has been embedded in the overall movement and the development of strategies in SRI. Even though the Chinese market lacks the ethical roots embedded in the initial stage of SRI, the awakening public awareness of environmental and social issues may promote ethical motivation for investors to engage in SRI.

Due to the difficulty separating negative and positive screening from the fund level, the evaluation of fund-level performance can only provide a partial picture of how investors are impacted by ethical motivation in evaluating SRI. Investigating an individual's preferences for different strategies using a questionnaire can add knowledge on how Chinese individual investors understand these concepts. The

following section provides the relevant literature for understanding different screening strategies from ethical and financial perspectives.

2.2.3   SRI strategies-the implications from ethical and financial perspectives

In SRI, investors regard socially responsible information as an additional criterion when making investment decisions instead of only considering the risk-return profile of an investment. SRI strategy refers to the methods by which investors adopt SR information. This thesis mainly discusses negative screening and positive screening strategies as SR-related strategies. Negative screening, also known as avoidance/exclusionary strategy, shuns away firms or industries that have evolved with unethical conduct. The positive screening method actively chooses a target that performs better in socially responsible aspects than its peer groups. It is also known as the best-in-class approach (Sparkes & Cowton, 2004) or the supportive method (Button, 2019). Besides the two screening strategies mentioned, the literature also discusses engagement strategy (shareholder activism), where investors use their ownership rights to influence corporate behaviour and steer it in a more socially responsible direction (Sparkes and Cowton, 2004). Institutional investors are more interested in engagement/activism strategies to the extent of their shareholding level (Sparkes & Cowton, 2004). SRI funds of insignificant size limit the ability to assert CSR values on companies. Within the scope of this study, in the Chinese market, investors, especially individual investors, have relatively weak power in corporations due to unique financial, labour and education systems (Hofman et al., 2017; Newman et al., 2012). Shareholder activism and engagement are not discussed in this study for individual investors. The rest of this section mainly discusses the ethical and financial

implications of negative and positive screening strategies as well as investors' preferences for those strategies.

From an ethical perspective, SR investments are viewed as an extension of identity (Glac, 2009, 2012). Negative screening is an expression that keeps investors' ethical preferences consistent with their investment activity. The avoidance shows concerns for investors in keeping moral integrity (Sandberg & Cowton, 2012). As Sandberg and Nilsson (2015) mentioned, this strategy can be understood as seeking moral purity by giving up a specific industry that is against their moral requirements. People are also concerned about being sanctioned and losing their reputation (Akerlof, 1980) by not obeying certain social customs, such as investing in what is perceived as 'sin' industries by most individuals and social groups. For instance, in the US, pension funds hold fewer stocks in the alcohol, gaming, and tobacco industries due to their undesirable social consequences (Hong & Kacperczyk, 2009). However, this strategy is criticised for ignoring the opportunities to encourage products, companies, and practices that improve their socially responsible performance.

The positive screening method actively chooses a target that performs better in socially responsible investments than its peer groups. The SR information is applied actively, which involves adjusting investing positions according to whether firms conduct activities that improve their socially responsible performance (Berry & Junkus, 2013). For instance, investors intentionally choose firms with conclusive employee well-being, better environmental policies, and safe products. At the same time, excluded firms fall short in these aspects. From an ethical perspective, this strategy is argued to

be following the idea of seeking ethical efficiency, which refers to maximising positive ethical influence that brings about social change (Sandberg & Nilsson, 2015). Investors who prefer positive screening may have ethical reasons to invest in firms with better CSR performance to 'make the world a better place' (Sandberg & Nilsson, 2015a, p. 37).

Therefore, individuals perceive these two strategies from an ethical perspective with different moral motivations. Individuals choosing a negative screening strategy are more concerned with moral purity (Sandberg & Sjöström, 2021), which shows a desire to maintain consistency with their moral stand in the investment process by avoiding specific industries. Positive screening with a selection of firms with better CSR performance represents investors' desire to impact society, which indicates the need for moral efficiency (Sandberg & Sjöström, 2021). Even though it is mentioned that negative screening can also achieve ethical efficiency by limiting the capital access for firms with unethical behaviour (Schifeling & Hoffman, 2019), the impact is moderate in considering the divestment influence from individual investors.

In terms of financial efficiency, modern portfolio theory argues that SRI using non-financial criteria would prevent investors from forming a fully diversified portfolio and thus lead to an inferior risk-return profile (Barnett & Salomon, 2006). In particular, excluding certain firms and industries leads to investors bearing specific risks and decreasing risk-adjusted returns (Kurtz & DiBartolomeo, 1996). Also, additional filtering procedures will incur more transaction costs and managerial fees, which will cause the portfolio to underperform compared to those without the screenings (Bauer

et al., 2005; Jensen, 2002).

Proponents argue that firms using SR criteria are better managed and foster competitive advantage, which results in better financial performance (Barnett & Salomon, 2006; Porter & Van der Linde, 1995). By weighing investment positions based on environmental, social, and governance criteria, positive screening results in a selection of firms with better social practices. The costly and burdensome corporate social responsibility (Jensen, 2002) is argued to cultivate good relationships with stakeholders and thus generate profit in the long term (Freeman et al., 2018). Even positive screening leads to less diversified firms; those selected firms are well-run, stable firms with better stakeholder relationships and strong management and thus generate superior financial returns.

Empirically, mixed results are generated by comparing SRI funds' performance with conventional funds (Von Wallis & Klein, 2015). In considering the intensity of screening, Barnett and Salomon (2006) conclude a curvilinear relationship between social and financial performance. Their definition of the intensity of screening is the number of industries and issues used to filter firms from their portfolio, which is a mixture of negative and positive screening strategies. The following studies (Laurel, 2011; Lee et al., 2010; Renneboog et al., 2008) confirm a relationship between social screens and financial performance, yet they cannot conclude that the relationship is curvilinear. Capelle-Blancard and Monjon (2010) find that the exclusion of firms, sectors and industries hurts financial returns. On the other hand, screens based on the evaluation of improving social governance commitment for stakeholders have no

impact on returns. Their study with the study of Renneboog, Ter Horst and Zhang (2008) confirms that exclusion strategy harms financial return, which is consistent with the theoretical argument that non-financial performance criteria can affect the diversification of portfolios and lead to exposure to additional risk.

From the above discussion in viewing positive and negative screening from both ethical and financial perspectives, the motivation to adopt negative screening involves investors' strong ethical requirement to keep consistency with their moral integrity. The avoidance of specific sections, industries or firms is a representation of investors' ethical standards. The exclusion leads to a possible reduction in financial performance. Investors adopting this strategy seem to emphasise the non-financial utility of investing and are content with a lower rate of return (Renneboog et al., 2008). Positive screening, on the other hand, may indicate that investors are seeking to do well while doing good. Companies can obtain long-term benefits by improving environmental, social and governance aspects and maximising shareholder value (Goodpaster, 1991). Investors selecting those firms can generate better financial returns and contribute more to society. However, it is difficult to differentiate whether investors emphasise ethical efficiency to "make a difference" or instrumentally view corporate social responsibility as a signal of good management that leads to higher financial achievement (Barnett & Salomon, 2006).

In addition, from a practical perspective, positive screening is a more challenging and complex approach than negative screening because it needs investors to decide what aspect of corporate socially responsible behaviour to focus on and how to confirm and

quantify the improvements of the socially responsible activities (Berry and Junkus, 2013). Investors will have to focus on specific corporate social practices, decide the importance of assigning those practices and quantitatively rate a firm according to the rating. The process is highly subjective and requires a certain level of knowledge and information (De Spiegeleer et al., 2023), which also indicates that a lack of sufficient information and disclosure of firms' CSR engagement may hinder people's intention in this approach.

In practice, several studies have suggested that investors exhibit different preferences for those two strategies. McLachlan & Gardner (2004), by surveying Australian investors, find that individuals already investing in ESG-profiled funds tend to employ exclusion strategy, whilst conventional investors favour inclusion strategies. Carlsson Hauff and Nilsson (2023) find that the inclusion strategy ignites higher return expectations from investors, which explains conventional investors' preferences for a positive screening strategy. In their study, investors also expect lower returns from negative screening. Further, a survey of Spanish investors reveals a preference for positive screening (Valor et al., 2009). In a similar vein, Berry & Junkus's (2013) survey of over 5000 American investors finds that more than half of the respondents feel that companies best demonstrate social responsibility qualities through proactive behaviour rather than through exclusion based on specific criteria. These findings indicate that investors have diverse preferences for SRI strategies in different geographical locations, and their expectations for those strategies are different. A deeper investigation of the motivation behind that preference is informative regarding how ethical and financial perceptions differentiated Chinese individual investors'

behaviours in SRI. The following section discusses existing literature on SR investors' heterogeneity.

2.3   The heterogeneity of investors

2.3.1   Profiling SR investors compared with non-SR investors

One strand of literature focuses on the individual attributes regarding demographical characteristics, such as gender, age, and education, to different SR and non-SR investors. The ethical side of SRI introduces the ethical decision-making process into discussing SR investors' behaviour. Rest (1992) uses demographical characteristics to explain how individuals perceive and react to ethical situations. Demographics are also argued to provide valuable insights into segmenting retail financial service markets (Harrison, 1995). Table 2.1 below summarises the literature using questionnaires as a research instrument to differentiate the socio-demographical features among SR and conventional investors.

Among those features, education level is one of the most relevant variables. Most papers indicate a significant positive relationship between higher education level and SR investments (Diouf et al., 2016; Nilsson, 2008; Riedl & Smeets, 2017). It seems people with higher education are more likely to be SR investors, especially in the study of developed markets such as Europe. For instance, Rossi et al. (2019), based on the Dutch market, find that education is a pivotal variable. McLachlan and Gardner (2004) argue that the higher educated individuals are better informed or influenced by socially responsible issues when they invest, which is later confirmed by Diouf et al. (2016). They find that higher education level has a positive impact on individuals' awareness

of environmental and social issues, which would provide an incentive to invest responsibly.

Table 2.1 A Questionnaire-based research Summary of socio-demographical characteristics of SR investor

Significant profiling attributes	Conclusions	Nation of study	Authors
Age Education	SR investors tend to be younger with higher levels of education	US	Rosen et al. (1991)
Gender Education	Females and higher educated have a stronger tendency to invest in SRI	Sweden	Nilsson (2008)
Gender	Women are potential SRI customers	Spain	Valor et al. (2009)
Gender Education Age	Female, younger and better-educated investors are more likely to be SR investors	US	Junkus and Berry, (2010)
Age Gender Education	Females, young and highly educated investors think pro-social performance is important, and financial performance is not the only goal.	International	Cheah et al. (2011)
Age Education Income	SR investors tend to be middle-aged, middle-income professionals	Australia	Pérez-Gladish et al. (2012)
Age Gender Income	SR investors are likely to be older, female and low incomers	Spain	Ballestero, (2015)
Age Education	Social identification is stronger among highly educated, younger investors	Netherland	Bauer and Smeets (2015)
Age Education Gender	Female, young and highly educated individuals are more likely to invest in SRI.	Canada	Diouf, Hebb and Touré (2016)
Education	Higher-educated investors are more likely to hold SRI mutual funds	Netherland	Riedl and Smeets, (2017)
Education	Higher educated people are more likely to prefer SRI	Dutch	Rossi et al. (2019)
Gender Education Income	Male, educated individuals with above-median income have a higher awareness of sustainable investment.	Japan	Gutsche et al. (2021)
Gender	Females are more likely to have SRI intentions	India	Singh et al. (2021)

Gender is also a feature that is often discussed. Women are found to be more likely to engage in SRI. For instance, in the US, females show strong intentions toward SRI (Junkus & Berry, 2010). This is possibly linked to the increasing power of women in the workforce and their 'natural affinity to the concept of socially responsible investing' (Schueth, 2003, p. 192). Niszczota and Białek (2021) state that women are more inclined to refuse sin stocks (such as alcohol and cigarette stocks) than men. By using a questionnaire and a sample of 335 participants in the US market, the paper argues that women rate sin stocks as less morally appropriate and feel more uncomfortable investing in them. It seems women are more likely to be motivated by ethical considerations in investment decisions, especially towards the unethical conduct of firms. Singh et al. (2021) confirm the above statement by investigating the India individual investors. However, the gender variable does not generate consistent results across different studies. Gutsche, Nakai, and Arimura (2021) found that in Japan, males are more likely to be aware of sustainable investment, possibly because they have more opportunities to invest. The previous literature indicates that female investors with more acumen in social awareness are a potential group to engage in SRI. However, their access to SRI is to some extent influenced by their overall power and position in society, especially in the workforce.

Regarding age, younger investors seem to accept SRI more (Diouf et al., 2016; Rosen et al., 1991). Studies in Australia (McLachlan and Gardner, 2004) indicate no age differences between SR and conventional investors. While also based on Australian individuals, Pérez-Gladish et al. (2012) have a sample of SR investors being middle-aged. Ballestero (2015), using a Spanish sample, find that older SR individuals are

more likely to be SR investors. Income level is also one of the variables that are often discussed. There is no consistent result regarding investors' income level and SR activities (Bauer and Smeets, 2015).

Overall, demographically, SR investors have distinctive features compared with conventional investors. Gender, age and education level are extensively tested in profiling SR investors and generating significant results. High-educated young women seem to be a more promising group in promoting SRI. However, SR investors are different across countries, which may be due to the heterogeneity of the development of SRI and the institutional and cultural differences across nations (Sandberg et al., 2009). While demographic characteristics can help compare social and conventional investors and should be considered in studying the intentions of investors' behaviour regarding SRI, they cannot fully explain why investors opt for SRI products. The following section will discuss investors' psychological differentiation, specifically their ethical and financial considerations when undertaking SRI.

2.3.2   Heterogeneity among SR investors

The ethical roots embedded in SRI and the conclusiveness and constantly evolving nature of socially responsible investment have separated SR investors from each other. Due to the ethical roots of SRI, early SR investors arose from people who had an ethical requirement, which was to seek consistency in investment (Sparkes & Cowton, 2004). They added non-financial criteria into their investment decision-making, gradually leading to SRI today. Understanding the duality in individual investors' characteristics between financial and non-financial desire plays a vital role in

understanding SR investors and their variations with each other, which are researched primarily using questionnaires as instruments in motivational and attitudinal research. The table below provides a summary of existing questionnaire-based research on this aspect.

The ethical attitude and motivation are addressed on the one hand through the pro-social attitude, which is the importance of socially responsible issues in investment decision-making (Diouf et al., 2016; Glac, 2009; McLachlan & Gardner, 2004). It reflects individuals' awareness of ESG issues. The literature in Table 2.2 shows that Likert-type items are used to measure the extent of people's awareness towards socially responsible issues. This measurement is adopted as a proxy to generalise people's pro-social attitudes. People with a higher level of awareness towards socially responsible issues, such as environment protection and equality in the workforce, indicate the high importance of ESG issues in their choices of investments. These groups of people are more likely to invest more in SRI. The awareness of the ethical aspects of SRI leads people to think less about money and more about moral concerns in investment. For instance, more concern for employee well-being enables investors to notice the misconduct of firms in this area and leads them to invest less in these firms. Glac (2009) introduced an 'expressive' decision frame by asking respondents about their pro-social attitude toward corporate conduct when consuming. They found that people with pro-social attitudes significantly increased the percentage of participants choosing the SRI option.

On the other hand, some studies approach ethical consumerism and the symbolic

consumption literature and adopt the concept of perceived consumer effectiveness (PCE) to reflect how individual investors think of their influence through investing socially responsibly. In the literature on consumerism, PCE is conceptualised as the perception of the extent to which personal consumption activities help to solve a problem (Berger & Corbin, 1992). In the context of SRI, it is proposed that people are more likely to engage in SRI if they believe that their investment behaviour helps to improve society and firms into more socially responsible practices. The ability to recognise the ethical impact of SRI can increase the propensity of investors for SRI (Gajewski et al., 2022). Nilsson (2008) was one of the early works that addressed investors' behaviour from a consumer investment perspective. The paper builds a theoretical framework that considers the non-financial part of SRI behaviour. The authors divided the influencing factors into pro-social and profit-oriented. The former includes the perceived consumer effectiveness of SRI. The paper finds that the investors who believe their investments are making a difference in social, environmental and ethical problems invest more in SRI.

Table 2.2 A Literature summary of ethical and financial Attitudes of investors

Ethical attitude and motivation	Proxy	Data generation and analysis method	Authors
Pro-social attitude	The importance of different social issues when making purchasing decisions from a firm	Construct a five-point Likert scale	Nilsson (2008)
	Attitude towards different exclusionary screens	Seven-point Likert scale	Borgers and Pownall, (2014)
	ESG profile-valuation of respondents' awareness of ESG issues	Five-point Likert scale ranging from [-3,3]; distribution of mean scores to determine four ordinal attitudes on the overall ESG issues	Diouf, Hebb and Touré (2016)
	Expectation for CSR-five CSR	Five-point Likert scale, and then are dichotomised with a mean split to separate into high/low CSR expectation	Glac (2009)
	The importance of social responsibility in SRI investment	Five-point Likert Scale	Nilsson (2009)
	The importance of ethical issues in investment decisions	Four-point Likert Scale	McLachlan and Gardner (2004)
Ethical effectiveness	Perceived consumer effectiveness (PCE)-several statements to evaluate the social impact of investing in SRI	Five-point Likert scale	Nilsson (2008, 2009)

Table 2.2 continued

Financial attitude and motivation concepts	Proxy	Data generation and analysis method	Authors
Subjective financial attitude	Perceptions of risk and return of SRI funds compared with conventional funds	Five categories of different levels of risk and return	Nilsson (2008); Gutsche and Ziegler (2019); Lewis and Mackenzie (2000a)
	Investor profile-expected annual return on ESG fund	Five categories of level of returns	Diouf, Hebb and Touré (2016)
	The importance of financial return in SRI investment	Five-point Liker scale	Nilsson (2009)
	The importance of financial return in investment decisions	Seven-point Likert scale	McLachlan and Gardner (2004)
	Hypothetical scenarios of their willingness to change ethical fund holdings with varying rates of return in conventional funds	Five categories	Lewis and Mackenzie (2000)
Trade-off attitude	WTP-willing to pay for the exclusionary screening	Seven-point Likert scale that ranges from ''No, certainly not'' to ''Yes, certainly''.	Borgers and Pownall (2014)
	Trade-off-how much return investors are willing to sacrifice for choosing the SRI option.	Subtracting the indicated SRI return from the return of the conventional funds' option	Glac (2009)

Table 2.2 continued

Willingness to Sacrifice Ethical Concerns for Financial Gain	Respondents assign an investment amount to each of 10 combinations from five levels of financial return and 2 levels of ethical performance.	Berry & Yeung (2013)

Besides the above two points in describing investors' ethical perspective on SRI, the financial attitudes of SR investors are also investigated. The financial perspective of SRI is examined through individuals' attitudes towards the importance of financial returns in SRI, such as perceptions of risk and return of SRI funds compared with conventional funds (Lewis & Mackenzie, 2000; Nilsson, 2008), and the expected annual return for ESG funds (Diouf et al., 2016). It has been found that people hold diverse beliefs regarding the financial performance of SRIs (Diouf et al., 2016). Some think SRI generate lower returns than conventional investments, and some investors hold the belief that SRI can generate at least a similar return compared with a conventional investment (Diouf et al., 2016). Objective financial comparisons between SRI and conventional investment are conducted in several empirical research, generating mixed results (Barnett & Salomon, 2006; Revelli & Viviani, 2015). Nilsson (2008) argues that the perceived performance of SRI is more crucial in determining individual investment decisions and finds that people with positive perceptions of the financial gain from SRI invest more in SRI.

Several studies linked individuals' financial perception of SRI with the ethical consideration of SRI by evaluating people's trade-off attitude and their willingness to forgo financial return for social values (Berry & Yeung, 2013; Glac, 2009). The study of Lewis and Mackenzie (2000) indicates that ethical investors are relatively inelastic for losses in ethical funds. Benson and Humphrey (2008) also find that SRI funds are

less sensitive to past returns. There seems to be a willingness to trade off financial performance for social gains (Barreda-Tarrazona et al., 2011; Glac, 2009). Barreda-Tarrazona et al. (2011) find that SR investors are more focused on SR attributes when they reach a certain level of return.

2.3.3 Heterogeneity of the Chinese individual investors in SRI

As discussed in the earlier section regarding the development of SRI in China, it is known that SRI in China is a co-product of strong global investors' demand and active engagement of the government. In practice, China SIF distributed a questionnaire regarding individual investors' attitudes and motivations regarding socially responsible investment. According to China SIF (2021), ESG mutual funds have seen rocketing growth since 2015. However, individual investors are still in the stage of understanding the concept of socially responsible investment. Individual investors have limited literacy regarding SRI. It showed that the understanding of concepts like "green finance", "sustainable investment", or "ESG" is in the minority. However, people would choose to consider environmental protection, emission reduction or business ethics during their investment forming process. It shows that investors may not know the more internationalised terminology, yet they do consider the mindset of investing responsibly. The lack of experience and knowledge may hinder their investment decision-making on their own.

Even though SRI in the developed world has entered a more mature stage where more readily and accessible ESG information can be achieved, the emerging market still faces difficulty for investors in finding comparable and reliable information sources (Zou et al., 2020). For instance, CSR reporting in China has been criticised for releasing limited information in terms of CSR activity specifics and independent third-party audits (Marquis & Qian, 2014). Although there have been some adjustments in institutional and regulatory standards in recent years, China's financial markets are still facing some challenges, such as poor-quality financial information, limited disclosure of firm-specific information, and low transparency (Xiao et al., 2018).

The incorporation of non-financial attributes into investment decisions increases the complexity of SRI. The complication created by the combination of financial and moral aspects can be overwhelming to investors. Besides, the great extent of ambiguity in SRI-related terminology, definitions, strategies, and practice makes it more complicated for individual investors. Self-reported investment knowledge has been studied to be a significant predictor of investors' behaviours (Van Rooij et al., 2011). Self-rated financial literacy can reflect people's better understanding of economic activities. It also represents self-confidence in making financial decisions (Anderson et al., 2017). The importance of information and knowledge have been mentioned in several papers regarding people's intentions in SRI (Bauer & Smeets, 2015; Diouf et

al., 2016; Gajewski et al., 2022; Rossi et al., 2019). Lack of knowledge and qualified information access can create barriers to engaging in SRI (Paetzold & Busch, 2014).

The complexity of SRI increases with the absence of related information and knowledge. The study of Barreda-Tarrazona et al. (2011) indicates that investors who are informed of a fund with its socially responsible attributes invest more. Diouf et al. (2016) show that people who have heard of SRI products from different information sources (advertising and news articles) are more likely to invest in SRI funds. In their study, the agreement that financial advisors are familiar with the knowledge also enables the respondents to invest more in SRI. The lack of high-quality information to differentiate firms' CSR performance would result in investors searching for additional information to assess firms (Su et al., 2016). The grasp of additional information and knowledge would motivate individuals to invest in SRI. In considering the information access, quality and limited overall knowledge of individual investors in China, investors equipped with more knowledge and information in SRI may be more familiar with the logic developed under SRI, and it is essential to explore how their knowledge and information sources impact their SRI behaviour.

The existing literature has a number of limitations that this study will aim to address. First, literature concerning SRI usually segments investors dichotomously according to whether they invest in SRI funds or not (Diouf et al., 2016; Nilsson, 2008; Pasewark

& Riley, 2010). Based on the existing segmentation, this research aims to further advance the segmentation of investors in regard to their preferences for different strategies, as in negative screening, positive screening and non-screening strategies. Different strategies vary since positive and negative screening strategies embody financial and socially responsible implications. As discussed in earlier sections, positive screening, which includes firms with positive performance of specific ESG dimensions, implies achieving both ethical and financial goals. Theoretically, it fulfils investors' ethical needs by improving ethical efficiency through investing responsively to make social improvements. Also, it can create long-term returns by improving stakeholder values (Barnett & Salomon, 2006; Sandberg & Sjöström, 2021). Negative screening, which excludes specific unethical sectors, industries and firms, is focused more on ethical goals (Sandberg, 2008). It implies investors' moral requirement to be consistent during investment with possible forgo of financial returns (Capelle-Blancard & Monjon, 2014). In addition, there is a lack of literature on linking investors' different ethical needs with how they incorporate SR information, as in either positively or negatively screening SR attributes during investments. As the literature on SRI strategies suggests, different strategies have various ethical and financial implications (Sandberg & Nilsson, 2015b; Sandberg & Sjöström, 2021). Segmenting investors according to their strategy preferences can address the oversimplified dichotomous classification of investors and provide insights into how individual investors understand different SRI strategies in relation to their ethical and financial

needs.

Second, while existing literature has helped to better understand the heterogeneity of socially responsible investors, the research is mainly conducted in developed and more mature markets. Individuals' perceptions and how they intend to incorporate SR information are under-researched in emerging markets, where the demand for SRI is rapidly enlarging with limited and inadequate information access. So far, no academic research has focused on SR investors' heterogeneity, especially in their ethical perception regarding their socially responsible awareness and trade-off attitude toward SRI in the Chinese market context. Do they have similar ethical considerations as their counterparts in more developed capital markets, as in higher emphasis on pro-social issues and a forgo of financial returns for social improvement (Diouf et al., 2016; Glac, 2009; Nilsson, 2008)? Therefore, it is necessary to investigate how individual investors perceive SRI ethically and financially. So far, there is no academic research focused on Chinese individual investors. This research, by exploring primary data through a questionnaire, aims to fill the gap of limited research in understanding SR investors in emerging markets.

2.3.4 Hypotheses developed based on heterogeneity and its link with strategy preferences

Addressing the limitations mentioned above encourages this study to use a

multidimensional approach to explore the complexity of factors that impact the decisions of individuals regarding SRI. The hypotheses are focused on addressing the research objective of this study: to explore factors that influence SRI behaviours, such as individuals' demographic characteristics, ethical attitudes, and practice perceptions of SRI in the Chinese market.

The heterogeneity in the perceptions and practices is reflected in the questionnaire design for this study, which is mainly discussed in four sections (Appendix D and E). The first section provides basic profiling information of individuals' demographical characteristics and investment features; the second section includes information to investigate individuals' ethical and financial perceptions of incorporating SR information in investments; in the third section, items are developed to gather information for individuals' evaluation of their practice in SRI in terms of SRI literacy, information sources and strategy preferences.

Based on the existing literature, this study constructs a group of variables to describe individuals' perception of SRI in ethical, financial and practical aspects (Figure 2.1). SRI strategy preferences serve as the dependent variable, while the other five aspects addressing investors' perceptions regarding SRI are determinants in later analysis. The ethical and financial perception includes individuals' pro-social motivation to incorporate SR information, which refers to individuals' perception of the social

impact of SR, such as whether they believe in the social change they make during investment. This serves as a proxy of PCE. The pro-social concern addresses individuals' attitudes on the importance of different CSR issues. Trade-off attitude describes people's willingness to forgo financial return for social value. These aspects assist in understanding Chinese individual investors' ethical considerations and their link with the financial perception of SRI.

Figure 2.1 Framework of individual perception of SRI
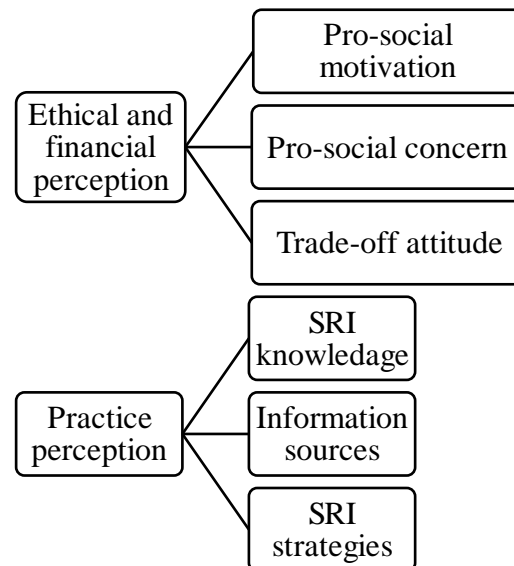
People's views on the practice include individuals' perceived ability regarding their SRI knowledge and trust in SR information sources. The perceived ability indicates individuals' assessment of resources to make SRI decisions. Also, a stated intention for positive, negative and non-screening strategies is added. The above two blocks (Figure 2.1) provide information on how Chinese individuals understand SRI. The

measurement of these variables can be found in Chapter 3. The descriptive analysis of questionnaire items is shown in Chapter 5. The rest of this section is focused on hypotheses developed in factoring SRI strategy preferences.

This study argues that factors directing people's intention for specific screening strategies include a combination of their demographical and investment characteristics, their socially responsible motivation and awareness, and their trade-off attitude between financial and social values. In considering the unique development of SRI in China, individuals' preferences for specific strategies are also influenced by their perceived SRI knowledge and the reliability of sources for SR information. Specifically, the following hypotheses are developed under the framework shown in Figure 2.1, which focuses on how individual perceptions factoring investors' SRI strategy preferences.

2.3.4.1   The socially responsible motivation for incorporating SR information

Several studies have discussed the motivations behind investors conducting SRI (Amel-Zadeh & Serafeim, 2018; Renneboog et al., 2008). Riedl and Smeets' (2017) study suggests that strong social preferences are the first stage needed to buy SRI funds. Nilsson (2008) approaches from a consumer perspective, regarding individual investors as consumers of investment funds, and finds that their ability to identify possible social change through investment is positively related to their SRI. The ability

to identify the social impact of investment represents perceived consumer effectiveness in consumerism literature (Berger & Corbin, 1992). In the SRI context, it is a belief that investment behaviour helps to improve society. In this study, as shown in Figure 2.1, pro-social motivation is developed to depict whether individual investors in China have this belief. It is argued that the ability to recognise the ethical impact of SRI can increase the propensity of investors for SRI (Gajewski et al., 2022). This study provides an analysis of how this belief influences people's way of incorporating SR information through different strategies. A positive screening strategy, which ensures ethical efficiency in terms of doing good for society and creates long-term returns by improving stakeholder values(Barnett & Salomon, 2006; Sandberg & Sjöström, 2021), may be positively related to people's pro-social motivation. While considering the characteristics of SRI development in China, where investors are easily influenced by policy priority and CSR is developed implicitly under the unique financial and cultural system (Hofman et al., 2017; Newman et al., 2012), it is challenging for individual investors to translate their belief into positive screening strategy, which is resource-demanding, subjective and explicit to individuals' non-financial expectation (Berry & Yeung, 2013; De Spiegeleer et al., 2023). The belief may lead to vaguely considering SR information but not precisely how SR information is adopted. Therefore, in this study, the following hypothesis is developed:

H_1: *Individuals who believe in the socially responsible impact of investment are more likely to adopt a screening strategy rather than a non-screening strategy.*

2.3.4.2 Pro-social concern

Several research studies have confirmed that individuals who are more aware of socially responsible issues are more likely to be involved in SRI (Diouf et al., 2016; Nilsson, 2008). Nilsson (2008) constructed a pro-social attitude variable by asking the respondents about the importance of firms' socially responsible issues when purchasing the products. He finds that investors with more SRI display stronger concerns over different pro-social issues. Based on existing literature, it is expected that people with more awareness of corporate social responsibility issues will be more likely to adopt SR screening strategies. In this study, a construct of individuals' pro-social attitudes is generated based on a series of questionnaire items investigating people's level of concern on different CSR issues (Pro-social concern as shown in Figure 2.1). Both negative and positive screening processes need individuals to understand corporate social responsibility. Since the inclusionary process requires more subjective discretion on where to focus and how to evaluate the non-financial attributes of firms, it is more likely that investors who adopt a positive screening strategy show more concern for different CSR issues. Thus, the following hypotheses are developed,

H_{2a}: *Individuals with higher pro-social concerns are more likely to adopt screening (positive and negative strategies) than non-screening strategies.*

H_{2b} *Compared with the negative screening strategy, individuals with higher pro-social concerns are more likely to adopt a positive screening strategy.*

2.3.4.3 Trade-off attitude between financial return and social value

Nilsson (2009) segmented investors according to their heterogeneity in terms of their perceptions of the trade-off between financial returns and social responsibility values. The trade-off attitude reveals individuals' choice of priority for non-pecuniary and financial attributes during investment decision-making. In this study, as shown in Figure 2.1, the rade-off attitude is developed to depict individuals' different emphasis on financial and non-financial attributes in SRI. According to previous literature, the willingness to sacrifice financial returns is linked to people's preferences for SRI(Barreda-Tarrazona et al., 2011; Glac, 2009).

According to Sandberg and Nilsson (2015), the strict avoidance embedded in negative screening can be regarded as an expression of the moral integrity of investors, which indicates a stronger morality requirement. Also, SRI funds with negative screens (excluding sin stocks and other controversial stocks for ethical reasons) receive larger capital inflows. They are less sensitive to negative returns than other types of SRI funds (Renneboog et al., 2009). The preference for negative screens is possibly influenced by a stronger desire for morality than financial return. As for positive screening, there is a growing popularity in the developed market for this strategy, for it ignites higher return expectations that attract conventional investors (Carlsson Hauff & Nilsson, 2023) and fulfil ethical efficiency for SR investors (Berry & Yeung, 2013; Sandberg & Nilsson, 2015). In the Chinese market context, where SR information is concerned

with being transparent and hard to compare(Matten & Moon, 2008), it is challenging for individual investors to transfer their pro-social concerns through a positive screening strategy.

Therefore, in this study, the following hypothesis is developed:

H_{3a}: Individuals who are more willing to sacrifice returns over social value are more likely to adopt a negative screening strategy.

H_{3a}: Individuals who are less willing to sacrifice returns over social value are more likely not to consider SR information (non-screening strategy).

2.3.4.4 SRI knowledge and information sources

SRI information exposure is studied to have a positive impact on people's SRI activities (Barreda-Tarrazona et al., 2011; Diouf et al., 2016). In this study, as shown in Figure 2.1, SRI knowledge and SR information sources are developed to depict individuals' exposure to SR information. Lack of knowledge and qualified information access can create barriers to engaging in SRI (Paetzold & Busch, 2014), especially when considering SRI in China, where the primary incentive for development is from the government and international market. Investors' reaction to SRI is facilitated by the nature of CSR information and SRI knowledge they receive from government reports and policy releases. More accurate knowledge helps investors access and analyse information regarding SRI and thus engage in more complicated investment strategies such as positive screening. In the Chinese market, where CSR information

is implicit and the quality of SR information is poor (Marquis & Qian, 2014), individuals with additional SRI knowledge are more likely to adopt more complicated investment decisions regarding SRI. Therefore, it is expected that:

H4: Individuals with higher SRI knowledge are more likely to adopt a positive screening strategy than other strategies.

Even in developed markets, with increasingly accessible ESG information, the complaints from fund managers regarding the quality of reporting ESG information are considered major barriers for SRI (Amel-Zadeh & Serafeim, 2018). As more ESG-labelled investment products have appeared on the market, significant concerns have been shown towards possible misleading environmental claims (Crane, 2000). With SRI still in an immature stage in China, the concerns may be more prominent as investors face uncertainty regarding aspects such as the quality of CSR disclosure, the lack of clarity of the constitutes in CSR reports, and less accessible ESG data for individuals. In the pro-social consumer domain, consumers' scepticism regarding environmental and social claims lowers buying intentions of socially responsible products (Crane, 2000). It is expected that:

H5a: Individuals with lower trust in SR information sources are less likely to adopt screening strategies (both negative and positive screening) than non-screening strategies.

H5b: Individuals with lower trust in SR information sources are less likely to adopt the

positive screening strategy than a negative screening strategy.

2.3.4.5 Social-demographics

Profiling SR investors resulted in SR investors being heterogeneous across countries, which is possible due to the origination and development of SRI being different (Sandberg et al., 2009). Generally, young females with higher education are the possible group with a higher level of awareness of social responsibility and intention in SRI (Diouf et al., 2016; Lewis & Mackenzie, 2000). However, it is challenging to use socio-demographics alone to explain individuals' intentions for different SRI strategies. Therefore, it is expected that:

H_6: Although socio-demographic characteristics help explain certain intentions for different SRI strategies, their significance is moderated when associated with other variables

The above hypotheses are developed based on existing literature, which emphasises how individual perceptions influence people's SRI behaviour. However, there is a lack of discussion on how external institutional factors influence people's SRI behaviours. This research, with the aim of addressing this issue, adds provincial differences, such as cultural value differences across provinces, into the analysis of factoring SRI strategy preferences. The following section focused on the rationale and hypotheses developed based on how cultural differences can explain individuals' intentions to use

SRI strategies.

2.4   The cultural explanation of SRI investing behaviour

SRI development in China consists of highly engaging government and foreign shareholder demand for coherent CSR policies and actions. As a result, SRI development across regions within China is uneven, especially considering the already unbalanced economic development across provinces. Therefore, it is plausible that provincial attributes may influence people's acceptance and understanding of SRI and thus influence their strategy preferences. Therefore, some provincial-level attributes are introduced to further understand the determinants that influence people's preferences for different strategies. Sandberg et al. (2009) have mentioned that the heterogeneity of SRI is possibly due to institutional and cultural differences. In considering the expanded geographical area, uneven economic and international exposure, and the ethical consideration of SR investors, a discussion of cultural differences is necessary for investigating individual SRI strategies. According to Williamson (2000), culture first shapes the formal institutional environment, such as the development of financial and legal systems. It possibly influences the development of SRI in China. Second, it impacts individual decision-making through informal rules and standards. The review of the relevant literature regarding cultural influence is approached from these two channels mentioned by Williamson (2000). Before illustrating how cultural values influence SRI behaviours through these two channels,

the concept of culture is first addressed in the following section. Since this study is conducted within China, shared culture value is discussed within a nation rather than across different nations. The share culture values are used within provincial level, which will also be discussed in this section of literature.

2.4.1 Hofstede's cultural dimension as a measure of cultural differences

The study of culture in Accounting and Finance focused on two relatively stable aspects of culture: belief and values. Hofstede's cultural dimensions provide a quantitative measure to proxy the shared values among cultural groups, which is the relatively early and often-referenced framework in conceptualising culture (Kirkman et al., 2006). Hofstede's (2001) culture framework includes the original four-dimension model, which includes individualism (INV), power distance (PD), uncertainty avoidance (UA), and masculinity vs femininity (MAS-FEM). A fifth dimension is adapted from the work of the Chinese Culture Connection (1987) and is called long-term vs short-term orientation (LTO) in his later work (Hofstede, 2001). The sixth dimension of indulgence vs restraint (IVR) is added based on Inglehart's analysis of the World Values Questionnaire, and the seventh dimension of well-being vs survival (Hofstede, 2010) is later added as well. This study focused on the original five dimensions due to the newly added dimensions of indulgence vs restraint being one facet of LTO and the dimension of well-being vs survival being focused on the changing part of the culture.

2.4.1.1 INV

Individualism implies a loosely connected society where the rights of individuals are the most important. Collectivism implies a tightly connected social framework where people are loyal to a particular group they belong to (relatives, clans or organisations). The variation of tightness between self and certain groups deviates from individuals' perceptions of self and their relationship with society. A more individualistic society creates social orders where people can develop autonomous and self-sufficient agents and where self-expression and freedom are emphasised (Allik & Realo, 2004). More collectivist culture develops interdependent self-construct. Society is formed in closely cohesive in-groups, where support can be obtained from in-group to individuals in return for loyalty and respect (Hofstede, 2010). The primary discussion of its impact on economic activities regards national culture and its association with transaction costs (Aggarwal & Goodell, 2014). Chen et al. (2002) theoretically proposed the relationship between individualism and opportunistic propensity and how it influences transaction cost. Hofstede's individualism dimension is also used to explain overconfidence in corporate merger activities (Ferris et al., 2013), which indicates that high individualism value is linked to overconfidence. Besides the discussion of cultural influence on firm-level financing activities (Zheng et al., 2012), the Hofstede framework is also used to explain individual behaviours, such as individualism's association with trading activities (Chui et al., 2010), and its impact on shaping the accounting education and judgement (Chand et al., 2012).

2.4.1.2 PD

Power distance refers to the extent to which less powerful members can accept the unequal power distribution in society, institutions and within the family (Hofstede, 2010). Societies with higher power distance are more accepting of the uneven share of power and wealth among individuals and the stratification of social order. Hierarchies and authority are appreciated rather than rejected compared with societies with lower power distance. In low PDI societies, individuals try to reduce the uneven power distribution and believe that this power distance should be reduced and lessened. Zheng et al. (2012), by adopting power distance under Hofstede's framework, find that higher power distance regions tend to use more short-term debt.

2.4.1.3 UA

Uncertainty avoidance is defined as the degree of acceptance of ambiguity and uncertainty. People in societies with higher uncertainty avoidance 'feel threatened by ambiguous or unknown situations. This feeling is, among other manifestations, expressed through nervous stress and in need for predictability: a need for written and unwritten rules' (Hofstede et al. 2010, pp191). Conversely, individuals with lower uncertainty avoidance feel more comfortable under surprising, novel and different-to-usual situations and can improvise and cope with unplanned settings.

2.4.1.4 MAS-FEM

This dimension differentiates societies into more masculine or feminine. Masculinity

values focus on achievement, success, and competition, while femininity emphasises caring for others, solidarity, and cooperation. This dimension addresses the differences in society's values associated with gender. Hofstede et al. (2010, p.140) state: 'A society is called masculine when emotional gender roles are distinct: men are supposed to be assertive, tough, and focused on material success, whereas women are supposed to be more modest, tender and concerned with the quality of life. A society is called feminine when emotional gender roles overlap: both men and women are supposed to be modest, tender, and concerned with the quality of life.'

2.4.1.5   LTO

In 2001, Hofstede added the fifth dimension based on the Chinese Values Questionnaire (CVS) initiated by Michael Harris Bond. The CVS questionnaire generated three dimensions highly correlated with Hofstede's dimensions. Another dimension that cannot be equated in the Hofstede IBM questionnaire but was correlated with past national economic growth and highly differentiated among countries. The dimension was initially called 'Confucian Work Dynamism' (Chinese Culture Connection, 1987), and it mainly contained items related to Confucius's teachings. Hofstede later renamed this dimension 'Long versus Short-Term Orientation'.

Long-term orientation (LTO) represents perseverance and thrift for future rewards. Personal adaptiveness to different situations and subordination to oneself for a purpose

are encouraged in pursuit of future gratification. 'Old age is seen as a happy period, and it starts early.' (Hofstede, 2010). Short-term orientation (STO) societies "foster virtues related to past and present' (Hofstede,2010, p210). The norm of immediate need gratification is experienced along with respecting traditions and maintaining a consistent self. 'In these cultures, old age is seen as an unhappy period, but it starts late.' (Hofstede, 2010, p 210). Minkov later uses the WVS to proxy the LTO-STO dimension to interpret self-stability and concern for tradition through a measure of different types of pride and religiousness. It renamed the dimension 'monumentalism versus flexibility', which emphasises that societies maintain consistency in identity versus societies encourage adaption and flexibility with many selves. Heine and Hamamura's (2007) self-enhancing theory was a baseline to link the variability of self as a more precise explanation of Hofstede's LTO dimension. According to Heine and Hamamura (2007), the definition of self-enhancing is related to self-consistency because it is a syndrome of high self-regard, self-liking, satisfaction with self, and self-confidence. This dimension has been used to depict firms' orientation regarding time, which explains firms' strategy planning (Buck et al., 2010).

Hofstede's cultural dimensions are considered one of the most influential cultural classifications and a feasible way to examine the concept of culture, which is readily accessible and time and cost-efficient for researchers (Soares et al., 2007). This framework provides insights for the quantitative measurement of cultural impact in

accounting and finance literature. However, there were also critics towards this framework, mainly focusing on the fact that the sample generating the cultural scores is based on survey results within subsidiaries of IBM across countries. The survey was initially designed to study corporate culture but not to identify culture dimensions. Major issues lie in the underrepresentation of IBM employees for the general population, the relatively outdated data and the misinterpretation of corporate culture with national culture. In considering the possible issues, this study integrates the World Value Survey (WVS), which is a worldwide questionnaire interviewing people about their values, beliefs and norms. Unlike the IBM survey, which only focused on work-related values, WVS has been conducted across the globe every five years to collect updated overall values and beliefs. By adopting this dataset and integrating it with Hofstede's framework, this study aims to generate provincial cultural scores to depict people's cultural differences across provinces within China.

2.4.2 The adoption of Hofstede's cultural dimension on the provincial level within China

Hofstede's dimensions have long been regarded as an elaborate typology of nation culture (Kirkman et al., 2006), and the adoption of the framework to evaluate the impact of culture on decision-making predominately uses the nation as the proxy boundary of culture (Schaffer & Riordan, 2003). Hofstede also acknowledges the existence of variations in culture within a nation across groups. Research has also

empirically demonstrated variations in cultural values within countries. However, the impact of cultural diversity within a nation has not been extensively researched.

The origin and formation of culture are reflected in a society's need for survival and prosperity (Stone & Merton, 1958). Thus, societies respond differently to physical environmental conditions such as climate, land type and natural resources (Lenartowics & Roth, 2001). Hofstede (1990) claims that geographical latitude is essential in explaining cultural differences across countries. The warm climate is associated with a higher masculine culture (Hofstede, 2001). Therefore, it is also likely to be a critical factor in differentiating regional culture, especially in large countries. Besides, income and economic change and development are also factors that bring value and belief differences within local regions. Regions with better economic development present higher individualism (Inglehart & Oyserman, 2004; Tang & Koveos, 2008) and less focus on masculinity (Tang & Koveos, 2008).

Therefore, considering the expanded geographical area of Mainland China and its rapid and uneven economic development across regions, it may be misleading to assign a stereotypical culture of this country to all its local regions. Zhao et al.(2015), by surveying 3690 first-year students from universities across 31 provinces in China, summarise subcultures under the guidance of Schwartz's value items and GLOBE questionnaire items. Kwon (2012), applying Hofstede's cultural dimensions, compared

two cities (Shenzhen and Taiyuan) using work-related values. Their study confirms that there are cultural variations between these two cities, which implies that cultural heterogeneity exists within the nation.

This thesis uses the factor analysis method based on Hofstede's five-dimension framework to verify subculture within China. Chapters 3 and 4 discuss detailed methods, data, and results. There is relatively limited literature discussing intra-country cultural variation under Hofstede's model in the context of China. The existing related literature is confined to comparisons between exemplary cities with limited power in generalizability (Kwon, 2012). This PhD study adopts world value questionnaire data for waves 5,6, and 7 across different provinces in China to draw a more generalised conclusion on how different provinces varied in value and belief under Hofstede's framework.

Previous studies regarding intra-country cultural differences are primarily focused on individualism (Kwon, 2012; Ralston et al., 1999). It is also the most mentioned dimension in Chinese culture (Herrmann-Pillath, 2016; Yan, 2010). China has been regarded as a "collectivistic" society and scores low in Hofstede individualism score. After the launch of market-oriented economic reforms in 1987, social progress is focused on measuring material advancement (Yan, 2010). Academic work among Chinese anthropologists was preoccupied with discussing the establishment of the

individual self. China has experienced rocketing economic growth during the past three decades with increasingly uneven economic differentials across regions. China's eastern areas, which have geographical advantages and high trade openness, are developing faster. In addition, globalisation enhances the importance of competition, profit-making and self-resilience, which are traits that belong to individualism. Radical economic change influences individuals' perceptions of self and relationship with society. Empirically, Ralston et al.(1999) found that Chinese managers are becoming more individualistic by comparing three generations. The largely uneven development of the local areas has made possible discussion regarding value variation across provinces, especially around Hofstede's individualism vs collectivism dimension. In the factor analysis using WVS in this study, it is expected that individualism will be a salient dimension that will vary across provinces. Due to the relatively limited literature on discussing other dimensions within the nation, it is unclear whether other dimensions can significantly differ among provinces.

2.4.3 Hofstede's culture dimensions in SRI research

According to Hofstede, culture refers to 'the collective programming of the mind that distinguishes the members of one group or category of people from another' (Hofstede, 2010, p51). It refers to the thinking, feeling and acting patterns that differ among groups. It implies 'different assumptions about society, business and government' (Matten & Moon 2008, p. 408). These assumptions influence the practice and

evolvement of SRI. On the micro-level, the existence of shared value within a particular group indicates a preference for a specific 'mode of conduct or end-state' (Rokeach, 1973, p. 16), which guides individual judgements and decisions. The shared culture creates social norms and rules, which will result in an inclination to engage in or demonstrate preferences for specific choices (Lenartowics & Roth, 2001). In the SRI context, it provides a specific institutional environment that constrains individual decision-making regarding different strategies. In considering the ethical implication of different SRI strategies, cultural values that form social norms and mental models influence people's propensity for different ethical situations through impact on ethical attitude, perception and decision-making (Franke & Nadler, 2008; Vitell et al., 1993). How culture influences individuals' behaviour in literature is reviewed in detail in the following sections.

Most of the cultural studies related to SRI discuss how cultural values drive the development of CSR policy, agendas, disclosure and corporate decision-making (Campbell, 2007; Ioannou & Serafeim, 2012; Matten & Moon, 2008). Corporate social responsibility refers to corporate strategy and practice of integrating social, environmental and ethical concerns into the business operation to achieve societal wellness and profit-making (Matten & Moon, 2008). CSR is linked with socially responsible investing in the way that corporate social, environmental and governance issues are the base for investors to incorporate their non-financial factors into

investments. SR investors are likely to invest in firms with CSR agendas (Sparkes & Cowton, 2004). CSR provides information for investors to evaluate and make investment decisions.

Meanwhile, the investors are the critical drivers for corporations to engage in CSR, and the growth of SRI could lead to great attention to responsible business practices (Lozano et al., 2006). SRI and CSR are fundamentally the same in that both assets and businesses should consider social, environmental, and ethical issues in addition to generating wealth (Sparkes, 2003). SRI view this from the perspective of investors, and CSR looks at this from the firms' viewpoint. Therefore, the cultural influence on CSR can also provide insights into how cultural values influence SRI.

2.4.3.1 Cultural impact on the development of SRI as an informal institution

Values predominating in a country influence its institutions and resource allocation (Stulz & Williamson, 2003). Culture, as an informal institution, influences formal institutions such as legal, business, and education systems and further drives explicit and implicit CSR (Matten & Moon, 2008). Explicit CSR refers to voluntarily articulating responsibility for societal interests based on firms' discretion. This explicit CSR is motivated by different stakeholders in the corporations. Societies featuring high levels of individualism and emphasising autonomy drive the development of explicit CSR that addresses issues related to different stakeholders within corporations.

Implicit CSR refers to corporation actions regarding social responsibility as a response to mandatory and codified requirements, reflecting collective values, norms and rules. Implicit CSR is incentivised by broader societal consensus and major groups in societies (Matten & Moon, 2008). In China, cultural emphasis on interdependent self-construct and cohesive in-group relations is closer to developing implicit CSR. Hofman et al. (2017) argue that China's CSR also has distinct implicit CSR. With more active government influence, the development of CSR in China reflects a stronger regulatory orientation (Gond et al., 2011). Corporations address social responsibility to respond to the consensus on a societal level and to the guidelines proposed by the government but not to respond to corporation stakeholders.

At the firm level, empirical research explains the variation of corporate social performance through cultural traits (Graafland & Noorderhaven, 2020; Ioannou & Serafeim, 2012). Ioannou and Serafeim (2012) feature the cultural system using two well-established measures by Hofstede (2001): the power distance index and individualism. Their research finds that high individualism generates higher corporate social responsibility performance. Individualism results in individual initiative and more willingness to tolerate unilateral decision-making. Managers in a more individualistic culture are more likely to choose explicit decisions and actions, which may result in voluntary and explicit CSR initiatives and thus higher corporate social performance (CSP). Graafland and Noorderhaven (2020) conclude their positive

influences on CSR practices by theorising the interplay of economic freedom with the cultural trait of long-term orientation. This research implies that the societal level long-term orientation dimension has an indirect impact on CSR policy through various groups of stakeholders. This paper addresses the long-term orientation societies press managers to improve CSR with higher economic freedom.

In relating cultural values to the development of SRI, explicit CSR provides substantive information for investors to incorporate SR attributes in their decisions. Also, stakeholders who are active individual investors can express their social preferences through investing. The fact that the origination and evolution of SRI as a response to the demand of investors for different social issues in most highly individualistic Western countries (such as Anglo-Saxon countries) confirms the influence of individualism cultural value as an informal institution. There are increasing preferences for engagement, activism strategy, and positive screening (Sparkes & Cowton, 2004), which require explicit CSR disclosure to gauge the performance of CSR. Investors in China, not like their Western counterparts, play a relatively weak role in the development of SRI, which the active government pushes to obtain broader societal aims such as poverty alleviation. CSR is implicit and not specific. This hinders investors from choosing more complex strategies to incorporate SR information on the firm level. Therefore, investors with more knowledge of SRI may make more active decisions related to SRI, such as adopting positive screening

strategies.

2.4.3.2 Cultural impact on SRI behaviour

Personal values such as investors' religious and political values have been discussed in relation to SRI behaviours. Gutsche & Ziegler (2019) studied German investors. They find a great extent of unobserved heterogeneity among financial decision-makers, especially strong-stated preferences and a considerable willingness to pay for sustainable fixed-interest investment products and sustainable equity funds. They find that investors' preferences for SRI are associated with their political identification. Investors with an affinity to left-wing parties (such as Social Democrats and the Green party) who have pro-environmental behaviour have a higher willingness to sacrifice returns for sustainable investment. Brodback et al.(2019) find a positive link between altruistic values and their importance in social responsibility. Altruism is found to be positively related to the importance of social responsibility. However, the literature discussing the links between SRI and social values and norms approaches from personal values differentiated individually. Hong and Kacperczyk (2009) provide evidence for the effect of social norms on institutional investors' behaviour and find that sin stocks (alcohol, tobacco and gaming) are less held by norm-constraint institutions, such as pension funds. The personal value system and social norms are formed under specific cultural institutions. So far, there is limited literature discussing the impact of regional cultural values on individual investors' SRI behaviour. The

impact of customary beliefs that existed among certain groups needs to be addressed.

A more recent paper provides a trial in studying national culture value and the influence on SRI funds flow by adopting the overall four dimensions of Hofstede (Labidi et al., 2021). The paper adopted the updated four-dimensional model from Tang and Koveos (2008). Their findings show that low levels of masculinity, uncertainty avoidance, and high levels of religiosity influence SRI fund in-flows. In contrast, conventional fund flows are significantly impacted by power distance and individualism. This paper provides empirical proof of how predominant values shared within a culture influence people's financial choices (Cai et al., 2016). It provides explanations of how each cultural dimension shapes people's attitudes towards ethical behaviours. SRI funds flow is regarded as a demonstration of individuals' ethical concerns, which ignores the fact that an investment in SRI funds can also indicate financial purpose rather than ethical concern.

Kahneman and Tversky (1979) argue that 'the frame that a decision-maker adopts is controlled partly by the formulation of the problem and partly by the norms, habits, and personal characteristics of the decision maker' (p. 453). Glac's later research (2012) discussed the determinants of forming frames in aspects of environmental stimuli. She argued that conformity to norms and seeking approval from certain groups can influence individuals to frame a problem differently. Culture serves as 'the collective

programming of the mind' (Hofstede. 2010, p51). There are hidden traditions of thoughts that will be activated when framing a problem as to what to focus on, what evidence to search and what inferences to make (Weber & Morris, 2010). In the SRI context, some investors understand SRI as an extension of applying their ethical values and social identity and prioritise the pro-social importance of SRI (Lewis & Mackenzie, 2000). Pro-social values refer to values focused on 'active protection or enhancement of the welfare of others' (Lenartowics and Roth, 2001:307). Some emphasise the economic outcome through SRI (Diouf et al., 2016). The duality of SR investors in seeking both ethical and financial goals through SRI leads to a discussion of how ethical attitude and awareness impact SRI decision-making (Berry & Junkus, 2013; Nilsson, 2008), which can be more clearly depict through different SRI strategies.

Regarding SRI strategies, Sandberg and Nilsson (2015) link SRI strategies with investors' ethical preferences and suggest that different SRI strategies (negative versus positive screening) can be separated into seeking moral purity or moral effectiveness. From an ethical perspective, the exclusion criteria embedded in negative screening can be considered a moral constraint on action (Sandberg & Nilsson, 2015). Investors' ethical concerns focus on how the process of investing in irresponsible firms, industries, or sectors affects their inherent righteousness (keeping moral purity). For the positive screening strategy, inclusion firms with better CSR performance indicate making social change through investing. Investors' ethical consideration is focused on

the consequences of the behaviour (Sandberg & Nilsson, 2015), as in how investing those better performers in socially responsible issues can make the world a better place (seeking moral efficiency). The ethical implications of negative and positive screening are expected to be influenced by cultural differences.

How cultural norms affect ethical decision-making has been discussed long ago, focusing on business ethics (Ho et al., 2012; Vitell et al., 1993). Vitell et al. (1993), by adopting Hofstede's typology of culture dimensions, developed propositions regarding each dimension and their influence on people's ethical decision-making. They argue that people in more collectivistic regions are influenced more by industry codes of ethics or social and ethical norms due to their focus on interrelationships in various groups to which they belong. Consistently, Maignan (2001) compares French, German, and US consumers regarding whether and how consumers consider CSR a vital purchasing criterion. Specifically, she argues that consumers from France and Germany, which are regarded as less individualistic than those in the US, are more concerned about businesses conforming to social norms and pay less attention to their economic responsibilities. This study indicates that consumers' different perceptions of CSR are possibly due to their being influenced by different national ideologies.

Based on the above discussion, several limitations are found in the current cultural discussion in the area of SRI research. So far, there is a relatively limited direct

adoption of Hofstede's framework on SRI activities. Labidi et al.'s (2021) study provides insights into how cultural values influence people's investment decisions. It shows how cultural values, measured by Hofstede's framework, explain people's SRI decisions. However, Labidi's findings reveal only a significant positive relationship between individualism score and conventional fund flow but no significant relationship with SRI funds flow. Using the movements of SRI funds flow to represent investors' pro-social preference may oversimplify the ethical implications embedded since different strategies indicate varied combinations of ethical and financial considerations (Carlsson Hauff & Nilsson, 2023; Sandberg & Nilsson, 2015). Also, it is not easy to see the mechanism of cultural influence on people's decisions in incorporating SR information into investment choices. Therefore, this study tries to address these issues by investigating cultural influence on people's preferences for different SRI strategies and provides a mechanism for how cultural factors influence SRI behaviour from their impact on the overall development of SRI and from their impact on people's values and beliefs.

In addition, extensive research using Hofstede's framework will be conducted to investigate economic activities and individual behaviours on a national level. However, the local roots are salient in influencing people's social behaviour and thinking (Tan, 2006) within a nation. The frequent discussion of the influence of subculture within a country may lead to potential vital drivers of human behaviour being missed

(Schlevogt, 2001). The subculture within China, due to the expanded geographical area and uneven economic development, has been ignored. Existing research provides evidence of variations in shared values and beliefs across different regions in China (Kwon, 2012; Zhao et al., 2015), especially in individualism and collectivism (Yan, 2010). Therefore, this study innovatively applies the Hofstede dimension within China at the provincial level to depict variations among different local regions in China and explore how culture, representing specific social norms and values, influences individuals' investment decisions regarding SRI. The following section discusses hypotheses developed regarding how culture influences people's preferences in SRI strategies across different provinces in China.

2.4.4 Hypotheses – the effect of culture on SRI strategy preferences

As discussed in the previous section (2.4.3), cultural influence is often discussed when investigating firm-level behaviours regarding corporate social responsibility. The institutional theory provides a theoretical baseline to link cultural factors to decision-making by discussing its impact as a specific social environment, which 'have generated very different broad assumptions about society, business and government' (Matten & Moon, 2008, p. 408). SRI screening strategies (positive and negative) have different financial and ethical implications. As for individuals, business ethics literature discussed culture's effect on forming mental models concerning ethical decision-making (Maignan, 2001; Vitell et al., 1993). The distinct development and

investing environment for SRI in China can be partly explained by its generally more collectivist culture, which constrains or promotes individuals' intentions for different SRI strategies. Meanwhile, with the diverse geographical landscape and uneven economic development, regions in China are differentiated in terms of cultural values, which provides the possibility to explore how this variation influences individual decision-making through their ethical attitude.

In order to capture cultural differences, this study relies on the widely accepted cultural framework developed by Hofstede (1980), which consists of five dimensions: individualism, uncertainty avoidance, power distance, masculinity and long-term orientation. According to the methods illustrated in Chapter 3 and the results of adopting Hofstede's framework on provinces within China illustrated in Chapter 4, two dimensions of individualism and LTO have been found to vary among different provinces within China. As a result, the hypotheses regarding cultural influence on strategy intentions are focused on these two dimensions. This section focused on discussing the hypotheses developed with regard to INV and LTO and their impact on SRI strategy preferences.

2.4.4.1 INV and SRI strategies

Individualism refers to the focus more on the individual self instead of on a group. According to Hofstede (2010), individualism emphasises independence rather than the

preservation of group harmony (high collectivism). People in more individualistic regions tend to be more self-expressive and autonomous. For instance, Griffin et al. (2017) argued that highly individualistic regions prefer managerial discretion to use their expertise. Respect for freedom and tolerance of personal opinion create an environment for people to express their own opinions confidently. The emphasis on independence is argued as a representation of individual freedom and equality (Griffin et al., 2021) and thus more respectful for different stakeholder groups, which leads to activism and individual social awareness (Labidi et al., 2021). People in less individualistic and more collectivistic regions emphasise on interrelationships and are respectful for specific norms and rules, such as industry codes of ethics or social and ethical norms.

In terms of financial interests, the focus on self, independence, and freedom of individualism leads to people prioritising their own interests over group interests, which may tend to motivate seeking financial performance rather than pro-social preferences (Chen et al., 2002). Maignan (2001) studied more individualistic US consumers and less individualistic French and German consumers. Her findings confirm that US consumers value corporate economic responsibilities highly, while French and German consumers care more about businesses conforming to legal and ethical standards. People emphasising personal interests and rights may be more opportunistic and driven by immediate financial gains (Labidi et al., 2021; Zheng et

al., 2013).

With regard to different strategies, a positive screening method which considers improving the social responsibility attributes of firms for long-term financial attainment fulfils individuals' non-financial and financial requirements. In comparison, a negative screening strategy with avoidance of specific industries, sections and firms is harmful to financial return in order to achieve non-financial attainment. For more individualistic regions, positive screening strategies are preferable from both financial and ethical perspectives.

What is more, Ferris et al. (2013), by observing Fortune Global 500 firms during 2000-2006, found that CEOs in highly individualistic countries are overconfident. Investors' confidence in decisions can be facilitated by the knowledge they acquire from available and accurate information Campbell & Kirmani, 2000; Wang, 2009). In relation to the development of SRI in China, with relatively weak investors facing implicit CSR information, investors' preference for a more resource-based positive screening strategy is expected to be stronger along with their increasing SRI knowledge, especially in higher individualism regions. So, when considering the regional cultural attributes, the hypotheses are:

H_{7a} People are more likely to adopt a positive screening strategy in higher individualistic regions.

H_{7b} People are more likely to adopt a negative screening strategy in more collectivistic regions.

H_{7c}: There is a stronger positive relationship between individuals' SRI knowledge and the likelihood of adopting a positive -screening strategy in higher individualistic

2.4.4.2 LTO and SRI Strategies

Long-term orientation vs short-term orientation is developed by adopting "Confucian work dynamism" (CWD) from the Chinese Culture Connection (1987). This dimension differentiates societies that emphasise the past and present from those focused on the future (Hofstede & Minkov, 2010). The high LTO is defined as "the fostering of virtues oriented towards future rewards". The high value of LTO at the societal level programmes its members to accept delayed gratification for material, social and emotional needs (Hofstede & Bond, 1988), emphasising a 'dynamic, future-oriented mentality' (Hofstede & Bond, 1988, p. 16). People consider themselves humble and adaptive in detecting and correcting deficiencies to constantly achieve future rewards. China is considered a country that values long-term orientation. LTO is argued to be associated with a strong propensity to save and invest and is observed as 'a major explanation of the explosive growth of the East Asian economies in the latter part of the 20th century'(Hofstede, 2001, p. 351). Individually, the forgoing of immediate need is transferred to a focus on future gain that is designated for material achievements. In individual behaviours, long-term orientation embodies individual

traits of being thrift and persevering for future rewards. The focus on future rewards may turn into an emphasis on financial return preservation and less preference for a negative screening strategy.

The low LTO is defined as "the fostering of virtues oriented towards present and past" (Hofstede, 2010, p. 124). Meanwhile, societies of the opposite (STO) focus on personal stability and consistency (Minkov & Hofstede, 2012a). People derive positive self-concepts, such as high self-regard, self-liking, satisfaction with their current self and high self-confidence. In contrast, people in LTO societies have low self-esteem and low self-confidence and constantly improve to a better self. People holding LTO values have low self-satisfaction and seek constant self-improvement. People in higher STO are more confident with their opinions and conduct consistent decision-making. Ferris et al. (2013) find that CEOs in STO countries are overconfident. Investors' confidence in decisions can be facilitated by the knowledge they acquire from available and accurate information (Campbell & Kirmani, 2000; Wang, 2009). In relating this to the development of SRI in China with relatively weak investors facing implicit CSR information, investors' preference for a more resource-based positive screening strategy is expected to be stronger along with their increasing SRI knowledge, especially in the STO region. Therefore, the hypotheses are:

H_{8a} People are more likely to adopt the non-screening strategy than the positive screening strategy in high LTO regions.

H_{8b} People are less likely to adopt a negative screening strategy in high LTO regions.

H_{8c}: There is a stronger positive relationship between individuals' SRI knowledge and the likelihood of adopting a positive -screening strategy in short-term orientation regions.

2.5   Summary

Overall, based on the existing literature, the ethical origin of SRI and its constant evolvement with investors' social requirements indicate that investors engaging in SRI have both financial and non-financial goals to achieve through SRI. The investigation of individuals' SRI strategy preferences is approached from how people's ethical and financial perceptions vary and how cultural values influence those preferences. The following Figure 2.2 summarises all the hypotheses developed in this study.

People's pro-social motivation, pro-social concern, and trade-off attitude toward financial performance for social values are discussed, and hypotheses are developed based on how these determinants influence their preferences for different strategies. Considering the uniqueness of SRI development in China, where governmental incentives and international pressure play vital roles. Hypotheses proxying individuals' perceptions of practices of SRI, including SRI knowledge and reliability for SR information sources, are developed to examine their impact on peoples' strategy intentions. Hypotheses 1-6 are developed based on individual perceptions and the

impact on SRI strategy preferences. The analysis of results is shown in Chapter 6.

Figure 2. 2 Model frameworks
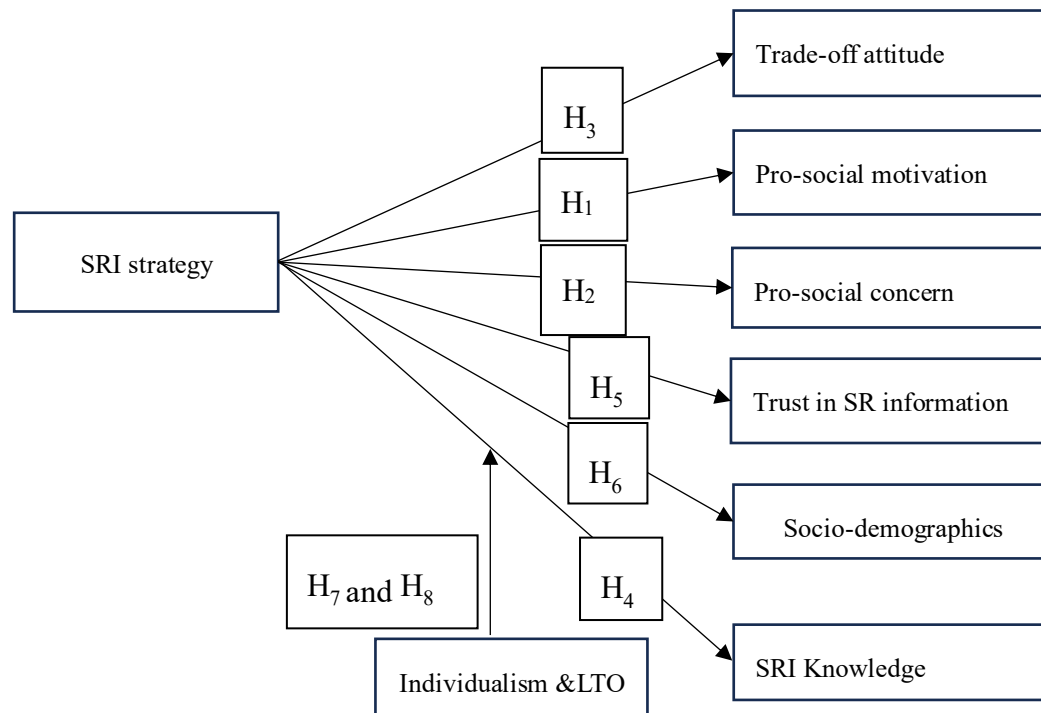
SRI in China is a co-product of government influence, international pressure and increasing social awareness. Considering the uneven economic development and international exposure, people's strategy preferences may vary across provinces. Therefore, the study further investigates provincial attributes, specifically cultural differences, and their impact on people's intentions for different strategies. Hypotheses are developed focusing on how individualism and LTO dimension impact SRI strategy preferences, considering the interaction with individuals' SRI knowledge level.

Hypotheses 7 and 8 are developed based on provincial cultural values and the impact

on SRI strategy intentions. The analysis of results is shown in Chapter 7.

CHAPTER 3 RESEARCH METHODOLOGY AND METHODS

3.1   Introduction

This chapter explains in detail the methodology of this project, including the underlying pragmatism paradigm guiding this research, the overall abductive research design and the detailed methods employed to collect and analyse data. Specifically, this chapter elaborates on the adoption of the questionnaire as a research instrument to collect data on people's perceptions and attitudes toward socially responsible investment (SRI). Also, detailed illustrations regarding the use of factor analysis to generate cultural scores are displayed, followed by an illustration of multinominal logistics regression analysis to investigate the determinants of SRI strategy preferences.

3.2   Research paradigm

Research paradigm refers to the philosophical framework that follows to form consistency throughout the research. It consists of three pillars: ontology, epistemology, and methodology. In the accounting and finance research, the functionalism is the prevalent paradigm. Functionalism comes from the paradigm framework of Burrell et al. (1979) underpinning positivist philosophy. Ontologically, research conducted under the functionalism paradigm assumes that society is objective and concrete with specific rules. Epistemologically, researchers focus on discovering the underlying order of the world and generating law-like rules based on observable and measurable facts. Researchers usually target to find causal relationships and produce predictive

conclusions. Axiologically, researchers are independent of the research subject, and their actions do not impact the subjects or the results. Correspondingly, in terms of methodology, structured quantitative methods with large data sets are primarily applied in this paradigm (Saunders, 2019).

This research focuses on observing and understanding SR investors' perceptions regarding SRI and investigating how attitudes and perceptions impact behaviours. Research conducted and developed within the functionalism paradigm assumes that investors are rational in seeking profit maximisation. According to conventional economics and finance theories, the apparent motivation for rational investors to do SRI is to obtain the maximisation of financial returns. This strand of research starts by evaluating the materiality of SRI developed from asset pricing and portfolio management theories. The discussion of materiality produces two opposite views. One is that SRI cannot generate better financial performance. Limiting the portfolio to only stocks that meet the SR criteria would result in less diversification and thus lead to underperformance (Hamilton et al., 1993). It also incurs more costs to maintain the strategy of SRI (Bauer et al., 2005; Jensen, 2002). The other view is that SRI can generate better financial performance. Corporations focusing on their social responsibility would attract more qualified employees (Becchetti et al., 2012), incur lower cost of capital (Brzeszczyński & McIntosh, 2014) and improve corporate reputation (Jo & Na, 2012). These attributes help firms to form competitive advantages

and generate abnormal returns for investors. Empirical works are conducted to compare SRI performance with conventional fund performance to determine whether investors can use non-financial information of firms to generate returns (Bauer et al., 2005; Hill et al., 2007).

In general, the functionalism paradigm provides an objective and systematic way of understanding the motivations of SRI. The ontology and epistemology of functionalism provide assumptions that investors are homogeneous and rational and that they make investment decisions according to an unbiased expected return and risk. The process of making investment decisions is, by nature, ruled by a cause-and-effect mechanism. Methodologically, most works deductively develop hypothetical statements based on existing theories (Benson & Humphrey, 2008; Labidi et al., 2021). Commonly used econometric models to test hypothetical statements can provide clues and help to search for and establish cause and effect mechanisms.

However, functionalism precludes the fulfilment of the research objective of this study, which focuses on SR investors. One prominent problem in SRI research is that differentiation in the development of SRI results in heterogeneous terminologies, definitions, and practices (Sandberg et al., 2009). These variations can be explained by different nations' values, norms and ideologies (Sandberg et al., 2009). With their varied ideologies, cultures, and values, investors tend to focus on different corporate

social aspects in SRI and hold goals other than achieving financial performance. In the context of SRI, investors' heterogeneity is subtle, unique, meaningful, and contextual-based (Cheah et al., 2011; Diouf et al., 2016; McLachlan & Gardner, 2004). They are heterogeneous rather than rational homogeneous investors searching for the optimal effective portfolio. Human elements, including individual social value, identity, and psychological attributes, separate them from one another (Nilsson, 2009), which refutes the assumption that individual investors are uniform in functionalism.

This research studies individual investors' behaviour regarding SRI while considering the complexity of SRI (Diouf et al., 2016), the uniqueness of SRI in China and the heterogeneity of SR investors beholding both financial and non-financial goals. An investigation of Chinese individual investors' SRI behaviour needs to be done by applying enriching methods and tools. Pragmatism offers an appropriate view of the problem from different perspectives in searching for practical methods that best answer the research problem (Creswell & Creswell, 2017). The research question of exploring the heterogeneity of investors in SRI follows the idea of pragmatism that 'actions cannot be separated from the situations and contexts in which they occur (Morgan, 2014, p.26). The cultural explanation of the behaviours derived from the pragmatic idea that 'actions depend on worldviews that are socially shared sets of beliefs' will be discussed (Morgan, 2014, p. 27). The extent of shared belief determines the possibility of behaving similarly and assigning comparable meanings to the

consequences of those behaviours (Kaushik & Walsh, 2019).

Moreover, pragmatism embraces both the one extreme of positivism, supporting objective knowledge through hypothesis testing, and the other extreme of constructivism, proposing relative knowledge and complexity. This stance enables the researcher to select various research designs and methodologies most suitable for addressing the research question. Therefore, pragmatism permits research with abductive reasoning where the researcher is actively involved in creating data as well as theories (Morgan, 2007). The decision to adopt the questionnaire method and combine regional cultural data with the questionnaire data for later analysis was developed under the guidance of the pragmatism paradigm.

3.3   Research design

This study adopts an abductive research design, which allows the research process to move between induction and deduction (Morgan, 2007) and is usually used at the discovery stage of hypothesis formation and testing (Walton, 2014). This design provides enriched inductive findings through exploratory questionnaire data on SRI perceptions and offers the opportunity for trials in generating provincial cultural data. The linkage between cultural factors in explaining SR-related attributes and strategies is developed abductively, and a conclusion is formed based on the most probable explanations from SRI literature and culture literature. Figure 3.1 outlines the overall

Figure 3.1 The research design outline


```
Literature Review
-Profiling SR investors
-Ethical and financial consideration of SR
investors
-SRI strategies
-Development of SRI in developed markets
and in China
```

```
Design and develop
questionnaire
```

```
Exploratory analysis of
questionnaire items
```

```
Hypotheses
development
```

```
Statistical tests
(Personal ethical, financial
practice perceptions on SRI
strategies preferences)
```

```
Literature Review
-Culture factors in investment decision-
making
-Cultural differences in SRI investment and
CSR
-Culture dimension frameworks
```

```
Generating Provincial
cultural data
```

```
Hypotheses
development
```

```
Statistical tests
(Adding provincial culture
score into analysing SRI
strategies preferences)
```

91

research design of this study. This study focuses on the heterogeneity of SRI investors in the Chinese market and the factors behind people's SRI behaviours. The design and development of the questionnaire are based on a literature review regarding how SR investors are different from traditional investors and how heterogeneous they are compared with each other. The questionnaire provides an exploratory summary of investors' understanding of SRI, which is constructed as investors' perceptions of financial, ethical, and practical aspects. The SR-related perceptions consist of five aspects, including investors' attitudes to the importance of socially responsible information, their willingness to sacrifice financial performance over non-financial attributions, their concerned issues regarding corporate social responsibility, their attitude to the reliability of different SRI information channels, and their familiarity of SRI-related knowledge. Hypotheses and analyses are conducted based on individual differences in perceptions of SRI together with individual demographics and investment features.

The literature review and findings based on individual perceptions of strategy choices enrich the understanding of SR investors' behaviour on a psychological level, which leads to additional reviews from a cultural perspective that explain their involvement of non-financial attributes in investment decision-making. Based on literature reviews from a cultural perspective and the questionnaire results, cultural data is collected from the WVS dataset (Haerpfer et al., 2022) and is analysed under the cultural framework

of Hofstede (2010). Regional cultural scores are generated to differentiate regions on a cultural level. Hypotheses related to cultural differences are added in order to analyse the provincial cultural influence on SRI strategy preferences based on existing cultural literature in SRI and CSR and the questionnaire findings.

3.4 Quantitative research method-exploratory questionnaire

3.4.1 Questionnaire as the research instrument

From the above illustration of the general research design of this project, individual investors' attitudes and perceptions regarding SRI are collected using an online self-administered questionnaire, where respondents complete an online questionnaire on their own. Questionnaires are suitable research instruments for providing descriptive analysis to identify variations in certain phenomena (Saunders, 2023). A self-complete questionnaire distributed via a hyperlink and a QR code is considered appropriate for this study. The web-based distribution mode enables this study to obtain a larger sample size that is geographically dispersed (Saunders, 2023), which fulfilled the aim to obtain responses across provinces in mainland China to gain an overview of Chinese individual investors and their behaviours related to SRI. Also, some of the questions in the questionnaire are about individuals' ethical considerations during SRI as well as their financial situations; a web-based questionnaire can lower the possibility of respondents distorting their answers to be socially desirable (Dillman, 2009) and thus generate more reliable answers. However, there are several risks when using questionnaires, which may cause errors in the estimation produced by the

questionnaire. Four sources of those errors need special attention: coverage error, sampling error, measurement error, and nonresponse error (Dillman, 2009). The detailed definition of those errors and how these errors are related to this study are illustrated in Table 3.1 below.

Table 3.1 Questionnaire error

Sources of Errors	Definition	Relation to this study
1. Coverage error	The drawn sample does not accurately represent the population to be researched.	The sample's characteristics, including demographical and investment characteristics, are biased compared with the overall situation of Chinese individual investors.
2. Sampling error	Result generated from only part of rather than the whole of the total population	Differences between the sample estimations and the estimation of the overall individual investors in China
3. Measurement error	Respondents are unwilling or unable to provide honest answers	The display or wording of the questions mislead respondents or respondents to provide socially desirable answers rather than what they really think of SRI.
4. Nonresponse error	Difference between those who respond to the questionnaire and those who do not in a way that influences the study	Respondents who answered are more interested in SRI than those who do not and thus possibly generate inflated answers for some questions.

Considering the uniqueness of conducting questionnaire research in China, several problems need special attention. The first is regarding coverage error (point 1 in Table 3.1 above). It is challenging to derive probability samples that are representative of all the individual investors in China. It requires a long time and sufficient financial support to access respondents in all parts of the country due to communication and

transportation. The second issue is measurement error (point 3 in Table 3.1). In attitudinal research, social desirability bias is one potential risk that affects the research. Socially desirability can be viewed as respondents' tendency to give favourable responses that are desirable to society and to the researcher (Crowne & Marlowe, 1960). In Chinese culture, preserving "face" is considered important. As for respondents answering questionnaires, it consists of enhancing or saving their own face and that of the researchers (Bond & Hwang, 1986). Adler et al.(1989) report that Chinese respondents tend to answer in a way they think is desired by the researcher rather than reflecting their true feelings or views. Therefore, there may be higher measurement errors resulting from response bias. In developing, refining, and distributing the questionnaire, this study tries to mitigate those concerns as much as possible. Those procedures will be explained in the following sections 3.4.2 and 3.4.3.

3.4.2 Questionnaire development and refinement

The questionnaire in this study is a modified version of a questionnaire on Attitudes Towards Responsible Investment conducted by China's Sustainable Investment Forum (SIF) and Sina Finance consecutively in the years 2020 -2022. The questionnaire in this study is developed based on the structure of the SIF questionnaire and additionally modelled with more focus on addressing the research questions in this project. This study aims first to understand the heterogeneity among Chinese individual investors and their viewpoints on SRI and second to examine the factors, including individual

and provincial level differences, that influence their SRI strategy decisions. Therefore, in addition to the SIF questionnaire, there are items developed to investigate investors' ethical considerations as well as their trade-off attitude on financial and non-financial attributes of SRI (Nilsson, 2008; Pérez-Gladish et al., 2012; Wins & Zwergel, 2016). Also, in terms of demographical information, more information is included based on existing literature. Information such as education, occupation, and regional residence is included for later analysis of drivers behind investors' SRI awareness (Junkus & Berry, 2010a; Pérez-Gladish et al., 2012).

The final questionnaire contains four sections (Appendix D and E). The first section provides basic profiling information of individuals' demographical characteristics and investment features; The second section provides information to investigate individuals' ethical and financial perceptions of incorporating SR information in investments; The third section develops items to gather information for individuals' evaluation on their practice in SRI in terms of SRI literacy, information sources and strategy intentions. These questions are developed based on the literature (Dorfleitner & Utz, 2014; Junkus & Berry, 2010a; Nilsson, 2008) and the findings of China SIF.

The refinement of the questionnaire included two stages. The first stage was pilot tests focused on the design of the initial questions and how these items addressed the research question. The questionnaire was revised based on the feedback from

supervisors and several accounting and finance academics. The test was also run among several investment practitioners to ensure the wording and questions were understandable to individual investors. Pilot tests are helpful in discovering ambiguity in questionnaires and thus improve understandability (Bourque, 2003). Also, in considering the uniqueness of conducting questionnaire research in China, pilot tests among local investment practitioners help reduce response bias problems in assessing whether specific wording or questions are viable for individual investors (Roy et al., 2001). As a result, the final version of the questions was shortened to 21 questions, and several question structures were changed. For instance, the number of scale-type questions was reduced, and some terminologies were reworded into more straightforward illustrations. Real-time trials were followed to test the finalised questionnaire under actual questionnaire conditions. This ensures the smoothness of the planned procedures for later distribution by having a preview of possible problems during accessing and answering the questionnaire. It is also helpful in providing estimations regarding respondents' answering time and rate (Leeuw et al., 2008). Appendix B to Appendix E include all the related documents as required by the university ethical committee to conduct research using questionnaires[6], including the questionnaire, ethical approvals, and consent forms in both English and Chinese.

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[6]This questionnaire is reviewed and approved by the university ethical committee. Respondents need to read and sign the consent form to participate in the research.

3.4.3 Delivery and responses

The questionnaire was delivered by the online platform the University of Strathclyde authorises. A QR code or anonymous link was shared through the following source: a Chinese social networking app, WeChat. No payments, expenses, or other incentives were offered to participants. WeChat is a social app similar to WhatsApp. The investors' contacts were obtained through the researcher's social contacts. As mentioned in 3.4.1, there can be some concerns when using questionnaire instruments for research. In this study, the measurement and nonresponse errors were the primary concerns. In order to mitigate respondents' untruthful answers, the questionnaire guaranteed anonymity without asking respondents' names and details of their working institutions. Only limited personal information was collected on respondents' demographical and investment information. In addition, the researchers had no means of tracing any respondents after they had finished the questionnaire. The anonymity can partially eliminate opportunities for subsequent social sanctioning (Dodou & De Winter, 2014; Fox & Schwartz, 2002), and the web-based channel for the distribution of the questionnaire weakens the appearance of the researcher and thus reduces the social desirability bias. However, this issue cannot be fully resolved in questionnaire-based research. Therefore, the interpretation of results should be treated with care.

This study used WeChat to start distributing questionnaires from the author's own social network and applied a gatekeeper approach (Lac, 2014) to expose to a broader

range of individual investors who invest on their behalf. A gatekeeper approach is a strategy to approach a specific person who can influence other respondents to cooperate with the study to gain more access to targeted respondents. In this study, the researcher targeted group hosts and individuals from the researcher's social circle as gatekeepers and explained the rationale and aim of the research in great detail to these gatekeepers, persuading them to spread the questionnaire in their group to increase the response rate.

It is an efficient way, especially in China, due to the emphasis on "in-group" relations relative to individuals; there is a strong emphasis on guanxi or connections and relationships in China (Redfern, 2004). Due to the questionnaire reflecting respondents' financial situation, it was not easy to approach the investors directly to obtain their opinions. The goalkeeper serves as a bridge to enhance the trust of respondents in the research without letting the respondents face and communicate with the researcher directly. The WeChat groups are randomly selected by visiting stores and communities and browsing investing forums. The Wechat groups are community groups for different activities, such as customer community groups for different products, investment community groups, and gym community groups. For instance, the researcher asked store owners if they have WeChat customer groups for the distribution of the questionnaire. The questionnaire QR code or weblink is sent to the group with the consent of the group hosts (gatekeepers). Members from the groups can

voluntarily answer the questionnaire. In this sense, this approach tries to minimise the response bias and, at the same time, increase the sample size, thus reducing the measurement errors mentioned in Table 3.1.

Besides using a gatekeeper approach to access a broader range of respondents, there are several ways to increase the response rate. Increasing the number of respondents as much as possible can reduce the coverage error and sampling error mentioned in Table 3.1 point 1 and 2. According to Dillman (2009), the processes for delivering the questionnaires are as follows: These procedures are included to boost the respondence rate:

i.   Providing advance notification before distributing the questionnaire

ii.   Attaching a cover letter to the questionnaire explaining the research

iii.   Sending a follow-up chat to remind those who have not yet responded

iv.   Sending a replacement questionnaire two weeks after sending the questionnaire
        to non-respondents

v.   Final contact for non-respondents a week after the replacement questionnaire
        is sent

Considering the function of WeChat as a social networking app, the above approaches are adaptively applied under such a context. The researcher first introduced the questionnaire to possible participants (individuals and group hosts) by chatting with

them using WeChat. After they agreed to take the questionnaire, a notice was sent to them (including the introduction of the questionnaire, the PIS form, and the consent form). After they had completed the forms, a Qualtrics [7]link was sent to them, enabling them to finish the questionnaire.

The questionnaire was distributed to individuals and WeChat groups, and 871 responses were returned. Among these, those who refused to sign the consent forms (3 responses) were omitted, and participants who took less than one minute to complete the questionnaire were also excluded (104 responses). Participants for which basic checks yielded limited answering (answering only 1 question or not answering any related questions) in SRI sections (71 responses) were also excluded. As a result, 178 responses were eliminated in the process, leaving 693 usable responses.

In terms of nonresponse bias mentioned in Table 3.1 point 4, the potential bias is in the differences between the respondents and those non-responding individual investors. One test suggested by Moore and Reichert (1983) is to compare the characteristics of respondents to those of the population at large. If they match well, the sample can be considered reasonably representative of the population at large. However, it is impossible to obtain a complete population of individual investors in the Chinese

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[7] Qualtrics is a software for questionnaires which is authorised by the University of Strathclyde. The application allows data to be collected online and analysed. Source: www.qualtrics.com and www.strath.ac.uk/is/software/qualtrics

market. Comparisons can be made between papers focused on Chinese individual investors. One paper for comparison is a study that portrays individual investors in China (Dai et al., 2016). This paper collected demographics of 2129 individual investors across China and can be used as comparable data with the sample of this research. The $\chi 2$ goodness-of-fit analysis is applied to compare whether the comparison paper and the sample in this study are the same proportion in terms of demographic variables: gender, education and age, and the investment horizon.

Regarding gender, 59.3% of responses are male in the comparison, whereas in the sample of this study, males only account for 42.7%. The statistics show that these two samples are statistically significantly different in proportion to gender. As for age, this sample has 72% of respondents in the age range of 31-60, which is not statistically significantly different compared with Dai's data. In terms of education, respondents in this sample hold higher education degrees than those in the comparison sample. This sample has predominating proportions of those with a university degree or above. In comparison sample, the percentage is only 42%, which indicates this sample is slightly biased in education level.

Another paper is also used as a comparison. Jones et al. (2021) studied individual trading and return predictability in the Chinese stock market. They have information regarding trading account balances. Their paper shows that account balances of less

than 10k account for 58.7% of the total sample (53 million retail accounts during 2016-2019). Respondents with invested capital under 100 thousand RMB account for 51% of the sample in this research. The $\chi2$ is significantly different, indicating that individual investors in this sample are relatively larger in terms of investing capital.

A broader survey was conducted by the Shenzhen Stock Exchange on individual investors, which was conducted for 12 years since 2010. However, due to limited access to information regarding their dataset, only general information can be obtained through this survey. According to their report in 2020, respondents were 18-60 and traded stocks on the Shenzhen and Shanghai stock exchanges over the previous twelve months in 2020. The investors' average age was 30.4. In this study, 50% of the respondents belonged to the age group of 31-40. Regarding investment capital, the Shenzhen survey shows that the average capital invested for stock investors is 597 thousand RMB. Regarding this sample, the mean value falls in the category of 100 thousand to 1 million RMB.

In general, considering all the comparisons between the papers and the Shenzhen survey, the sample of this study is slightly biased toward females with higher education and individuals with larger capital invested. There are two possible ways to introduce the bias of the sample. Firstly, these groups of investors are those who are more aware of SRI. For instance, females are more socially aware (Cheah et al., 2011) and thus

more active and interested in answering the questionnaire. Nevertheless, understanding the attitudes and intentions of such investors is particularly important because previous literature has shown that SR investors tend to be females with higher education (Diouf et al., 2016; Nilsson, 2008a). Investors with a more significant amount of capital for investment may incur material impact through investing. These groups of individuals may be more active in shaping and pushing the development of SRI in China.   Second, even though the distribution and refinement of the questionnaire try to mitigate the influence of response bias as much as possible, distribution through researchers' social network still influences the sample distribution to be slightly biased to young, female and highly educated population.

3.4.4   Sample characteristics

The table below presents summary information of the sample. The respondents comprised fewer men (42.9%) than women (57.1%). More than 2/3 of the respondents belonged to the age group of 31-50. The sample is well-educated, with over 80% of respondents holding an undergraduate degree or above. 15.2 per cent of respondents were working in the financial industry. The demographic information of respondents was associated with investors' different SRI strategy decisions in a later analysis. Regarding the investment characteristics of the respondents, half of the investors had 100 thousand RMB (roughly 13.8 thousand in US dollars) or below for investing. 36.1% per cent of the investors invested 100 thousand-1 million RMB. 38.4% of the

respondents invested within a year, and 53% invested in a 5-year horizon.

Table 3.2 Summary statistics of the sample

Gender（N=693）	Percentage	Working in the Finance industry (N=691)	Percentage
Female	57	Yes	15
Male	43	No	85
Age (N=693)	Percentage	Investment horizon (N=690)	Percentage
18-30	26	<1 year	38
31-40	51	1-5 years	54
41-50	14	6-10 years	6
51-60	7	Above 11 years	2
above 60	2		
Education (N=692)	Percentage	Amount invested (N=683)	Percentage
Junior high school or lower	2	Below 100 thousand	51
Secondary school or below	3	100 thousand-1 million	36
College	8	1million-6 million	8
Undergraduate	47	6 million above	5
Post Graduate or above	40		

3.5   Data analysis methods

According to the research design discussed in 3.3, this research aims to understand

individuals' understanding of SRI within the Chinese market and investigate the factors

that influence their perceptions regarding SRI. In order to fulfil the research aim, the

main part of the data was collected using a questionnaire, as discussed in 3.4. The data

analysis procedure for the questionnaire items is performed in three stages. Stage 1

includes univariate analysis to understand individuals' perceptions of SRI and their

SRI strategy intentions. Stage 2 performs bivariate tabular analysis. Each of the three

SRI strategy intentions (positive screening, negative screening, and non-screening) is

determined by social-demographic characteristics, individuals' SRI awareness, and provincial economic and cultural attributes. In the final stage, all variables are included in the multivariate model to observe their effect on the intentions for different SRI strategies in the presence of each other. The multinomial logistic regression is used for this purpose.

3.5.1 Variables and measurements

This study identifies three SRI strategy preferences from questionnaire question 18 (Appendix D and E). A virtual questionnaire item is designed. Respondents imagine how they would choose to invest in a high-pollutant energy-consuming industry. Three options are provided, each of which represents a strategy that this paper aims to discuss:

- *Negative screening* Individuals choose the option "giving up the industry altogether", which demonstrates their intention of avoiding specific industries due to their attributes of violating social responsibility norms.

-*Positive screening* Individual*s* choose the option "invest companies in improving energy usage or reducing pollutants", demonstrating their intention of using SR information actively to improve the socially responsible performance of companies.

-*Non-screening* individuals choose the option "invest in companies that generate higher returns, " demonstrating individuals' intention to use a traditional return-focused strategy regardless of SR information.

These three strategies comprise the dependent variable to measure different preferences, which is a categorical variable consisting of three categories. This variable represents the different strategies of individuals. Respondents choosing a specific option claim their preference for a specific strategy (negative screening, positive screening or non-screening). The choices of predictor variables are based on the literature on socially responsible investing and questionnaire items, as shown in the following framework (Figure 3.2). Detailed information regarding all the discussed variables is shown in Appendix A, and the respective questions in the questionnaire can be found in Appendix D and E:

- *Pro-social motivation:* a measurement of individuals' pro-social motivation is generated by investigating motivations behind individuals' incorporation of SR information. A dummy variable is generated of 1=choose the option "SR information is important in investment due to their impact on sustainable development" and 0 otherwise.

- *Pro-social concern:* A Likert scale is generated to measure the general level of individuals' concerns over pro-social issues when investing. It is a proxy to represent individuals' SR awareness. It is generated based on five 5-scale Likert-type items (Weiss, 1971) verified by factor analysis, and a higher value indicates the individual is more concerned with pro-social issues.

- *Trade-off attitude:* In this study, by using two scenario questions (see section 5.3.6)

In both scenarios, respondents were asked to choose between an alternative and benchmark investment, "Good CSR with average financial performance". In scenario 1, the alternative investment is "Average CSR with good financial performance"; in scenario 2, the alternative investment is "Poor CSR with good financial performance". An ordinal variable divides individual into 3 groups: those who value social responsibility over financial returns, those who value financial returns and those in between.

- *SRI knowledge:* In this study, a scale was constructed based on eight 5-scale Likert-type items to proxy a general level of individuals' SRI knowledge, which indicates perceived resources and information individuals have for making SRI-related decisions.

-*Trust in SR information sources:* In this study, a scale was constructed to proxy the general level of trust individual investors have for receiving SR information based on six 5-scale Likert-type items. This variable indicates the richness of the information sources individuals have.

-*Socio-demographics:* Gender, age, education, finance occupation, investment horizon less than one year, investment capital larger than 1m, stock as one major instrument

-*Provincial culture differences:* Individualism score ranging from 0-100 with a higher score indicating high individualism; LTO score ranging from 0-100 with a higher score indicating long-term orientation, a low score indicating short-term orientation.

Figure 3.2 Model framework
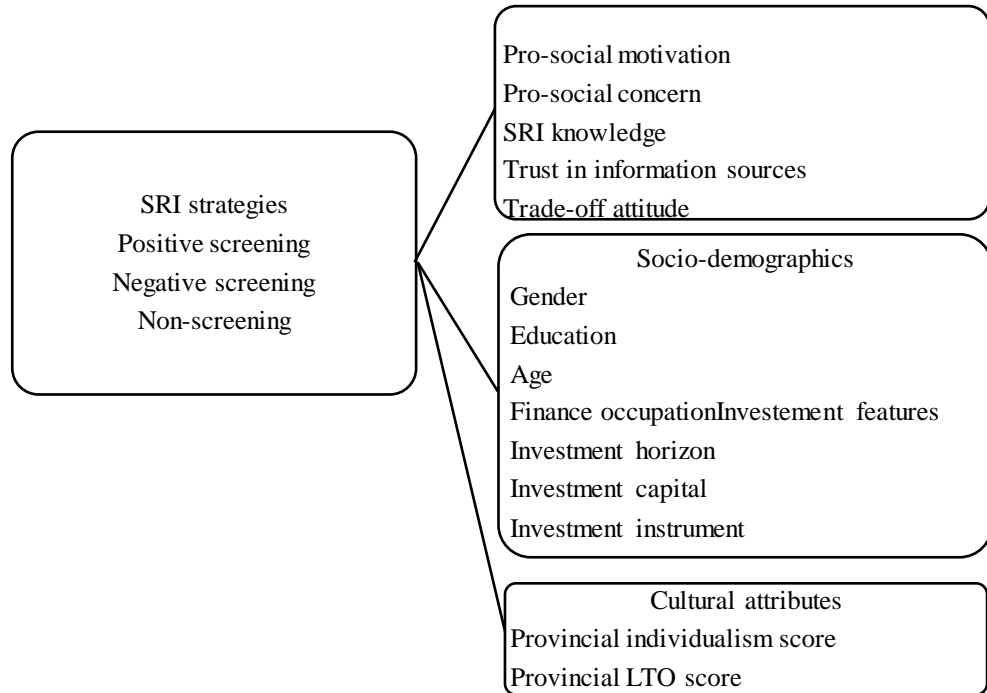
3.5.2 Multinominal logistic model

According to the three stages of data analyses, univariate, bivariate and multivariate analyses are adopted. For the final stage, all variables are tested together using a multinomial logistic model (MLR), an extension of the logistic model. This model is used due to the categorical nature of this study's dependent variable (see 3.5.1), which has more than two categories without natural ordering among all these categories and allows simultaneous comparison of multiple contrasts (Agresti, 2019). Similar to logistic regression, the dependent variable is transformed into the natural log of the odds of a specific case happening or not. The logarithm of the odds is called logit. The regression calculates the changes in the logit of the dependent variable.

In the MRL model, the coefficients are estimated to be in a baseline category. If there

are p predictor variables with a dependent variable having k categories, one of the categories is considered the base level and all the logarithms of the odds are constructed relative to it. $\text{Log}(\frac{\pi_j}{\pi_k})$ represents the log odds that the response is j relative to baseline, and the model with p predictor variables are shown as:

$$\log\left(\frac{\pi_j}{\pi_k}\right) = \alpha_j + \beta_{j1}x_1 + \beta_{j2}x_2 + \cdots + \beta_{jp}x_p, \text{j=1,\ldots, k-1.} \tag{1}$$

Where j represents category j and k represents the baseline category. The model has k-1 equations with separate parameters for each, and the coefficients vary according to different categories compared with the baseline category. The coefficient is interpreted as one unit change of x effects on the log of the odds of falling into a certain category relative to the baseline when the other variables in the model are held constant (Agresti, 2019). The model's parameter is estimated using the maximum likelihood method for all the equations simultaneously, and in this study STATA[8] software is used to do the fitting.

The probability of category j occurring based on the above model is:

$$\pi_j = \frac{e^{\alpha_j + \beta_{j1}x_1 + \beta_{j2}x_2 + \cdots + \beta_{jp}x_p}}{\sum_{h=1}^{k} \alpha_h + \beta_{h1}x_1 + \beta_{h2}x_2 + \cdots + \beta_{hp}x_p}, \text{j=1,\ldots,k} \tag{2}$$

$\sum_j \pi_j = 1$. The parameter equals zero for the baseline category in the logit expression.

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[8] StataCorp. 2023. Stata Statistical Software: Release 18. College Station, TX: StataCorp LLC.

For this study, this model enables comparisons of the effects of different predictor variables on the possibility of individuals' intentions in choosing among three categories: negative, positive and non-screening strategies. For instance, taking non-screening strategy as a baseline category, the MRL model of response falling in negative screening strategy is written as:

$$\log\left(\frac{\pi_{negative\ screening}}{\pi_{non-screening}}\right) = \alpha_{negative\ screening} + \beta_{negative\ screening1}x_1 + \beta_{negative\ screening2}x_2 + \cdots + \beta_{negative\ screeningp}x_p \qquad (3)$$

The estimates for $\log\left(\frac{\hat{\pi}_{negative\ screening}}{\hat{\pi}_{non-screening}}\right)$ with coefficient $\hat{\beta}_{negative\ screening1}$ for x_1 indicates that 1 unit increase the estimated odds that an individual chooses negative screening rather than non-screening strategy change $\exp(\hat{\beta}_{negative\ screening1})$.

3.5.3 Interaction terms in multinominal logistics regression

In order to address the cultural impact on individuals' SRI strategy choices, this study developed hypotheses based on the indirect relationship between cultural differences and people's strategy choices. Methodologically, this study introduces interactive terms into the multinominal logistics regression to capture the effect of SR-related variables on strategy decision-making depending on the magnitude of cultural differences. SRI knowledge level, to be exact, serves as a focal independent variables. Cultural differences are treated as moderators, and strategy choices are outcome variables. One thing to be noticed in this study is that the multinomial logistics model

for the categorical dependent variable (choices of SRI strategies) produces nonlinearities in the predicted probability metrics. It is misleading to use the coefficient on the interaction term to conclude categorical models (Mustillo et al., 2018). Ai and Norton also mentioned, 'The interaction effect...cannot be evaluated simply by looking at the sign, magnitude, or statistical significance of the coefficient on the interaction term when the model is nonlinear' (Ai & Norton, 2003, p. 129). Therefore, this study will provide an estimated probability table and the results table to help the analysis be better understood.

3.6   Factor analysis

3.6.1   Exploratory factor analysis (EFA)

Among all the predictor variables, several variables are generated using factor analysis. Factor analysis is a data reduction method where measurable and observable variables can be reduced to fewer latent variables that share a common variance and are unobservable. This method can search common indicators and generate measurable instruments to represent the unobservable theoretical construct (Bartholomew et al., 2011). In this thesis, factor analysis is adopted first to explore communality embedded within several Likert-type questions in the SRI questionnaire and generate variables including individuals' pro-social concern, level of SRI knowledge and trust in SR information sources. Secondly, it reduces the number of values, beliefs and norm questions from the World Value Questionnaire (Haerpfer et al., 2022) to generate

dimensions to differentiate provincial cultural characteristics.

There are two types of factor analysis: exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). The former is used when no predefined theory forms the structure or dimensions underlying a set of variables. There are no clear expectations or relatively incomplete expectations' regarding the underlying dimensions of the correlations (Fabrigar & Wegener, 2011, p. 4). CFA, on the other hand, refers to analysis with a clear theoretical backbone of common factors embedded in a set of variables and is usually used in testing specific hypotheses regarding the structure of the correlations. In regarding this thesis, EFA rather than CFA is adopted. The rest of this section will use the generation of cultural dimension as an example to illustrate the application of EFA in this study. Results of SRI-related variables and cultural scores are respectively discussed in chapters 4 and 5.

Concerning cultural dimensions among provinces, Hofstede's five-dimensional cultural framework is a starting point to investigate the possible differences across different Chinese regions. It provides a general idea of how factors might emerge from selected items. The expectations of which items might be influenced by certain factors are based on Hofstede's definition and illustration and previous literature. Indeed, previous literature has shown that some of Hofstede's dimensions are validated using diverse datasets and research methods. Previous literature also indicates the objectivity

of specific dimensions (INV, LTO and PD). However, there is constant criticism against the dimensions of UA and MAS-FEM regarding their inconsistency when testing using different data and methods.

More importantly, prior replication and validation work has mostly been conducted at the national level (Beugelsdijk & Welzel, 2018; Minkov & Hofstede, 2012a). Previous studies have cast doubt on the use of nations as a unit of analysis in culture-related studies (House et al., 2004). There is limited work to adopt intra-country analysis (Minkov & Hofstede, 2012a; Xu et al., 2019). Therefore, there is no sufficient support, either theoretically or empirically, to specify the exact number of factors, as well as how those factors influence each item. So, this thesis will adopt the exploratory approach of factor analysis. In addition, the aim of the exploratory factor analysis is to investigate whether selected questionnaire items from the World Value Survey (WVS) can form meaningful latent culture constructs to represent Chinese respondents' attitudes and beliefs on the provincial level. This aim determines that the common factor model is used rather than the principal component model (PCA). The common factor model is focused on understanding the correlations among measured variables, which makes this mathematical framework more suitable for finding underlying constructs among variables. At the same time, the principal component model accounts for variances rather than explaining the covariance. Details are discussed in the section on implementing EFA.

3.6.2 Properties of variables and sample

3.6.2.1 Properties of measured variables

Several features are particularly important in the context of EFA in terms of measured variables for generating the factors. The fundamental one is the adequacy of measured variables sampled for a valid factor to emerge. In this thesis context, items selected for each factor should represent the concept of the designated culture dimension. Underrepresented or undiscovered variables could affect the strength of the underlying factor. Also, the inclusion of a variable that does not suitably belong to one dimension or a spurious factor that belongs to another dimension may result in distorted factor structures that are difficult to interpret (Fabrigar, 2012). In order to avoid the above situations, the items selected for each dimension have a theoretical backbone that closely resembles Hofstede's definition. This is realised by sourcing similar items to Hofstede's original IBM questionnaire. In addition, there is also an investigation of existing empirical works on selections of WVS items for each dimension. A detailed illustration of the selection of items from WVS will be shown in Chapter 4. Statistically, a KMO[9] test will be conducted to test the overall adequacy of the selected items before the factor analysis.

A second aspect that needs to be discerned is the number of measured variables selected to generate the underlying construct (factor). Besides the theoretical

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[9] The Kaiser–Meyer–Olkin (KMO) test is a statistical measure to determine how data is suitable for factor analysis.

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requirement of the selection of variables, the number of included variables has an impact on the quality of the factor analysis. Previous studies have suggested at least 3-5 measured variables to be selected to reflect each common factor. The more variables added, the higher the chance of having high-loading variables for the expected factor. The degree of overdetermination, which means multiple variables well-defining a factor both in theoretical meaning and statistical loading, has a great influence on the quality of the analysis. This impact is more critical when the overall sample size for analysis is small (MacCallum et al., 1999). More details regarding the degree of overdetermination will be discussed in the following section when taking sample size into consideration.

3.6.2.2   Properties of the sample

The sample size must be considered in order to conduct factor analysis. Early studies recommended an absolute number for the total sample. Gorsuch (1988) suggests a sample size of not less than 100. Comrey and Lee (1992) suggested that a sample of 500 would be desirable for factor analysis. However, later studies have identified the misconception of these guideline ratios due to the lack of consideration of the other properties of the data for a given study and the lack of both theoretical and empirical support. The level of communality of each variable (proportion of variability explained by factors for each variable, 1-uniqueness in STATA) and overdetermination (multiple measured variables with substantial loading on each factor) of the factors should also be considered (MacCallum et al., 1999). A larger communality and a high degree of

overdetermination improve the quality of the factor analysis solution and reduce the impact of sample size. Besides these two aspects, the minimum sample size is also determined by the number of factors (De Winter et al., 2009).

In this study, 3 waves of questionnaire responses were retrieved from WVS. The initial WVS data includes the recent 3 waves with a total of 7327 respondents. However, the unit of analysis for the factor analysis is the provincial level, which means the answer to each selected questionnaire item is aggregated to that level. As a result, the sample ended up with a size of 30 provinces, which is a fairly small sample size. The small sample size might trigger some problems in generating reliable factors. With the number of factors being small, if appropriate data are sampled, a reliable solution can still be reached with a small sample size (MacCallum *et al.*, 2001; De Winter, Dodou and Wieringa, 2009). In order to minimise the effect of a small sample size on the factor solution, several data properties need to be considered. The data properties include the number of factors, the number of measured variables per factor, the level of communality, and factor loading. The design of this research for the cultural dimension is to extract one strong factor through several questionnaire items to represent a corresponding cultural dimension. The factor analysis is run for each dimension separately, and each analysis retains one factor.

For each factor, at least five potential items are selected to run the test. According to

Winter et al.'s (2009) simulation study, the increased number of measured variables reduces factor indeterminacy. The sample size cannot be expanded in this research context, so selecting as many questionnaire items for each dimension as possible is needed. So far, INV-COL is with 7 potential items: PD (7 items), UA (9 items), MAS-FEM (8 items) and LTO-STO (6 items). In addition, the level of loadings is a strong determinant of the solution reliability (MacCallum *et al.*, 1999; De Winter, Dodou and Wieringa, 2009). Factor loading captures how a measured variable contributes to a specific factor. The larger the loading represents, the stronger the correlation between the variable and the factor (Kline, 2014), indicating that the factor better accounts for this variable. A high factor loading (usually above 0.8) can reduce the impact of sample size.

Communality, calculated as the sum of the square of all factor loadings for a measured variable, indicates the extent to which the variable is influenced by all the factors. A one-factor model is used in this study, so the communality is the squared factor loading that provides information on how well the factor estimates the variable. Variables with low communalities (less than 0.2, so that 80% is a unique variance) are usually eliminated from the analysis since the aim of factor analysis is to try and explain the variance through the common factors (Child, 2006).

3.6.3   Implementation of EFA

In order to implement EFA, three steps must be taken. The first step involves choosing a model fitting procedure from various options such as principal factor analysis, Iterated principal (IPA) factor analysis, and maximum likelihood (ML) factor analysis. The second step is to determine the number of factors for estimation, and the final step is to select a rotation process. This section will provide a detailed explanation of these three steps that will be carried out in this thesis.

The three fitting procedures are all based on the common factor model, with variations in the methods used to generate parameter estimates. The common factor model can be expressed in terms of variances of measured variables:

Observed variances= common variance+ unique variance   (4)

The fitting procedure is focused on estimating the unique variance/common variances. In many methods of factor analysis, the goal of extraction is to remove as much common variance in the first factor as possible (Child, 2006). The differences in those procedures appear under conditions of low commonalities and a low ratio of measured variables to a common factor. Among these three procedures, ML is the most preferable for scholars due to its ability to compute model fit indicators, which help the researcher evaluate the model and decide on the appropriate number of factors retained. However, this model requires multivariate normality, whereas the other two

procedures do not. It is prudent to examine IPA and ML to confirm the results (Fabrigar, 2012). This thesis will follow this rule of applying both procedures to confirm stable results.

Regarding the number of factors retained, since the goal is to know whether the selected variables can generate one strong factor representing each of Hofstede's cultural dimensions, we will first apply ML and the likelihood ratio test to evaluate if a one-factor model is appropriate. A non-significant test has to be obtained in order to retain the one-factor model. If not, we use the likelihood ratio test combined with its χ^2 difference test between one and two-factor models to see if there is an improvement. This procedure can be repeated until a satisfactory model is achieved. From there, we conduct the varimax rotation procedure, which is a procedure to reduce the complexity of factor loading and increase the interpretability of the results. We interpret all the factors to see if one represents the designated dimension, replace those measured variables with low communality, and rerun the test to see if we can improve the results and find variables that better determine the corresponding factor. We then conduct IPA to confirm that both methods produce comparable results.

In the following several paragraphs of this section, an example of one of the dimensions (INV) is provided to demonstrate how the EFA method is being used in this study. Seven potential items have been selected from the WVS data to run the

factor analysis to generate the INV score. The details of how these items are selected are based on Hofstede's theoretical framework and empirical research, which will be discussed in detail in the result. This part will focus on how EFA is applied to decide which variables generate a score representing INV.

Items selected are with different ranges. Among the 7 items, items 1-6 are Likert-type variables with 10 intervals; item 7 is Likert-type variables with 4 intervals. A standardised process was being applied so that it would be easier to generate a score at a later stage. The provincial average is calculated for each item. Table 3.3 shows the statistical results of those items, testing for their adequacy in conducting factor analysis using ML.

The Kaiser-Meyer-Olkin (KMO) measure confirmed the sampling adequacy for the analysis (Kaiser, 1958). The statistical measurement provides the level of suitability of a sample for factor analysis. The higher the statistics indicate a higher degree of fitfulness for the analysis. The total KMO was 0.78, which is considered acceptable (Hair et al., 2013). Individual KMO values are > 0.52, which is above the acceptable minimum of 0.5 (Hair et al., 2013). Three items had values between 0.80 and 0.90, three items had values between 0.70 and 0.80, and 1 item had values between 0.5 and 0.7. The sample is multivariate and normally distributed (Doornik-Hansen chi2(14) = 14.83).

Table 3.3 Statistic summary of items

Item	Mean	SD	Skewness	Kurtosis	KMO	N
1	-0.04	0.19	0.82	4.58	0.86	30
2	-0.03	0.21	-0.20	2.81	0.78	30
3	-0.05	0.26	-0.23	3.14	0.74	30
4	-0.04	0.28	-0.25	2.72	0.79	30
5	-0.04	0.21	-0.05	2.96	0.84	30
6	-0.04	0.25	-0.79	4.24	0.82	30
7	-0.04	0.27	-0.38	2.59	0.52	30

This table demonstrates an example of reporting the statistics of all the selected items for the INV factor analysis.

Table 3.4 shows the results of the factor analysis of the INV dimension using those 7 items. The higher uniqueness (defined as 1 – communality) indicates the amount of variability that is left over in the one-factor analysis. Uniqueness represents something that is measured reliably in that particular variable but not by any of the others. Values more than 0.6 are usually considered high. In the analysis, items 6 and 7 have a uniqueness higher than 0.6. They are removed, and the analysis is rerun. Model 1 is the factor analysis with all 7 items; model 2 is the tests conducted using 5 items (6 and 7 removed).

The results show that ML and IPA analysis generate similar results; there is one prominent factor from those items in both model 1 and model 2. LR test shows that the one-factor model is fit for analysis. Statistically, according to the previous discussions, a higher loading factor and communality can reduce the negative impact of a small sample size. Whereas the last two items theoretically addressed the other facet of INV, which should be included in later analysis. Factor scores based on 7 items and 5 items are both generated for use in later studies. Factor analysis for the other

four dimensions uses the same procedure as shown here, and the detailed results can

be found in the results chapter.

Table 3.4 Factor analysis for INV

	Model1			
	Maximum likelihood		Iterated principal factor	
Items	Factor1	Uniqueness	Factor1	Uniqueness
1	0.79	0.38	0.83	0.31
2	0.97	0.06	0.97	0.07
3	0.9	0.18	0.88	0.22
4	0.86	0.27	0.84	0.3
5	0.77	0.4	0.8	0.36
6	0.55	0.7	0.55	0.7
7	0.38	0.85	0.37	0.87
Eigenvalue	4.15		4.17	
AIC	38.82			
BIC	48.62			
LR test $\chi2$	21.64			
Cronbach's α	0.86			
	Model2			
	Maximum likelihood		Iterated principal factor	
Items	Factor1	Uniqueness	Factor1	Uniqueness
Justify-homo	0.78	0.4	0.77	0.4
Justify-abortion	0.91	0.17	0.9	0.19
Justify-divorce	0.96	0.08	0.95	0.1
Justify-euthanasia	0.87	0.25	0.87	0.24
Justify-suicide	0.79	0.38	0.82	0.33
Private vs State-owned				
Disagree Parent Proud				
Eigenvalue	3.72		3.74	
AIC	19.24			
BIC	26.25			
LR test $\chi2$	8.27			
Cronbach's α	0.93			

This table reports factor loadings of INV items as an example to demonstrate how factor analysis is conducted in this study. Model 1 shows a 7-item analysis using maximum likelihood and Iterated principal methods. Model 2 shows a 5-item analysis using these two methods.

3.6.4 Generating dimension scores

The final scores for each prominent dimension are generated after the factor analysis. One challenge is the variety of scales in the WVS questionnaire, which cannot add the items correctly. The raw value of questionnaire items in the corresponding factor is transformed into a Z score so that items with different scales can be added together using the unit weight approach. The weight assigned to each variable is the primary decision in generating the factor score. The unit weighting approach only uses the salient variables in unit weights and sums up them directly to represent the corresponding factor. In this study, factor analysis mainly aims to use questionnaire item clusters to depict the underlying common belief and attitude to proxy the cultural dimension. Interrelationship among items is more important than how each of them loads on the factor. The unit weight method gives equal weight to variables with different loadings. This method can generate the highest internal consistency reliability (Weiss, 1971), which fulfils the aim of this study. Other methods, such as factor scoring using regression and differentiated weights, can generate more independent factors but are less reliable than unit weighting (Weiss, 1971). In this study, only one factor is retained for each dimension, so independence among factors that are prominent problems in unit weight does not exist. Therefore, unit weighting is the proper method for generating factor scores in this study. The results of factor scores are detailed in the result chapter.

One thing to be noticed is the arbitrary decision on the salience of factors to be included in generating the score. Due to the relatively small sample size, the salience cutoff is an integrated decision of theory and statistics in this study. For instance, in the INV example shown above, statistically, the 5-item factor has improved statistics for the INV factor analysis. In contrast, the 7-item factor is more closely related to the concept in Hofstede's theoretical framework and, at the same time, statistically sound. Therefore, the 7-item structure is used to generate the score to represent INV.

3.7 Summary

In summary, this chapter illustrates this study's overall methodology and methods. This research is studied from the stance of a pragmatism paradigm. The questionnaire provides a general understanding of Chinese individuals' SRI perceptions. The factors that explain individuals' SRI strategy preferences are investigated using both questionnaire data and cultural data from WVS. Some Likert-type items from the questionnaire and WVS dataset are tested through EFA to generate variables used in later analysis. The influence of factors behind SRI strategy preferences is analysed through univariate, bivariate and multivariate methods. The following chapters discuss the implementation and findings of questionnaire data and the analysis results regarding factors influencing individuals' SRI intentions.

CHAPTER 4 GENERATING CULTURAL SCORES- IMPLEMENTATION OF EFA AND FINDINGS

4.1 Introduction

This chapter presents the results of EFA in addressing cultural variations among Chinese provinces and the cultural scores generated to proxy the variation for later analysis. This chapter provides a description of the selections of world value questionnaire (WVS) items under Hofstede's five-dimension framework, the implementation of EFA and data analysis to generate the most valid factor solution using WVS questionnaire items and the calculation of culture scores based on the factor analysis. As a result, only individualism (INV) and long-term orientation (LTO) are tested to be salient dimensions that differentiate across provinces in China. This chapter focuses on reporting the procedure and results of only these two dimensions. The test procedure and results of other dimensions, including power distance, MAS-FEM and uncertainty avoidance, are shown in Appendix G.

4.2 World Value Survey data

World Value Survey (WVS) is a worldwide questionnaire that interviews people about their values, beliefs, and norms. It was initiated in 1981 by Ronald Inglehart and is conducted globally every five years. It is, so far, one of the most authoritative and widely used questionnaires in the social sciences (Haerpfer et al., 2022). Up till now, this questionnaire has conducted seven waves over the past 40 years since its first wave.

This thesis will focus on the three most recent waves: wave 5 (2005-2009), wave 6 (2010-2014), and wave 7(2017-2022) for China. The items surveyed varied across waves. It generally contains items regarding respondents' social, economic, and ethical values and perceptions of corruption, migration, and security.

This thesis chooses WVS as the resource to generate cultural dimensions because of its fitfulness to the requirements of the research design. Firstly, WVS has extensive data regarding people's values and attitudes towards life and work. It is unlike Hofstede's IBM questionnaire, which only focuses on work-related values. Secondly, this research aims to evaluate the local differences from a cultural perspective. WVS questionnaire is conducted where each respondent's province of residence data is available. This information enables this study to analyse differences in values and beliefs on a provincial level. It also provides sufficient observations to capture and differentiate local regions' collective beliefs and norms. The items surveyed varied across waves. Items that appear in at least two waves are selected for analysis, which means each item has 4000-7000 observations. These sufficient observations enable generalisation on a provincial level.

The reasons to choose only the recent three waves instead of including all seven waves are that firstly, since China entered into the WTO in 2002, there has been a significant increase in exposure to international environments, resulting in a more diverse cultural

impact on its people (Yan, 2010). Secondly, the SRI questionnaire was carried out in 2022. Focusing on the most recent three waves can obtain Chinese individuals' most up-to-date perspectives and attitudes.

4.3   Implementation of EFA

This thesis utilises the World Value Questionnaire (WVS) waves 5, 6, and 7 to measure regional culture in China based on Hofstede's five-dimension framework. This investigation aims to explore possible cultural differences across various regions of China. Hofstede's framework is an ideal starting point for this study because it views culture as a set of shared values that distinguish one group from another, or 'the collective programming of the mind' (Hofstede, 2010, p.13). Additionally, Hofstede's framework is highly influential and cited in social science, having been replicated and validated by various researchers and methods since its original publication in the 1980s. This indicates the objectivity of specific shared values in the dimensions.

However, as mentioned in the previous chapter, adopting Hofstede's framework in this study faces mainly two challenges: first, lack of validity for some dimensions (UA and MAS-FEM) in the existing literature; second, the novelty in adopting this framework on the intra-country rather than inter-country level despite the fact that there is literature confirming the intra culture phenomenon within China (Kwon, 2012; Yan, 2010; Zhao et al., 2015). Considering the challenges, a mix of theory-based and data-

driven approaches is adopted to decide which items represent each dimension. Exploratory factor analysis will be conducted. Due to the exploratory nature of this part of the study, several criteria are needed to generate reliable proxies under Hofstede's framework.

First and foremost is the satisfaction of a close conceptual resemblance of those selected items with Hofstede's definitions. The WVS questionnaire was not designed under Hofstede's framework. In order to meet these criteria, waves 5-7 are used as a base pool of items and include items based on Hofstede's definition and existing literature on validating or replicating Hofstede dimensions using the WVS database. All the selected items are shown in detail in Appendix F.

Secondly, potential items for each dimension are tested using a one-factor model EFA according to the properties required by generating stable factor solutions mentioned in the previous section (3.6). Stata software is used to achieve factor analysis results. Due to the fact that the investigation of correlations among items is on the provincial level, the sample size is 28-30, which is relatively small for factor analysis. Previous literature concludes that there are no absolute thresholds for minimum sample size. It varies according to several determinants, which include factor loading, communalities, number of variables per factor, and the number of factors (De Winter et al., 2009; Gagne & Hancock, 2006; MacCallum et al., 1999). Small sample sizes are still an issue

to pay attention to when generating stable solutions. The following several statistical criteria are developed according to existing literature (Kline, 2014; Pett et al., 2003; Watkins, 2018) and the situation of the WVS dataset regarding those determinants mentioned above:

1. For each dimension, at least five items are selected for analysis. More items increase the chance of obtaining items with high-loading items. Loading is the correlation between an item and the factor. High loading indicates more relevance to the item to define the dimensionality of the factor generated.

2. The Kaiser-Meyer-Olkin (KMO) and basic statistical data, including mean, standard deviation, skewness and kurtoses, are reported to evaluate the sample's adequacy (Kaiser, 1958). KMO provides statistical information in terms of the proportion of common variances among items. A higher proportion indicates a higher adequacy for conducting factor analysis. Items' mean, standard deviation, skewness, and kurtosis are also shown using maximum likelihood (ML) when conducting factor analysis. According to Kaiser (1985), KMO less than 0.5 is regarded as acceptable. Therefore, items with lower KMO (lower than 0.5) may be removed, considering their factor loading and uniqueness. Both ML and IPA are conducted using a predetermined one-factor model.

3. Special attention is needed for the low-loading items. A one-factor model is tested, so the loadings are directly related to communality (the square of

loading per variable is the communality of that variable). Variables with loading lower than 0.3 are considered to contribute little to the respective factor. Variables with loading between 0.3 to 0.6 are interpreted with care.

4. For those validated culture dimensions, a cultural score can be generated. The removal decisions regarding items with low communalities are made according to the resemblance of respective items with the conceptualisation under Hofstede's framework.

Suppose the above statistical criteria cannot be met using the pre-selected items according to theory. In that case, more factors can be added to each factor analysis for a specific cultural dimension. The model fit statistics of AIC and SIC are used to investigate whether the dimension is merged in multiple-factor models. Low KMO items are removed one at a time, and the analysis is to see if the corresponding dimension can emerge. The overall process is a repetitive trial process to generate stable factor solutions that are also theoretically in line with Hofstede's framework. The confirmed items for corresponding dimensions are later summed up using the unit weighting approach to obtain a score (Weiss, 1971).

4.4 Findings of EFA

4.4.1 Individualism (INV)

So far, individualism is the most researched and significant driver of cultural

differences (Triandis, 1995). Individualism refers to the focus more on oneself rather than on that of a group. It represents preferences for individual freedom and self-expression over the preservation of harmony (Labidi et al., 2021). According to Hofstede (2010), individualism emphasises expressing one's own beliefs and preferences, which leads to active social awareness of individuals. On the contrary, people in more collectivist regions prefer to follow the group's opinion and are unwilling to break social norms. Decisions are made more focused on the obligation to a group rather than what is perceived as right or good by the individual consciousness. According to Hofstede (2001), individualism generally focuses on autonomy and self-orientation, the importance of private life, weak family ties, and fewer conformity behaviours. This dimension is the best-validated one in Hofstede's framework (Minkov & Kaasa, 2022). Although scholars operationalise this dimension in different ways (such as personal and work-related values) and apply different names to it, they mainly proxy this dimension through the people's acceptance of specific behaviours (Minkov & Kaasa, 2022), and the results converge. The following items are considered potential measures for INV using the most recent three waves of the WVS dataset for China from 2005 to 2020. The exact wording of the items is presented in Appendix F, with an explanation of their scale.

The justification of a series of behaviours indicates the freedom of personal choices, a facet of the degree of autonomy and self-expression (Beugelsdijk and Welzel, 2018).

Therefore, it includes the following aspects to represent people's attitudes in making free decisions on gender, sexual behaviour, and life.

- The extent to which people in a country find abortion justifiable (Justify-abortion)

- The extent to which people in a country find homosexuality justifiable (Justify-homo)

- The extent to which people in a country find divorce justifiable (Justify-divorce)

- The extent to which people in a country find euthanasia justifiable (Justify-euthanasia)

- The extent to which people in a country find suicide justifiable (Justify-suicide)

Another facet is the closeness of links within groups; the degree to which they attach high importance to in-group members (such as extended family) indicates a higher level of collectivism compared to individualism, which is dependent on universal norms and impartial institutions (Brewer and Venaik, 2011, Beugelsdijk and Welzel, 2018). Therefore, the following items are added:

- The extent of disagreement that one of the main goals in life is to make one's parents proud (Disagree Parent Proud)

- Private ownership business should be increased (Private vs State-owned)

The following table is the statistical test for sample adequacy before analysis. The Kaiser-Meyer-Olkin (KMO) measures the suitability of the data for factor analysis

(Kaiser, 1958). Smaller KMO affects the factor analysis. The total KMO was 0.78, which is considered acceptable (Hair et al., 2013). Individual KMO values were > 0.52, which is above the acceptable bare minimum of 0.5 (Hair et al., 2013). Three items had values between 0.80 and 0.90. Three items had values between 0.70 and 0.80, and 1 item had a value between 0.5 and 0.7. The sample is multivariate and normally distributed (Doornik-Hansen chi2(14) = 14.83).

Table 4.1 Statistic summary of selected items for INV

Item	Mean	SD	Skewness	Kurtosis	KMO	N
Justify-homo	-0.0394	0.1859	0.8205	4.5781	0.86	30
Justify-abortion	-0.0268	0.2122	-0.1962	2.8117	0.78	30
Justify-divorce	-0.0528	0.2635	-0.2287	3.1399	0.74	30
Justify-euthanasia	-0.0403	0.2818	-0.2478	2.7157	0.79	30
Justify-suicide	-0.0432	0.2057	-0.0525	2.9618	0.84	30
Private vs State-owned	-0.0354	0.2534	-0.7941	4.2420	0.82	30
Disagree Parent Proud	-0.0439	0.2654	-0.3827	2.5862	0.52	30

This table reports the statistics of all the items selected to conduct factor analysis for the INV dimension. All the items are from the WVS dataset waves 5,6 and 7. The original items are z-scored and averaged on the provincial level.

Table 4.2 shows the results of the INV factor analysis using those 7 items. Model 1 is the factor analysis with all 7 items. Model 2 is the tests conducted using 5 items (6 and 7 removed). The uniqueness is defined as 1 – communality. Considerable uniqueness (low communality) could represent something that is measured reliably in that particular variable but not by any of the others, which may deteriorate the representativeness of that factor for a corresponding culture dimension. According to the selection criteria, item Parent Proud and item Private vs State-owned have considerably high uniqueness (low loading between 0.3-0.6). Whether to add them to

the factor score has to be treated with care. The results show that ML and IPA analysis generate similar results. There is one prominent factor from those items in both model 1 and model 2 representing INV.

Table 4.2 Factor analysis for INV

	Model1			
	Maximum likelihood		Iterated principal factor	
Items	Factor1	Uniqueness	Factor1	Uniqueness
Eigenvalue	4.15		4.17	
Justify-homo	0.79	0.38	0.83	0.31
Justify-divorce	0.97	0.06	0.97	0.07
Justify-abortion	0.9	0.18	0.88	0.22
Justify-euthanasia	0.86	0.27	0.84	0.3
Justify-suicide	0.77	0.4	0.8	0.36
Private vs State-owned	0.55	0.7	0.55	0.7
Disagree Parent Proud	0.38	0.85	0.37	0.87
AIC	38.82			
BIC	48.62			
LR test $\chi2$	21.64			
Cronbach's α	0.86			
	Model2			
	Maximum likelihood		Iterated principal factor	
Items	Factor1	Uniqueness	Factor1	Uniqueness
Eigenvalue	3.72		3.74	
Justify-homo	0.78	0.4	0.77	0.4
Justify-abortion	0.91	0.17	0.9	0.19
Justify-divorce	0.96	0.08	0.95	0.1
Justify-euthanasia	0.87	0.25	0.87	0.24
Justify-suicide	0.79	0.38	0.82	0.33
Private vs State-owned				
Disagree Parent Proud				
AIC	19.24			
BIC	26.25			
LR test $\chi2$	8.27			
Cronbach's α	0.93			

This table reports factor loadings of generating INV dimension. Model 1 shows a 7-item analysis using both maximum likelihood and Iterated principal methods. Model 2 shows a 5-item analysis using these two methods. All the original items are from WVS waves 5, 6 and 7, which are z-scored and averaged to the provincial level to conduct the analysis.

From a series of fitness tests comparing those two models (Fabrigar & Wegener, 2011b). Model 2 is preferred statistically. Specifically, in terms of the Akaike information criterion (AIC), model 2's AIC value is smaller compared with model 1, which indicates it is better fitted than model 1 (Akaike, 2015). Other analyses, such as the Bayesian information criterion (BIC) and likelihood-ratio (LR) test, also reveal similar results. Statistically, besides the previous discussions, a higher loading factor and communality can reduce the negative impact of small sample size (De Winter, Dodou and Wieringa, 2009). Theoretically, the last two items from model 2 address the conception of INV and have been empirically used in previous literature. Both the 7-item and 5-item models will be used to generate the INV score. Table 4.3 below shows the INV scores generated based on the chosen items.

Table 4.3 INV score across provinces

Province	Score (7-item)	Score (5-item)	Province	Score (7-item)	Score (5-item)
Anhui	51	51	Jiangxi	61	60
Beijing	92	94	Jilin	50	51
Chongqing	52	39	Liaoning	51	57
Fujian	67	63	Nei Mongol	44	49
Gansu	37	39	Ningxia	27	33
Guangdong	100	98	Qinghai	48	49
Guangxi	92	87	Shaanxi	64	69
Guizhou	68	54	Shandong	47	42
Hainan	78	75	Shanghai	88	89
Hebei	32	31	Shanxi	47	41
Heilongjiang	52	64	Sichuan	71	71
Henan	74	73	Tianjin	53	56
Hubei	93	100	Xinjiang		
Hunan	82	91	Yunnan	61	55
Jiangsu	75	70	Zhejiang	74	69

This table reports individualism scores across different provinces in China. The score ranges from 0-100, with a higher value meaning a higher level of individualism.

The 7-item model is theoretically closer to the concept of individualism under Hofstede's framework. The score using 7-item is used in the main analysis. The INV score is then generated by adding up the standardised values of selected items and rescaled in the range 0-100, with higher scores indicating high individualism.

4.4.2 Long-term orientation (LTO)

Long-term orientation vs short-term orientation is developed by adopting "Confucian work dynamism" (CWD) from the Chinese Culture Connection (1987), for it is distinctively different from the other found dimensions. The high LTO is defined as 'the fostering of virtues oriented towards future rewards', and the low LTO is defined as 'the fostering of virtues oriented towards present and past' (Hofstede, 2010, p. 124). Minkov and Hofstede (2012) replicated LTO with World Values Questionnaire items. They found out that the positive pole of this dimension (high LTO) indicates thrift and determination in personal traits, and the negative pole (low LTO/high STO) is self-stability and self-consistent.

Minkov refines this dimension by providing a new understanding of the seemingly uncoherent linkage of thrift to the opposition of self-consistency (Hofstede & Minkov, 2010; Minkov, 2018; Minkov & Hofstede, 2012a). He derived a facet of LTO, named "Flexibility vs Monumentalism", where a contrast existed between societies emphasising invariant self versus societies focusing on the humble and flexible self. Heine and Hamamura's (2007) self-enhancing theory served as a baseline to link the

variability of self as a more precise explanation of Hofstede's LTO dimension. According to Heine and Hamamura (2007), the definition of self-enhancing is related to self-consistency because it is a syndrome of high self-regard, self-liking, satisfaction with self, and self-confidence. Those positive self-concepts prevent individuals from accepting or detecting deficiencies and discount self-improvement. In contrast, if individuals view themselves as fluid and malleable, they are more likely to detect deficiencies and try to correct them (Minkov, 2018). Empirically, LTO strongly predicts national education achievement (Minkov, 2012b, 2018).

In high LTO societies, people generally focus on future rewards and consider themselves fluid. So, individuals detect and correct deficiencies to adapt in return for future gratification. In low LTO societies, people focus on fostering the present and past. Therefore, they tried to maintain a consistent and stable self. This thesis tries to generate a proxy for this dimension by picking up items from WVS that are closely similar to LTO concepts defined by Hofstede and appear valid in the existing literature. The below items were included in the initial pool of items representing LTO. According to Hofstede (2010), he generated a new LTO using WVS according to the three items:

· Thrift is a desirable trait for children (Thrift), which indicates detained gratification for future rewards in long-term orientation.

- National pride (nation pride) is a measure of saving face, which refers to self-enhancement and confidence.

- The importance of service to others refers to self-enhancement and concern to keep a positive self-image, which represents a facet of short-term orientation. However, this item is only available in the early waves of WVS, so in this thesis, we replace it with Schwartz's item in WVS, the extent that you think the following statement is describing you: the importance of helping others (not help others)

Additionally, several empirical research on validating this dimension using WVS use a concept of perseverance to indicate a deferred gratification for future reward and less emphasis on present joy and relaxation, which is a resemblance of LTO (Beugelsdijk & Welzel, 2018b; Hofstede & Minkov, 2010). Therefore, the following item is added:

- Determination/perseverance as a desirable trait for children (Perseverance)

Two other items were added to try to proxy deferred gratification. So, the following items are added:

- The extent of agreement work should come first even if it means less spare time (work first)

- The extent of agreement that leisure time is essential in life (leisure time not important)

A concept of self-enhance, stability, and avoidance of duality indicates STO, which has been tested by a series of works (Minkov & Hofstede, 2012a). They use people's religiousness to present their avoidance of duality. The following item related to religiousness is also added as a potential item:

· The choice to describe yourself as being religious, not religious and atheist (religiousness)

Table 4.4 below is the statistics summary for LTO. Before conducting the analysis, the item nation pride is removed after the initial analysis for its KMO. The KMO of this item is lower than 0.5, with the value being only 0.28; the low item value of KMO will hurt the overall adequacy of the sample for factor analysis. The table below shows the statistics for the remaining items in factor analysis after removing the item nation pride. The total KMO after removing the item is 0.63, which indicates factor analysis is useful for understanding the underlying meaning of the selected items. All the details of the original item, including meaning and scale, can be found in Appendix F.

Table 4.4 Statistics summary of selected items for LTO

Item	Mean	SD	Skewness	Kurtosis	KMO	N
Thrift	-0.0395	0.1514	0.1586	3.5657	0.64	30
Perseverance	-0.0354	0.1568	-0.5916	3.3494	0.62	30
Not help others	-0.0293	0.3562	0.1086	2.8748	0.73	28
Religiousness	-0.0061	0.3222	-2.0553	8.7974	0.59	30
Leisuretime not important	-0.0332	0.1567	-0.7520	3.4508	0.53	30
work first	0.0276	0.2103	0.0078	3.0161	0.57	30

This table reports the statistics of all the items selected to conduct factor analysis for the LTO dimension. All the items are from the WVS dataset waves 5,6 and 7. The original items are z-scored and averaged on a provincial level.

Table 4.5 shows the factor analysis results for LTO using the above-selected items.

Model 1 is the factor analysis with all the items; model 2 is the tests conducted using

4 items (the last two items are removed) due to low factor loading.

Table 4.5 Factor analysis for LTO

	Model1			
	Maximum likelihood		Iterated principal factor	
Items	Factor1	Uniqueness	Factor1	Uniqueness
Eigenvalue	1.67		1.64	
Thrift	0.49	0.76	0.49	0.76
Perseverance	0.95	0.09	0.92	0.16
Not help others	0.40	0.84	0.45	0.80
Religiousness	0.49	0.76	0.45	0.80
Leisuretime not important	-0.08	0.99	-0.15	0.98
work first	-0.31	0.90	-0.36	0.87
AIC	24.40			
BIC	32.39			
LR test χ2	10.85			
Cronbach's α	0.54			
	Model2			
	Maximum likelihood		Iterated principal factor	
Items	Factor1	Uniqueness	Factor1	Uniqueness
Eigenvalue	1.57		1.53	
Thrift	0.48	0.77	0.42	0.82
Perseverance	0.97	0.06	0.91	0.17
Not help others	0.40	0.84	0.48	0.77
Religiousness	0.49	0.76	0.54	0.70
Leisuretime not important				
work first				
AIC	10.48			
BIC	15.81			
LR test χ2	2.23			
Cronbach's α	0.59			

This table reports factor loadings of generating LTO dimension. Model 1 shows a 6-item analysis using both maximum likelihood and Iterated principal methods. Model 2 shows a 4-item analysis using these two methods. All the original items are from WVS waves 5, 6 and 7, which are z-scored and averaged to the provincial level to conduct the analysis.

For model 1, the last two items related to the attitude towards work have low loadings

(lower than 0.3). After removing those two items, the statistics improved. So, a decision is made to use the first 4 items to generate the LTO dimension. The results show that items being picked up generated a prominent factor, which is also consistent with the meaning of LTO-STO diensions. The LTO score is then generated by adding up the standardised values of selected items and rescaled in the range 0-100 (Table 4.6), with higher scores indicating regions with a long-term orientation focused on future rewards with flexible and adaptive attitudes towards life and belief.

Table 4.6 LTO score across provinces

Province	LTO	Province	LTO
Anhui	61	Jiangxi	66
Beijing	56	Jilin	42
Chongqing	100	Liaoning	78
Fujian	30	Nei Mongo	
Gansu	61	Ningxia	42
Guangdong	63	Qinghai	35
Guangxi	74	Shaanxi	80
Guizhou	55	Shandong	58
Hainan	58	Shanghai	57
Hebei	72	Shanxi	75
Heilongjiang	79	Sichuan	64
Henan	58	Tianjin	
Hubei	77	Xinjiang	
Hunan	55	Yunnan	21
Jiangsu	44	Zhejiang	55

This table reports LTO scores across different provinces in China. The score ranges from 0-100, with a higher value meaning higher LTO values.

According to the result in Table 4.6, Chongqing is the province with the highest LTO values, which indicates emphasising thrift and determination in nurturing children and focusing less on leisure time in everyday life. Also, in societies with a more long-term

orientation, people are more flexible, according to Minkov and Maastricht (2012), which means they are more willing to adapt to shifting circumstances. Yunnan generates the lowest value of LTO, emphasising self-stability and short-term orientation focusing on well-being. This facet can be found in measurements of pride (a self-enhancing feeling) and religiousness (which tends to imply unchangeable values and beliefs).

4.5   Summary

The previous analyses verified two dimensions, individualism and long-term orientation (LTO) based on Hofstede's cultural framework within China, which means that different Chinese provinces have variations in those two cultural indexes. A more individualistic society creates social orders where persons can develop autonomy and self. The environment encourages independent opinions, where self-expression and freedom are emphasised, whereas less individualistic societies are more respectful of traditions and prioritise the interests of in-groups (Griffin et al., 2017). LTO societies represent perseverance and thrift for future rewards. Personal adaptiveness to different situations and subordination to oneself for a purpose is encouraged in pursuit of future gratification (Hofstede, 2010). Regions with lower LTO are more focused on the completeness and consistency of identity and are more prone to well-being and enjoyable life. Table 4.7 below provides a summary of both the scores and the questionnaire sample distribution across provinces.

Table 4.7 Sample distribution and cultural and economic proxies across provinces

Province	Nb.Obs(%)	INV	LTO	GDP per capita	Province	Nb.Obs(%)	INV	LTO	GDP per capita
Anhui	0.15	51	61	63,426	Jiangxi	0.29	61	66	56,871
Beijing	9.22	92	56	164,889	Jilin	0.73	50	42	50,800
Chongqing	0.29	52	100	78,170	Liaoning	0.59	51	78	58,872
Fujian	0.59	67	30	105,818	Nei Mongu	0.29	44		72,062
Gansu	0.29	37	61	35,995	Ningxia	0.15	27	42	54,528
Guangdong	3.51	100	63	88,210	Qinghai	0.15	48	35	50,819
Guangxi	0.59	92	74	44,309	Shaanxi	0.88	64	80	66,292
Guizhou	0.29	68	55	46,267	Shandong	1.17	47	58	72,151
Hainan	4.39	78	58	55,131	Shanghai	5.56	88	57	155,768
Hebei	5.56	32	72	48,564	Shanxi	0.73	47	75	50,528
Heilongjiang	0.15	52	79	42,635	Sichuan	0.73	71	64	58,126
Henan	53.88	74	58	55,435	Tianjin	0.59	53		101,614
Hubei	0.59	93	77	74,440	Xinjiang	0.15			53,593
Hunan	0.73	82	55	62,900	Yunnan	0.15	61	21	51,975
Jiangsu	4.39	75	44	121,231	Zhejiang	3.07	74	55	100,620

This table summarises the sample distribution and lists the cultural score across regions. The total sample is 683. Individualism and LTO have scores ranging from 0-100, with a higher number indicating the region is more individualistic and has a long-term orientation. GDP per capita is the annual gross domestic product (GDP) in different provinces[10].

Responses from Henan (52.8%), Beijing (9.04%), Hebei (5.45%) and Shanghai (5.45%) account for the majority of the sample, among which Henan province dominants, whereas other provinces each represent less than 5% of the sample. Later analyses include both the entire sample and subsamples without Henan province are tested to alleviate concern of sampling bias. Regarding cultural scores, Guangdong is the most individualistic province, which reflects higher self-awareness and autonomy.

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[10] This statistic was published by the National Bureau of Statistics of China in Oct.2021. One yuan equals approximately 0.16 US dollars (as of November 2021).

Ningxia is the least individualistic region, which reflects more collective decision-making within groups. Chongqing is the region with the highest LTO score, indicating strong adaptiveness and detained rewards for future gratification. Yunan has the lowest, emphasising a lifestyle of well-being and enjoying life. The INV and LTO scores are used in Chapter 7 to proxy provincial cultural differences.

CHAPTER 5 SRI QUESTIONNAIRE STUDY-IMPLEMENTATION AND FINDINGS

5.1   Introduction

This chapter provides a univariate analysis of the questionnaire results to provide a general understanding of individuals' perceptions of SRI. The development and refinement process of the questionnaires are reported, followed by a detailed illustration of the data collection process. In the third section of this chapter, the findings of univariate analysis of key variable measurements regarding Chinese individual investors' perceptions towards SRI in the Chinese market are reported.

5.2   Results of questionnaire refinement and implementation

The questionnaire design was based on an existing Attitudes Towards Responsible Investment questionnaire conducted by China Sustainable Investment Forum (SIF) and Sina Finance consecutively in 2020-2022. It is further developed to fulfil the research objective of this study, especially regarding investors' ethical considerations, including their pro-social motivation and issues of concern, as well as their trade-off attitude on financial and non-financial attributes of SRI (Nilsson, 2008; Pérez-Gladish et al., 2012; Wins & Zwergel, 2016). The questionnaires investigated five aspects to understand investors' opinions and perceptions of socially responsible investment. Table 5.1 below illustrates the summary of actions taken based on the research design discussed in the previous chapter and the modification results.

Table 5.1 Summary of actions to implement research design for the questionnaires and modification results

Actions	Implementation	Result of modification
Pilot tests		
-March, 2022	A test questionnaire was distributed among accounting and finance academics to check its suitability to address the research questions	-SR-related perceptions were separated into five questions, with each addressing an aspect -Question 13 was reformatted as a Likert-type question Question
-April, 2022	Test questionnaires were distributed among accounting and finance professionals and individual investors to check the appearance and understandability of the questions	-Questions 18, 19 and 20 were rephased into scenario questions for easier understanding for individual investors -Questions 15 and 17, choice items are rephased to be easier understood -Introduction is shortened
Real-time trials		
-May, 2022	Trial distribution to check the flow and display of the questionnaires on the Qualtrics platform	-Provision of both a QR code and website link for respondents to get access to the questionnaires
Final distribution		
11th May 2022- 14th July 2022	The actual questionnaires were distributed to individual investors across China.	
Statistical test	Data was cleaned and analysed.	

The final questionnaires were distributed through the online platform Qualtrics[11]. A QR code and anonymous link were shared through the following source: a Chinese social networking app (WeChat)[12]. The questionnaires were sent to both individuals

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[11] Qualtrics is a questionnaire software that allows data to be collected online and downloaded into numerous software packages such as excel. Source: www.qualtrics.com and www.strath.ac.uk/is/software/qualtrics

[12] WeChat is a social networking app similar to WhatsApp

and WeChat group hosts using WeChat. The gatekeeper approach (Lac, 2014) was adopted to expose to a broader range of individual investors through those individuals and WeChat group hosts. Explanations of the rationale and aims of the research were provided in great detail so that these gatekeepers could spread the questionnaires in their groups to increase the response rate.

Data collection for the questionnaires was conducted online using Qualtrics. The data collection started on 11 May 2022 and lasted for 8 weeks. During that time, questionnaire invites were regularly sent to individuals and WeChat group hosts. Table 5.2 shows the responses during the period of data collection. 871 responses were returned between 11 May 2022 and 14 July 2022.

Table 5.2 The progress of the questionnaire response

Week	Date	Number of questionnaires received	Accumulated percentage
Launch date	11 May 2022		
1	11th May 2022-17th May 2022	778	89%
2	18th May 2022-24th May 2022	31	92%
3	25th May 2022-31th May 2022	60	99%
4	1st June 2022-14th July 2022	2	100%

Among those 871 responses that returned. 89% of the responses were returned during the first week. Among those 871 responses, the following are omitted: those who refused to sign the consent forms (3 responses) and those who took less than one

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minute to complete the questionnaires were also excluded (104 responses). Exclusion was also conducted to responses with limited answering (answering only 1 question or not answering any questions related to SRI perceptions (71 responses)). As a result, 178 responses were eliminated in the process, leaving 693 responses of good quality.

5.3 Data analysis of questionnaire items

In order to gain an overall understanding of individuals' ethical, financial and practical perception of SRI, the questionnaire was designed with the following questions: investors' attitudes to the importance of socially responsible information; their awareness regarding different corporate social responsibility issues; their willingness to sacrifice financial performance over non-financial attributes; their SRI knowledge level and dependence on different SR information. In addition, it includes a question regarding individuals' strategic preferences. This section provides a univariate analysis of those items to understand individuals' perceptions regarding SRI and the intentions of investment strategies.

5.3.1 Pro-social motivation

Motivational research in SRI indicates that investors foster mixed goals of achieving financial and non-financial utility (Amel-Zadeh & Serafeim, 2018; Diouf et al., 2016; Riedl & Smeets, 2017). It is informative to know if Chinese individual investors also express a similar duality in their motivation to consider SR information in their

decision-making. Thus, the first set of questions investigated investors' attitudes toward socially responsible information of firms, such as the importance of SR information and the reason they think they are important in investments. Respondents were first asked to rank the importance of socially responsible information on a scale of 1 (very important) to 4 (not at all important). Figure 5.1 shows widespread belief in the importance of SR information in investments. More than half of the respondents consider socially responsible information to be very important in their investment decision-making process. Only 5% of respondents rank this information as 'not important' and 'not at all important'. According to the China SIF (2021) questionnaire data, the majority of respondents (64%) agree that ESG criteria should be incorporated into their investment decisions, which is consistent with the findings of this study. The high rating of the importance of SR information implies a realisation among Chinese individual investors of the importance of SR information and its possible impact on investment decisions.

Besides knowing the views on the importance of SR information, it is unclear why respondents think the information is important. The reasons for respondents' views on the importance of SR information reveals their possible motivations for incorporating that information during investment. According to the literature, the motivations can be financial (Benabou & Tirole, 2010), non-financial (Nilsson, 2008) or combinations of both (Krueger et al., 2020). In this study, among those rating 'important' and 'very

important', a follow-up question was designed to investigate the reasons behind their perception of the importance of SR information. Respondents are provided with multiple choices for this question. Figure 5.2 shows different reasons for considering SR information as important for investments.

Figure 5.1 Pie chart-the importance of socially responsible information
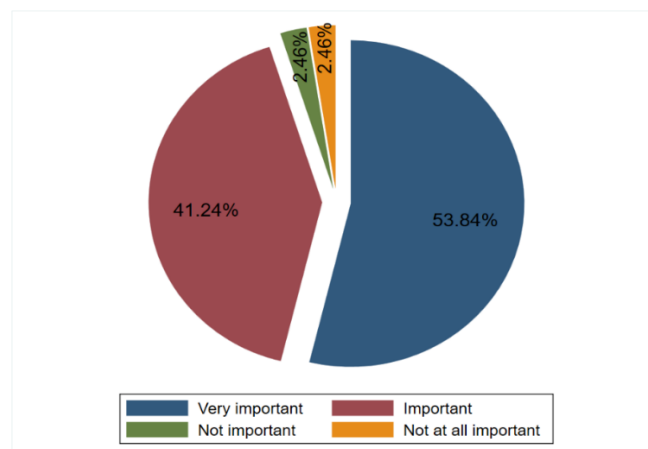
Among respondents who think SR information is very important and important in investment decision making, 70% chose the reason "an impact on the credibility of the investee firms", which can imply both financial and non-financial motives. 58% of the respondents believe that the importance of SR information in investment lies in their impact on sustainable development, which reveals the pro-social perceptions of investing and pure ethical consideration when doing SRI. The options SR information to be beneficial to returns (41%) and managing risks (53%) also scored high, implying respondents also emphasised the financial materiality of that information in investment

decision-making. The responses to these two questions indicate both the financial and non-financial importance of SR information, which conforms with evidence from questionnaire studies across other countries and among investment professionals (Pérez-Gladish, Benson and Faff, 2012; Amel-Zadeh and Serafeim, 2018). One thing to be noticed is that a high percentage of respondents consider investing socially responsively to bring changes to society. This implies that a certain proportion of investors are aware of the ethical aspects of SRI, specifically the possible pro-social impact of SRI in the Chinese market.

Figure 5.2 Bar chart-the reasons that SR information is important
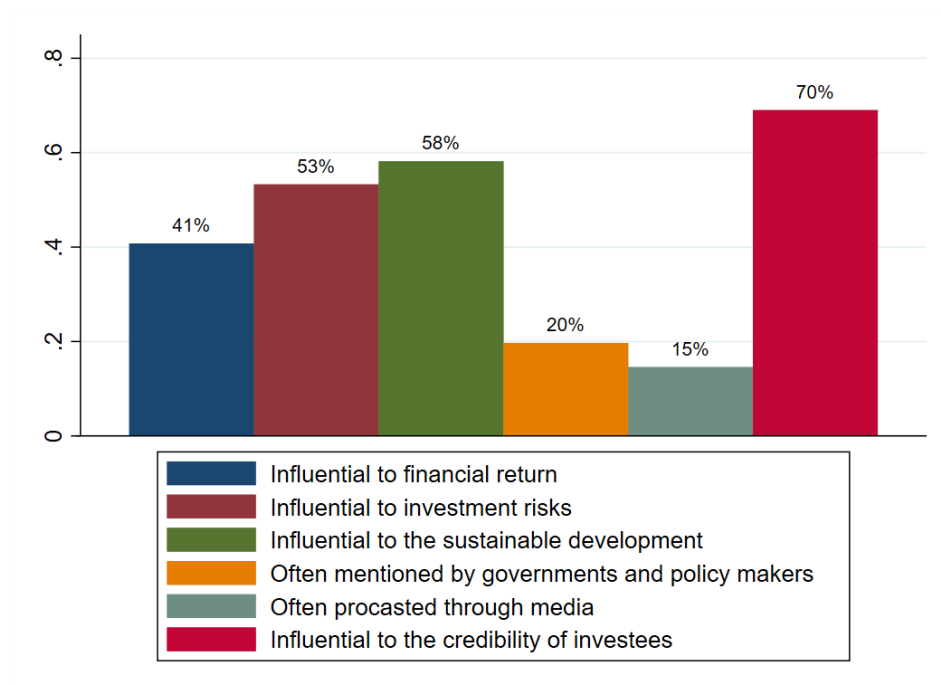
Riedl and Smeets' (2017) study suggested that strong social preferences are the first stage needed to buy SRI funds. In addition, individual investors are also regarded as

consumers. Therefore, their ability to identify the possible social influence they make during investment can be regarded as consumer perceived effectiveness (PCE). This reflects how much investors perceive their individual investment in SRI funds impact and change the social, environmental and ethical issues addressed in SRI. According to Nilsson (2008), PCE in SRI is positively related to their SR fund investing. The belief that investment behaviour will help sustainability will increase the likelihood of engaging in socially responsible investments. In this study, this data is later used as a proxy for investors' PCE (labelled as "pro-social motivation") in SRI to examine its impact on the choices of respondents' SRI strategies (Table 6.3).

For those 5% of respondents who do not consider SR information important, a follow-up question is asked to explore the reasons behind their negative perception. The two primary reasons are the lack of access and the doubt in the quality of information. These responses are consistent with the concerns stated in other literature regarding the quality of CSR reports in the Chinese market, such as the deficiencies of consistency, authenticity and reliability of CSR disclosure (Marquis & Qian, 2014; Moon & Shen, 2010). This also indicates the importance of obtaining knowledge and information when making socially responsible investments.

In order to further understand the motivation for incorporating SR information and learn which investors are more prone to non-financial motivations, this study applied

bivariate analysis to link the results to investors' demographical and investment features. A standard difference of means test is conducted using STATA software[13] to investigate if differences, such as gender, age, and educational level, have separated investors in their motivations to incorporate SR information. Given the existing literature on profiling SR investors, it is expected that socio-demographics can, to some extent, determine people's SRI activities (Junkus & Berry, 2010; Nilsson, 2008).

Table 5.3 reports the results. The proportion of respondents who choose a certain reason is compared among different groups of respondents in terms of demographic and investment features. The significance of the difference in mean is determined using t statistics. A higher percentage of female respondents can identify the non-financial impact of doing SRI (60.64% vs 54.84%) but only statistically significant at the 10% level. Respondents of younger age (40 and below) have a slightly higher percentage than older respondents who believe SRI can promote the development of sustainability. The sample of this study reveals that Chinese individual investors who might be SR investors are more likely to be female. However, they are not likely to have a better education. Individuals with a higher level of education (bachelor's degree and above) respond more to options focused on the financial materiality of SR information. Individuals with university degrees are more focused on the SR information influencing the credibility of the firms (71.35% versus 53.49% at a significant level of

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[13] StataCorp. 2023. Stata Statistical Software: Release 18. College Station, TX: StataCorp LLC.

Table 5.3 Attitude on SR information and investors' characteristics

Response	All (N=691)	Gender Female	Gender Male	Age ≤ 40	Age >40	Education[1] High	Education[1] Low	Fin[2] Yes	Fin[2] no
important and very important, because…	95.08%	95.2	94.92	94.95	95.51	95	95	91.43	95.73
1. It is influential to the credibility of the firm or investment	69.01	71.81	65.23	69.23	68.24	71.35	53.49***	72.92	68.28
2. It has an impact on the development of sustainability	58.17	60.64	54.84	58.58	56.76	59.23	51.16	68.75	56.27*
3. It is influential on the level of risk	53.28	53.19	53.40	53.25	53.38	54.66	44.19*	53.13	53.23
4. It is influential in financial return	40.76	38.56	43.73	39.05	46.62	41.48	36.05	38.54	41.22
5. It has often been mentioned by governments and policymakers	19.69	19.41	20.07	19.13	21.62	19.33	22.09	17.71	20.07
6. It has been often mentioned through media	14.57	15.47	13.36	15.61	10.96	14.11	17.65	17.89	14.03

Response	Investment period ≤ 1yr	Investment period > 1yr	Investment amount above 1m[3] yes	Investment amount above 1m[3] no	Stock[4] yes	Stock[4] no
important and very important, because…	95.47	94.82	88.89	95.95***	96.38	94.75
1. It is influential to the credibility of the firm or investment	66.27	70.90	63.75	70.02	72.20	66.75
2. It has an impact on the development of sustainability	52.78	61.44*	58.75	58.02	62.93	54.82
3. It is influential on the level of risk	47.62	56.97*	57.50	53.09	55.60	51.52
4. It is influential in financial return	41.67	40.30	42.50	40.92	45.17	38.07
5. It has often been mentioned by governments and policymakers	20.63	19.15	18.75	20.11	20.46	19.29
6. It has been often mentioned through media	13.94	15.00	11.25	15.04	15.89	13.78

This table reports survey responses to the question: Do you consider socially responsible information as 1= 'not at all important', 2= 'not important', 3= 'important' and 4= 'very important' in investment decision-making? A follow-up list of reasons why respondents consider that information as important for respondents chose 3 and 4 in the previous question. Each reason is treated as a dummy variable, with 1= it is the reason and 0 otherwise. Mean values marked with *, ** and *** are significantly different at the 0.5,0.01 and 0.001 level from the mean value in the preceding column, using the t-statistics mean test.
1. Respondents' education status, high="bachelor degree and above."
2. Respondents working experience in the financial industry
3. Respondents' investment amount is larger than 1 million RMB
4. Respondents have stock as one of their major investment instruments

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0.001) and the financial risk involved (54.66% versus 41.19%, significant at 5%). Previous research implies that higher education level positively correlates with investors' holding of SRI funds (Junkus & Berry, 2010; Pérez-Gladish et al., 2012). This research indicates that higher-educated investors may not motivated by non-financial aspects of SRI.

Additionally, in terms of occupation, respondents with financial industry working experience have a percentage of choosing to recognise the non-financial impact of SRI compared with those who are not working in the financial sector (68.75% versus 56.27% at the significant level of 5%), which indicates high exposure to SR information may have an impact on respondents' perception towards SRI (Barreda-Tarrazona et al., 2011). Regarding investment features, respondents with longer time horizons (one year above) believe that doing SRI can have a social impact. They are also more concerned about the risk impact of SR information, which is consistent with their institutional counterparts (Krueger et al., 2020).

5.3.2 Pro-social concerns

The integration of non-financial concerns reveals the inclusive nature of SRI, where SR concerns are varied across different stakeholders with different objectives and identities (Sandberg et al., 2009). In order to understand the extent of individuals' awareness of different pro-social issues during investment, this questionnaire asked respondents to rate their concerns on different corporate social responsibility (CSR) aspects on a scale of 1 to 5 (1 means unimportant, 5 means very important). The table below shows the basic statistics regarding rating different CSR issues.

As shown in Table 5.4, most investors are concerned with the provided choices regarding corporate social responsibility as an important and very important issue, which indicates an overall strong interest in different CSR issues among individual investors. Specifically, the issue regarding production quality and safety is the most concerning issue among individual investors (85.59%), followed by firms' activities compliance with law and regulation (85.33%) and the issue regarding supply chain (75.15%).

Table 5.4 Descriptive statistics of concerns on CSR issues

Items	% Important and very important	Mean	Median	Standard deviation	Skewness	Kurtosis	N
1. Production quality and safety	85.59	4.311	5	0.948	-1.618	5.487	673
2. The firm conducts compliance with law and regulation	85.33	4.363	5	0.988	-1.727	5.474	675
3. Supply Chain safety and sustainability	75.15	3.988	4	1.028	-1.023	3.605	676
4. Management socially responsible conduct	73.91	3.949	4	0.993	-0.939	3.579	667
5. Employee wellbeing	65.09	3.738	4	1.014	-0.652	2.952	676
6. Environment protection	62.54	3.659	4	1.049	-0.666	2.966	686
7. Charity activities	53.45	3.527	4	1.013	-0.421	2.806	666

Data in this table is based on the question: please rate the importance of the following issues when making investment decisions on a 5-point Likert scale (1= 'unimportant'... 5='very important').

Unlike the US and European markets, employment well-being and environmental protection do not attract the most attention (Derwall et al., 2011; Krueger et al., 2020) in this sample. According to the study of Barreda-Tarrazona et al. (2011), respondents' declaration of concern about SR issues leads them to invest more in SRI. From Nilsson's (2008) study, the concern about CSR can be understood as a pro-social attitude toward SRI, and his findings suggested that a pro-social attitude is positively related to SRI. This study, by reference to Nilsson's (2008) construction of pro-social

attitude, established a general level of CSR concerns to represent respondents' pro-social attitude.

An exploratory factor analysis (EFA) has been conducted using the procedure mentioned in Chapter 3 to verify whether there is an underlying latent construct to measure the general level of CSR concerns. One concern of conducting EFA and later regression analysis is treating categorical Likert-type items as continuous variables. According to DeVellis and Thorpe (2021), ordinal data such as Likert-type items are acceptable when regarded as continuous variables in EFA. It has become more common to assume Likert-type categories as interval-level measurements (Blaikie, 2023), and empirical research from Hsu and Feldt (1969) suggests that categorical items with at least five intervals are viable to be treated as continuous variables. Nonetheless, the non-normality of Likert-type variables needs to be noticed in EFA due to the fact that skewness and kurtosis impact EFA results. For instance, the extreme value of skewness of variables can produce artificial factors (Bandalos & Gerstner, 2016). Substantial non-normality with the absolute value of skewness larger than 2 and kurtosis larger than 7 may cause severe problems in factor analysis (Curran et al., 1996). According to Table 5.4, items 1 and 2 have skewness near 2 and 85% of the responses fall into categories of "important" and "very important", which indicates those two items are not variant enough and may impact the results. Therefore, those two items are omitted in the analysis.

EFA using the iterated principal method (IPA) was used without rotation. IPA is used instead of the usual Maximum likelihood procedure because IPA does not require

multivariate normality. The reason that EFA results are not rotated is that the test aims to confirm whether a construct of people's general concern on CSR can be generated from all the Likert-type items. Table 5.5 shows the results of EFA[14]. The table shows the first four factors and the factor loading of each variable contributed to each factor using the IPA method without rotation. Factor loadings represent the contribution to a factor. The higher the factor loading, the more a variable contributes to the specific factor. These four factors accumulate and account for all the covariance, among which factor one is the dominant factor for the co-movement.

Table 5.5 Factor analysis of pro-social concerns

Items	Factor 1	Factor 2	Factor 3	Factor 4	Uniqueness
Eigenvalue	3.212	0.278	0.157	0.015	
Percentage explained	87.72	7.60	4..29	0.40	
Management socially responsible conduct	0.819	-0.284	-0.189	0.005	0.213
Charity activities	0.801	-0.289	0.187	0.004	0.240
Supply Chain safety and sustainability	0.788	0.207	-0.215	0.040	0.289
Employee wellbeing	0.835	0.176	0.027	-0.099	0.262
Environment protection	0.762	0.202	0.199	0.057	0.335

This table reports the results of factor analysis based on ratings of concerns regarding 5 CSR aspects using the IPA method.

Based on the results in Table 5.5, each factor clusters ratings of concerns on CSR issues that tend to vary together. Factor 1 accounts for 87.72% of variations of the total variances of those five items. The first factor has high positive loadings on all the items. The high loadings show that factor 1 measures most of the variances of all the items. The positive sign indicates that the ratings of concerns for those five aspects of CSR issues move alongside each other in the same direction. Some individuals are more

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[14] The Kaiser-Meyer-Olkin measure of sampling adequacy is 0.84, suggesting that the data are suitable for factor analysis.

concerned about all five aspects of CSR, while others are not. Therefore, Factor 1 can be considered as a proxy to measure the general level of pro-social concerns. Based on the result of EFA, a scale to proxy individuals' overall level of CSR concerns is established by summing up all those ratings (Weiss, 1971) directly for each respondent. A higher score represents a higher concern for corporate social responsibility during investments.

5.3.3   SRI knowledge

In this part, the study investigates Chinese individual investors' knowledge of socially responsible investing. Even though, on a general level, there is agreement on the definition and concepts of SRI, it is inclusive at a practical level where different SR criteria are translated into different products and concepts (Sandberg et al., 2009). The questionnaire asks respondents to rate their knowledge of a series of SRI terminologies on a scale of 1 to 5, respectively labelled as 1 = "never have heard of it", 2 = "only have heard of it", 3= "only know the meaning of it",4= "know well about it" and 5 = "know very well about it". Figure 5.3 below shows the median rating for each terminology related to SRI. The results show how different investors varied in their mastery of SRI literacy.

As illustrated, the median ratings for all the concepts are below 3, which indicates limited knowledge regarding SRI concepts. SRI and green finance received a median rating of 2, meaning knowledge is limited to only having heard about the concept but not knowing the meaning. ESG investing received a median rating of 1, which means most people have never heard about the concept. This finding is consistent with

research conducted by China SIF (China Sustainable Investment Forum) and a Sina Finance questionnaire in October 2021(China SIF, 2021), which shows that individual investors in China have limited knowledge regarding SRI.

Figure 5.3 Bar chart-median of rating for knowledge in different SRI terminologies
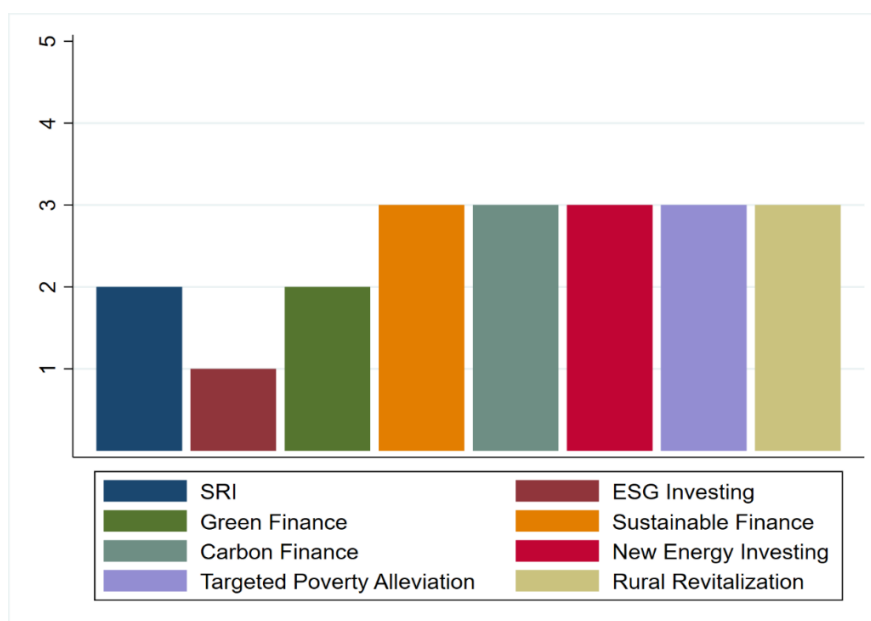
In addition, this study shows that the concepts that commonly appear and are well-known in the international market, such as "ESG investing" and "sustainable finance", received relatively low ratings compared with concepts more commonly mentioned in the Chinese market, such as "Targeted Poverty Alleviation" and "Rural Revitalization". This difference in understanding SRI-related concepts supports Sandberg *et al.* (2009) explanation of the heterogeneity in terminology resulting from cultural differences and how SRI emerged and developed within that region. Chinese individual investors are more familiar with investment in poverty alleviation and rural development concepts, which are more often mentioned in the media and government reports.

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To further explore which groups of individuals have more SRI knowledge and how knowledge of SRI impacts SRI strategy choices, a construct has been proposed to proxy the SRI knowledge level of individuals using those eight Likert-type items. An exploratory factor analysis (EFA) has been conducted using the same procedure mentioned in Chapter 3 to verify the underlying latent construct. Table 5.6 below shows the descriptive data on those 8 Likert-type items.

Table 5.6 Descriptive statistics -knowledge items

Item	Mean	Median	Standard deviation	Skewness	Kurtosis	N
Carbon Finance	2.564	3	1.182	0.129	1.991	677
New Energy Investing	2.867	3	1.173	-0.170	2.100	678
Sustainable Finance	2.541	3	1.162	0.160	2.027	675
ESG Investing	1.753	1	1.073	1.259	3.572	671
SRI	2.116	2	1.194	0.757	2.555	688
Green Finance	2.165	2	1.162	0.608	2.283	677
Targeted Poverty Alleviation	2.721	3	1.139	0.017	2.172	673
Rural Revitalization	3.216	3	1.100	-0.367	2.612	677

Data in this table base based on the question: please rate the level of knowledge you have for the following concepts on a 5-point Likert scale (1 = "never have heard of it", 2 = "only have heard of it", 3= "only know the meaning of it",4= "know well about it" and 5 = "know very well about it").

EFA was conducted using the iterated principal method (IPA)[15]. The results of the EFA are shown in Table 5.7. In the first four columns of Table 5.7, factor loadings using the IPA method are reported. Factor loadings represent the contribution to a factor. Each factor clusters ratings of specific terminologies that tend to vary together. The first factor has high positive loadings on all 8 items. The high loadings of all the items show Factor 1 measures most of the variances of all the items. The positive sign indicates that the respondents' ratings of these 8 SRI terminologies move alongside

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[15]All presented factors are without rotation. The Kaiser-Meyer-Olkin measure of sampling adequacy is 0.88, suggesting that the data are suitable for factor analysis.

each other in the same direction. Some individuals have a higher level of knowledge of those different SRI-related terminologies, whereas others do not. Factor 1 can be treated as a latent scale to proxy the general level of SRI knowledge. This factor captures 77.24% of the variations for all those items. Based on the results of EFA, factor 1 can be used to generate the overall level of individuals' SRI knowledge by summing up all the ratings of those concepts directly for each respondent. A higher score represents a higher SRI knowledge level.

Table 5.7 Factor analysis of the Likert scale of SRI knowledge

Items	Factor 1	Factor 2	Factor 3	Factor 4	Uniqueness
Eigenvalue	4.839	0.764	0.360	0.163	
Percentage explained	77.240	12.200	5.740	2.610	
Carbon Finance	0.875	0.112	-0.261	0.082	0.124
New Energy Investing	0.816	0.192	-0.214	0.137	0.204
Sustainable Finance	0.849	0.021	-0.222	-0.128	0.189
ESG Investing	0.709	-0.495	0.187	0.033	0.197
SRI	0.744	-0.381	0.106	0.178	0.235
Green Finance	0.823	-0.190	0.005	-0.288	0.200
Targeted Poverty Alleviation	0.756	0.356	0.264	0.052	0.220
Rural Revitalization	0.617	0.402	0.285	-0.054	0.366

This table reports the results of factor analysis based on ratings of 8 SRI knowledge terminologies. The first four factors are displayed using the IPA method.

5.3.4 Trust in SR information sources

This part focuses on different information sources and discusses investors' choices of access to SR information. Academics have revealed that a lack of reliable non-financial data (Amel-Zadeh & Serafeim, 2018) is a significant barrier to incorporating ESG information. China SIF's (2021) report also concludes the same. Therefore, in this study, investors were asked to rate the reliability of a series of information access on a scale of 1 to 5 (1 meaning not at all reliable, 5 meaning the most reliable). This study extends the literature by investigating different sources of information that investors

find reliable.

Table 5.8 displays some descriptive statistics for the Likert-type items of ratings for the reliability of different information access for SR. Among all the information access provided, investors consider government releases to be the most reliable source of socially responsible information. Almost two-thirds of the investors (77.91%) chose "very reliable" and "the most reliable". Research reports and information gained on their own are ranked second and third, with 65.32% and 56.45% of investors considering these two accesses as very reliable and the most reliable, respectively. On the contrary, only one-third of investors choose firm disclosure and media reports as reliable sources of socially responsible information. The low rank of reliability of SR information from firm disclosure in this sample is consistent with the general concern from the market of the reliability of CSR reports within China market (Wang & Li, 2016). The CSR reports have similar content and firms seldom disclose negative information (Wang & Li, 2016), which may also explain the low trust in this information source in this sample.

Table 5.8 Descriptive statistics-trust in SR information

Items	% reliable and very reliable	Mean	Median	Standard deviation	Skewness	Kurtosis	N
Government release	77.91	4.074	4	0.873	-0.907	3.942	688
Research reports	65.32	3.719	4	0.833	-0.697	4.049	669
Own information	56.35	3.607	4	0.772	-0.311	3.564	669
Information from family and friends	40.39	3.298	3	0.840	-0.137	2.933	671
Firm disclosure	36.87	3.261	3	0.818	-0.119	3.189	670
Media reports	35.32	3.194	3	0.863	-0.216	3.114	671

Data in this table is based on the question: please rate the reliability you think of the following information access for socially responsible information when making investment decisions on a 5-point Likert scale (1= 'unreliable'... 5='the most reliable')

Studies find that the information about SR characters revealed before investing impact positively in terms of investors' choices of SRI. (Barreda-Tarrazona et al., 2011; Glac, 2009). To further understand how individuals' trust in information access varies and investigate how it impacts individual SRI decisions, an exploratory factor analysis (EFA) has been conducted using the same procedure mentioned in Chapter 3 to verify whether there is an underlying latent construct to measure the general level of trust in SR information. As discussed in previous sections, Likert-type items are regarded as continuous variables in this study under the condition of non-normality being properly treated. Table 5.8 shows no extreme skewness and kurtosis values that may seriously affect analysis using EFA. However, the multivariant normality is breached, which means using the ML fitting procedure in EFA is less preferable. Therefore, EFA is conducted using the iterated principal method (IPA)[16] shown in Table 5.9.

Table 5.9 Factor analysis-trust in SR information

Items	Factor 1	Factor 2	Factor 3	Factor 4	Uniqueness
Eigenvalue	2.358	0.542	0.280	0.156	
Percentage explained	69.730	16.040	8.270	4.610	
Government release	0.478	-0.454	0.160	0.121	0.517
Research reports	0.684	-0.152	-0.249	0.210	0.399
Own information	0.554	0.350	0.207	0.121	0.503
Information from family and friends	0.521	0.406	0.032	0.049	0.539
Firm disclosure	0.734	-0.157	0.247	-0.206	0.331
Media reports	0.738	0.041	-0.296	-0.194	0.328

This table reports the results of factor analysis based on ratings of six information sources for receiving SR information. The first four factors are displayed using the IPA method.

This table reports the results of factor analysis based on ratings of perceived trust in 6

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[16] All presented factors are without rotation. The Kaiser-Meyer-Olkin measure of sampling adequacy is 0.77, suggesting that the data are suitable for factor analysis.

information sources. The first four factors are displayed using the IPA method. The results of EFA are shown in table 5.9. Factor loadings using the IPA method are reported in the first four columns of Table 5.9. Factor loadings represent the contribution to a factor. Each factor classifies ratings of specific information access that tend to vary together. The first factor has high positive loadings on all the items. The high loadings show factor 1 measures most of the variances of all the items. The positive sign indicates that the ratings of trust for different information sources move together in the same direction. Some individuals have a higher level of trust in all sources for SR information, while others do not. This factor captures 69.7% of the variations in the rating of trust in different information sources. Thus, those ratings can generate a latent scale to proxy the general trust level in SR information sources by directly summing the ratings up for each respondent. A higher score represents a higher level of trust in the overall information access.

5.3.5 Constructs of pro-social concerns, SRI knowledge and trust in information sources

Three constructs are generated according to 5.3.2-5.3.4 to proxy the degree of respondents' pro-social concerns, their level of SRI knowledge, and their trust in SR information access. The EFA result shows salient factors (Factor 1 in Table 5.5,5.7, and 5.9) behind those Likert-type items to proxy the general level of pro-social concerns, SRI knowledge and trust in SR information access, respectively. The Likert scales were generated by summing up all items respectively using the unit weight method (Weiss, 1971) to add them together equally weighted. The following Table

5.10 shows the descriptive statistics of the generated measurements for those three constructs. The three constructs reveal the general level of SRI knowledge, the overall concern about CSR issues and general trust in information sources among respondents.

Table 5.10 Descriptive statistics- pro-social concern, SRI Knowledge and trust in information access

Constructs	Mean	Standard deviation	Skewness	Kurtosis	N	Min.	Max.
Pro-social concern	18.888	4.213	-0.908	4.211	662	5	25
SRI knowledge	19.895	7.223	0.353	2.682	649	8	40
Trust in information access	21.165	3.324	-0.412	5.128	656	6	30

This table reports descriptive data on the three Likert scales. Pro-social concern is generated by summing five 5-scale Likert-type items. SRI knowledge is generated by summing eight 5-scale Likert-type items. Trust in information access is generated by summing six 5-scale Likert-type items.

Table 5.11 below shows the results of those three constructs and their links with investors' characteristics. There are some distinctive clusters with significant differences in pro-social concerns. Older respondents are reported to have higher concerns than younger respondents (19.895 vs. 18.611, significant at 0.01 level), which indicates older investors are more aware of socially responsible issues than younger individuals during investing.

Distinctive groups are found in terms of people's self-rated SRI knowledge level. Male respondents' rates were significantly higher to have more SRI knowledge than females (20.954 vs. 19.077, significant at 0.001 level). Respondents who have working experience in finance are reported to have higher SRI knowledge than those who do not (25.216 vs. 18.928, significant at 0.001 level), which is consistent with the recent increasing popularity of SRI in the capital market within China. According to early

Table 5.11 Pro-social concerns, SRI knowledge, trust in information access with investors' characteristics

	Gender		Age		Education[1]		Fin[2]	
	Female	Male	≤ 40	>40	High	Low	Yes	no
Pro-social concern	18.898	18.875	18.611	19.895***	18.815	19.402	18.310	19.002
SRI knowledge	19.077	20.954***	19.804	20.218	20.104	18.500	25.216	18.928***
Trust in SR information sources	21.329	20.947	21.155	21.199	21.230	20.707	21.050	21.188

	Investment period[3]		Investment amount above 1m[4]		Stock[5]	
	≤ 1yr	>1yr	yes	no	yes	no
Pro-social concern	18.690	19.012	19.262	18.818	18.795	18.960
SRI knowledge	18.437	20.792***	24.116	19.220***	21.262	18.907***
Trust in SR information sources	21.060	21.222	21.542	21.145	21.553	20.910***

This table reports the mean value of each construct: pro-social concern, SRI knowledge, and trust in information access in terms of investors' characteristics. Mean values marked with *, ** and *** are significantly different at the 0.5,0.01 and 0.001 level from the mean value in the preceding column, using the t-statistics mean test.

1. Respondent's education status, high='bachelor degree and above
2. Respondents working experience in the financial industry
3. Respondents' investment period
4. Respondents' investment amount above 1 million RMB
5. Respondents have stock as one of their major investment instruments

findings in section 5.3.1, financial professionals are also more likely to identify the non-financial impact of SRI, which indicates that high exposure to SR information may have an impact on respondents' perception towards SRI (Barreda-Tarrazona et al., 2011). Individuals with longer investment horizon (20.792 vs 18.437, significant at 0.001 level) claim to have higher SRI knowledge. Individuals with longer investment horizons may be more focused on the possible long-term effect of CSR on investment, therefore putting more attention on SRI. Besides, investors with a larger investing capital (21.262 vs 19.907, significant at 0.001 level) claim to have higher SRI knowledge, possibly due to the fact that they are more easily able to access SRI concepts and information.

5.3.6 Trade-off attitude

Riedl and Smeets (2017) find that SR investors earn lower returns on SRI funds and pay higher management fees, which suggests they are more willing to sacrifice certain financial returns for their ethical considerations. Therefore, in this questionnaire, two scenario questions were designed to investigate investors' attitudes on the willingness to sacrifice financial performance for ethical preferences. Table 5.12 reports the responses of individuals to these two scenario questions. The majority of the individuals preferred CSR performance rather than financial performance. Most respondents would choose investments with good CSR regardless of the variation in financial performance. In scenario 1, 80.91% of investors choose to have average financial performance with good CSR performance rather than investing in firms with good financial performance but average CSR. The percentage became even bigger to 88.71% versus 11.29% when firms perform poorly in CSR. More investors choose

firms with good CSR but average financial performance rather than firms with good

financial performance but poor CSR, which implies that investors are sensitive to firms

with poor CSR performance. They are more willing to forgo financial returns rather

than having to invest in firms with poor CSR performance. When CSR deteriorates

from good to poor, they are more willing to choose better CSR performance for ethical

and social values.

Table 5.12 Responses regarding the trade-off attitude

Response	N=681-682
Scenario 1	
Good CSR with average financial performance	80.91
Average CSR with good financial performance	19.09
Scenario 2	
Good CSR with average financial performance	88.71
Poor CSR with good financial performance	11.29

This table reports the percentage of responses for each scenario.

A construct of respondents' willingness to sacrifice financial returns to social values is

generated by categorising respondents into 3 groups: those who chose CSR in both

scenarios (Yes), which indicates individuals are more willing to trade-off financial

return for socially responsible performance; those who chose financial performance in

both scenarios, which indicate individuals are unwilling to trade-off financial return to

socially responsible performance (No); those who chose financial performance in

scenario 1 and CSR in scenario 2 (In-between), which means individual holding an in-

between trade-off attitude. The pie chart below, Figure 5.4, shows the percentage of

individuals in each category based on the combined answers to the two scenario

questions. The total sample is 652, with 30 responses omitted due to illogical choices.

From Figure 5.4, most people are willing to forgo financial return for social values,

which indicates the importance of social values in their perception.

Figure 5.4 Bar chart of the percentage of individuals in each trade-off category
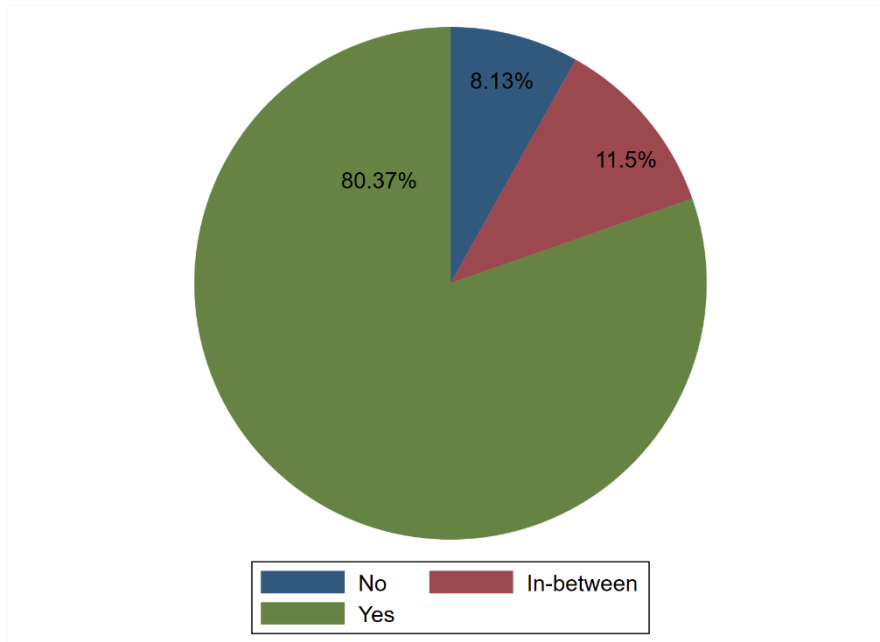
In order to further understand how different groups of respondents perceive their willingness to forgo financial return when considering SR information in investment decisions, a bivariate analysis is conducted in terms of investors' characteristics with their trade-off attitude. The results are shown in Table 5.13.

A significantly higher percentage of female respondents are willing to forgo financial return for better CSR performance (83.82% vs 75.64, significant at 0.001 level), indicating females' emphasis on pro-social values through SRI. Several previous research on profiling SR investors confirm that female investors are more likely to engage in SRI (Diouf et al., 2016; Nilsson, 2008a; Tippet & Leung, 2001). The findings of females' stronger willingness to forgo financial return than males suggest that they may be motivated by non-financial goals in investing in SRI. As for age, older

Table 5.13 Individual trade-off attitude with individuals' characteristics

	Gender		Age		Education[1]		Fin[2]	
	Female	Male	≤ 40	>40	High	Low	Yes	no
Trade-off willingness-yes	83.82%	75.64***	78.64	86.09*	78.91	90.36**	72.45	81.74*
Trade-off willingness-in between	9.55	14.18	12.97	6.62*	11.95	8.43	15.3	10.85
Trade-off willingness-no	6.63	10.18	8.38	7.28	9.14	1.20**	12.24	7.41

	Investment period		Investment amount above 1m[3]		Stock[4]	
	≤ 1yr	>1yr	yes	no	yes	no
Trade-off willingness-yes	82.73	78.86	70.11	81.69**	76.36	83.38*
Trade-off willingness-in between	8.43	13.43*	16.09	10.95	13.18	9.97
Trade-off willingness-no	8.84	7.71	13.79	7.36*	10.47	6.65

This table reports the percentage of respondents of each trade-off attitude category in terms of investors' characteristics. Comparisons marked with *, ** and *** are significantly different at the 0.5,0.01 and 0.001 level, using the t-statistics mean test.

1. Respondent's education status, high='bachelor degree and above
2. Respondents working experience in the financial industry
3. Respondents' investment amount above 1 million RMB
4. Respondents have stock as one of their major investment instruments

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individuals are more willing to sacrifice financial return (86.09% vs. 78.64%, at a 5% significant level). Surprisingly, investors with higher education (bachelor's degree and above) are less willing to sacrifice financial returns. Fewer people with university degrees show a positive attitude toward the trade-off attitude (78.91% vs.90.36%, at a 1% significant level). Borgers and Pownall (2014) find contradictory results regarding education level. In their study, the willingness to pay rises with the education level. Regarding investment features, individuals with larger capital in investing are more likely to focus on financial return (13.79% vs.7.36%, at 5% significant level), indicating they put more emphasis on obtaining financial achievement in SRI. People who have working experience in the finance industry are less willing to forgo financial return (72.45% vs 81.74%, at a 5% significant level), probably due to the predominate financial logic of profit-maximising in the field of finance (Reay & Hinings, 2009).

5.3.7 Strategy preferences

This study identifies three strategy preferences by designing a virtual questionnaire item. Respondents imagine how they would choose to invest in a high-pollutant energy-consuming industry. The intentions are classified into three categories: negative screening, positive screening and non-screening. Table 5.12 represents the distribution of individuals' choices regarding provided investment strategies. It shows that on a sample of 655 responses, 44.12% of individuals chose a negative screening strategy, 41.07% chose positive screening, and 14.81 % chose not to consider SR information and stick to a traditional return-risk-focused strategy.

Table 5.14 Distribution of SRI strategy preferences

Response	N	%
Non-screening	97	14.81
Positive screening	269	41.07
Negative screening	289	44.12
Total	655	100

This table reports responses to different SRI strategies.

The results of this sample show that people prefer incorporating SR information than not considering the information at all, among which the percentage of people who prefer negative screening is slightly higher than the ones who prefer positive screening strategy. In practice, investment products such as ESG or SRI funds are usually constructed by a combination of negative and positive screens (Renneboog et al., 2008). An exclusion process for unethical firms and industries, such as gaming, alcohol and human rights violation practices, is usually adopted first, followed by positive screening criteria. It also has high popularity among most investors in Europe and the US (Bengtsson, 2008; Renneboog et al., 2008). However, in China, exclusion strategies have only recently been added into practice. The newly- published report by China SIF (2023) recorded exclusion strategies as an additional strategy in China's socially responsible investing market due to the fact that the SRI indexes just added this method to constructing SR-related indexes. Both the practice development and the sample in this study show that social awareness has been an increasingly important factor in pushing forward the development of SRI in China.

5.4   Summary

This chapter provides a descriptive analysis of the questionnaire items regarding

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individuals' understanding of SRI. In general, the majority of Chinese individual investors have realised the importance of socially responsible information in their investment decisions. The incorporation of SR information is driven by both material and ethical reasons. Furthermore, more than half of them have the ability to identify the non-financial impact of investment on social change. They pay special attention to different CSR issues, especially those related to production and corporate compliance. Regarding their trade-off attitude between socially responsible value and financial return, most respondents chose non-financial performance over financial performance. Their financial literacy related to SRI concepts and terminology is poor, which means they may not understand the term SRI or ESG (China SIF, 2021) [17]. Concepts originating from the Chinese market, such as "Targeted Poverty Alleviation" and "Rural Revitalization", are relatively well-known compared with more internationalised concepts such as "ESG investing". Individuals in the finance industry, active in the stock market, or have relatively larger capital for investment claim to have higher SRI knowledge, possibly due to their easier exposure to SRI-related concepts that are increasingly popular in the capital market. They are also less willing to sacrifice financial return, indicating they put less emphasis on pro-social goals obtained through SRI. In terms of information sources, official documents and reports such as Governmental policy releases and research reports are believed to be more reliable. In contrast, firm disclosure received a relatively low rating, which reflects that

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[17] A questionnaire on Attitudes Towards Responsible Investment was conducted by China Sustainable Investment Forum (SIF) and Sina Finance consecutively in the year 2020-2022. China SIF is a non-profit organisation to promote responsible investment in China.

the development of SRI is driven by regulations and policy (GSIA,2020)[18] . Also, there is concern about the disclosure of CSR reporting from firms. Regarding strategy preferences, most of the respondents shows interests in SR screening strategies.

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[18] A report conducted by Global Sustainable Investment Alliance, a global wide membership-based sustainable investment organisation

CHAPTER 6   FINDINGS OF FACTORS BEHIND SRI STRATEGY PREFERENCES

6.1   Individual perceptions of SRI and strategy preferences

The previous chapter provides an overall understanding of individuals' SRI perceptions regarding SRI by separately discussing five aspects: individuals' pro-social motivation, their pro-social concern, level of SRI knowledge, trust in SR information sources and their trade-off attitude. This chapter mainly tests hypotheses 1-6 and discusses associations between these aspects and individuals' investment strategy preferences.

A bivariate analysis is conducted, as shown in Table 6.1 and Table 6.2. The segmentations of individuals adopting different SRI strategies are compared depending on the SR-related attributes as well as demographic and investment features by their distribution or mean values. For categorical independent variables, the percentage of each strategy option is calculated within each category to observe their variations in the three strategies. The χ^2 is used to test the significance of those differences. For continuous variables, such as degree of pro-social concerns, level of SRI knowledge and trust level for information sources, the average mean was calculated to observe the differences among the three strategy categories using t-statistics.

From Table 6.1 and Table 6.2, individuals' strategy decisions are distributed differently according to ethical and financial perceptions and demographical and investment attributes. According to Table 6.1, the distribution among the three strategies is

significantly different for pro-social motivation. Individuals who believe in the pro-social impact of investing prefer positive screening (45.68%, with a total sample of 370). Those who do not believe in the active impact of investment in promoting social change tend to adopt non-screening (17.44%). These results indicate that the ability to identify or believe the non-financial impact of investment differentiated people's intention in how to invest. Positive screening investors consider SRI as a tool to achieve environmental, social and governance improvement other than purely financial purposes, which is confirmed by the study by Sandberg & Nilsson (2015), indicating positive screening's function of fulfilling investors' non-financial goal of being ethically efficient to make a change.

Regarding the trade-off between financial return and social value, among individuals with a stronger willingness to sacrifice financial return, a higher proportion of people choose negative screening (48.52%). Among individuals with less willingness to sacrifice return, the proportion of individuals choosing non-screening strategies is higher (52.08%), which indicates that the attitude towards forgoing financial return is essential in differentiated people's preferences for negative screening and non-screening strategy. Negative screening investors are more likely to forgo financial returns than non-screening investors, indicating that individuals with preferences for negative screenings may seek ethical purity (Sandberg & Nilsson, 2015). The avoidance of unethical industries, sectors, and firms supports their identity consistency.

For mean comparisons of pro-social concern, SRI knowledge level and trust in information sources (Table 6.2), individuals' pro-social concerns are higher when they

Table 6.1 Strategy decisions according to independent variables.

		N	Non- screening (n=97)	Positive- screening (n=269)	Negative screening (n=289)	p- value
Pro-social motivation			p<0.1	p<0.1	n.s.	0.027
	Yes	370	44(11.89)	169(45.68)	157(42.43)	
	No	258	45(17.44）	93(36.05)	120(46.51）	
Trade-off			p<0.001	n.s.	p<0.01	0.000
	Yes	507	45(8.88)	216(42.6)	246(48.52)	
	No	48	25(52.08)	11(22.92)	12(25)	
	In-between	69	24(34.78)	25(36.23)	20(28.99)	
Gender			n.s.	p<0.01	p<0.1	0.001
	Female	397	48(12.83)	177(47.33)	149(39.84)	
	Male	296	49(17.44)	92(32.74)	140 (49.82)	
Age			n.s.	p<0.01	p<0.05	0.000
	18-30	172	20(11.63)	93(54.07)	59(34.30)	
	30-40	334	60(17.96)	130(38.92)	144(43.11)	
	41-50	93	12(12.90)	31(33.33)	50(53.76)	
	51-60	44	4(9.09)	9(20.45)	31(70.45)	
	Above 60	12	1(8.33)	6(50.00)	5(41.67)	
Education			p<0.1	n.s.	n.s.	0.017
	Secondary school or below	12	1(8.33)	8(66.67)	3(25.00)	
	High school	19	1(5.26)	9(47.37)	9(47.37)	
	College	50	4(8.00)	18(36.00)	28(56.00)	
	Undergraduate	306	38(12.42)	119 (38.89)	149(48.69)	
	Post Graduate or above	268	53(19.78)	115(42.91）	100(37.31)	
Financial industry			n.s.	n.s.	p<0.05	0.029
	yes	100	18(18.00)	50 (50.00)	32(32.00)	
	no	554	79(14.26)	218(39.35)	257(46.39)	
Amount invested			n.s.	n.s.	n.s.	0.551
	100k below	562	80(14.23)	233(41.46)	249(44.31)	
	100k above	86	16(18.60)	35(40.70)	35(40.70)	
Investment time horizon			n.s.	n.s.	n.s.	0.333
	<=1 year	244	36(14.75)	92(37.70)	116(47.54)	
	above 1 year	410	61(14.88)	177(43.17)	172(41.95)	
Equity investors			p<0.05	p<0.1	p<0.01	0.000
	yes	263	49(18.63)	123(46.77)	91(34.60)	
	no	388	48(12.37)	144(37.11)	196(50.52)	

The percentages (in parentheses) are calculated within categories of independent variables, including SR-related variables (Pro-social motivation and Trade-off attitude), demographics and investment features. The χ^2 is used to test the significance of differences in distributions within each category of strategies. The last column is the overall p-value of chi statistics. n.s.=not statistically significant.

Table 6.2 Strategy decisions according to independent variables

	Non-screening		Positive screening		Negative screening		Non vs. Positive screening	Non vs. Negative screening	Positive vs. Negative screening
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation	t	t	t
Pro-social concern	16.463	4.081	19.02	3.33	20.136	4.072	-6.025***	-7.564***	-3.487***
SRI knowledge level	19.322	7.110	21.031	7.122	19.439	7.189	-1.962*	-0.134	2.543**
Trust in Information access	20.447	3.043	21.245	2.991	21.643	3.486	-2.214*	-2.952**	-1.410

This table reports the t-statistics mean test of strategy decisions according to pro-social concern, SRI knowledge level and trust in information access. *, ** and *** are significantly different at the 0.5, 0.01 and 0.001 level.

incorporate SR screening. Individuals who adopt negative screening have a higher mean value of pro-social concerns compared with individuals preferring the positive screening strategy. In the study of Diouf et al. (2016), individuals with higher awareness of environmental, social and governance issues are the ones who invest more responsibly. This study further addressed that individuals with higher levels of pro-social concerns preferred to use a negative screening strategy.

As for SRI knowledge, the more SRI knowledge individuals claim they have, the more they prefer to actively adopt SR information, such as when choosing a positive screening strategy. Investors' confidence in decisions can be facilitated by the knowledge they acquire (Campbell and Kirmani, 2000; Wang, 2009). Additional information may increase confidence in the decision (Hall et al., 2007), especially in the Chinese market, where individuals have limited SRI knowledge. Individuals with higher SRI knowledge ratings indicate their confidence in understanding SRI, which leads to their preference for more actively incorporating SR information in investment strategy.

The general trust in SR information sources differentiates people's intentions between screening and non-screening strategies with statistical significance. People choosing screening strategies are associated with higher trust in the sources. In the questionnaire, 34 responses considered SR information unimportant, mainly due to a lack of trust in information access. These responses indicate the importance of SR information and its quality to investors' SRI strategy decisions. Improving the quality of SR information and providing a more transparent overall market environment can engage more

individual investors in the SRI market.

6.2   Individual socio-demographical features and strategy preferences

The demographic attributes of gender, age, education and financial occupation also have a significantly different distribution in the three SRI strategies, which indicates that individuals' demographical attributes relate to not only their investing in SRI (Diouf et al., 2016) but also how they invest in SRI. Specifically, according to Table 6.1, only education is significantly associated with individuals with non-screening intentions. People with postgraduate degrees are more likely to adopt a traditional return-focused strategy without SR screens. This finding contradicts most questionnaire studies on profiling SR investors, which show that SR investors tend to be highly educated (Junkus & Berry, 2010b; Nilsson, 2008). Females and younger individuals prefer positive screening, while males and older people prefer negative screening. There are no significant differences in age and gender in non-screening investors. The strategy intentions are also associated with individuals' investment features. However, there is no association between an individual's investment amount and time horizon with their strategy choices. As for investment instruments, equity investors, who regard equity investment as one of their major instruments, tend to use positive screening or non-screening strategies rather than negative screening. The bivariate analysis indicates that individuals' demographical and investment characteristics are important in influencing people's preferences for different strategies. However, these variables alone cannot explain why certain people choose specific strategies (Diouf et al., 2016). Their significance may be reduced when associated with other variables relating to people's ethical, financial, and practice perceptions of SRI.

Therefore, the following section reports the analysis of multivariate analysis by considering the effect of all the variables.

6.3   Multinominal logistic regression in segmenting SRI strategy preferences

After reviewing different variables in bivariate analysis to separately identify the association of different variables with the three strategies, a multinomial logistic regression was conducted to further confirm the SRI perception factors that influence SRI strategy decisions in the presence of each other. Since the dependent variable "SRI strategy" is categorical, multinominal regression analysis is adopted using STATA software[19]. Multinominal regression is an extension of linear regression that is applied when the dependent variable is of a categorical nature with more than two categories. The multinominal regression procedure in STATA calculates the likelihood of a specific outcome similar to that for logistic regression. Logistic regression applies maximum likelihood estimation after transforming the dependent into a logit variable (the natural log of the odds of the dependent variable occurring or not). The logarithm of the odds is called logit (or log-odd). The coefficient of the independent variable means the change of 1 unit in it leads to the change of the logit of the dependent category occurring (Agresti, 2019). With dependent variables with more than two categories, such as in this study with three different SRI strategies (negative, positive and non-screening), the construction of logit requires one of the categories as a base level, and all the logits are generated relative to the base category. In terms of this study, this approach derived simultaneous comparisons among factors determining investors'

[19] StataCorp. 2023. Stata Statistical Software: Release 18. College Station, TX: StataCorp LLC.

decisions on SRI strategies. The coefficient of a specific predictor variable means a unit of change in the independent variable leads to the logarithm of the odds of the specific strategy being chosen relative to the base strategy. This helped examine the impact of factors in explaining investors' preferences for negative screening, positive screening and traditional non-screening strategies. For instance, taking the non-screening strategy as the baseline category, the log-odd of the probability of responses falling in the negative screening strategy relative to the non-screening strategy is determined by the coefficient of specific factor (detailed illustration of the multinominal logistics model can also be found in Chapter 3 (3.5.2). A positive coefficient means an increase in the probability of adopting negative screening relative to the non-screening strategy with 1 unit of change in a specific factor.

The variables are examined by using the following model specifications. Model 1 investigates the impact of only the investor's features, including their demographical and investment characteristics, on individuals' strategy preferences. Models 2 to 6 investigate the significance of each aspect of SR-related perception while controlling for investors' socio-demographical features. Model 7 is built by testing those five aspects of SRI awareness together, controlled for demographical and investment features. Table 6.3 reports the results of multinomial logit regressions. For all the models, the left column analyses the probability of choosing non-screening strategy relative to positive screening, the middle column analyses the probability of choosing non-screening relative to negative screening, and the right column reports the comparison for the probability of holding a positive screening strategy relative to negative screening strategy. Estimated probabilities based on the regression results

(Table 6.3) are shown in Table 6.4 to interpret the results better.

Model 1 reports how investors' characteristics alone impact investors' strategy preferences. Gender is significantly positively related to the probability of choosing the negative screening and non-screening strategy relative to the positive screening strategy. Specifically, males have a significantly higher probability of choosing a non-screening strategy relative to the positive screening strategy. This means that, compared with females, the probability of males choosing a non-screening strategy relative to positive screening increases. Males have a significantly lower probability of choosing a positive screening strategy relative to a negative screening strategy. The results indicate that female investors are more likely to choose the positive screening approach rather than the other two strategies when compared with male investors. This finding is consistent with the findings in bivariate analysis. In addition, according to existing literature, females are likely to be socially responsible investors (Diouf et al., 2016; Tippet & Leung, 2001) to invest more in SRI funds. Niszczota and Bialek (2021) state that women are more inclined to refuse sin stocks (such as alcohol, cigarettes and stocks) than men. This study's findings add to this literature and suggest that women are more active in using SR information. In the Chinese market, rather than exclude specific industries, females prefer to invest in firms that improve CSR performance.

In terms of individuals' age and their SRI strategy preferences, the coefficient of model 1 shows that the increase in age is significantly negatively related to the possibility of individuals choosing positive screening and non-screening strategy relative to negative screening strategy, which means senior investors are more inclined to choose a

negative screening strategy, indicating investors with older age are more prone to refuse specific industries that are considered socially irresponsible. The ethical origin of negative screenings suggests investors prefer this strategy with an emphasis on fulfilling morality integration in investment behaviours (Glac, 2009; Sandberg & Nilsson, 2015). The results of this study suggested that older individuals in China are more focused on the non-financial attributes of SRI. This result is also consistent with the bivariate analysis in Table 5.11, which shows that investors over 40 have higher mean values of pro-social concern. Both these results indicate that older investors in China emphasise the ethical aspects of SRI. Several studies indicate that younger people are more aware of and concerned about CSR issues (Diouf et al., 2016; Matterson, 2000), which incentivises them to invest socially responsively. While in this study, in the context of China, older people show more concern for CSR issues and are more likely to adopt negative screens to reflect their moral requirements.

Education level impacts investors' choice of strategy between traditional profit-focused methods and screening strategies. Individuals receiving higher educational degrees are significantly less likely to adopt screening strategies, either positive or negative screening. Their choices indicate they may act more likely to rational individual investors to gauge investment based on the risk and return profile. This is consistent with the findings in the bivariate analysis (Table 6.1), where the percentage of individuals with a university degree and above who fall into a non-screening category is significantly higher than the other two groups. This study shows that, at least in the Chinese market, financial return is still the priority of individuals when forming investment strategies among higher-educated individuals. Most literature

based on other markets concludes that investors with higher education are likely to engage in SRI, that is, to invest more SR-themed funds (Diouf et al., 2016). This high demand for SR investor products in higher educated groups is explained due to their high social awareness. In comparison, this study approached how individuals would like to incorporate SR information and indicates that higher education investors may not be into SRI to do good but to do well financially. They do not show interest in the positive screening strategy compared with the traditional strategy, which may be because they are more aware of the complexity and resource-demanding nature of the positive screening method.

Investors with work experience in the financial industry are significantly less likely to adopt a negative screening approach relative to positive screening. Equity investors are found to be significantly less likely to choose a negative screening strategy relative to a positive screening strategy and more likely to adopt a traditional non-screening strategy relative to a negative screening strategy. This evidence may be due to the predominating logic of profit maximisation in the financial industry and capital market influencing people's intentions in choosing a risk-return-focused strategy. The classic portfolio theory, which pursues an efficient portfolio based on risk-adjusted returns, governs investment decision-making by considering only financial performance-related criteria. The financial sector has long been dominated by profit maximisation, providing guiding rules for those working in that industry to maximise financial returns (Yan et al., 2019). Studies show that the prevalence of financial logic influences investment professionals in decision-making and, hence, negatively affects the development of SRIs, such as the emergency of SRI funds (Jonsson & Regnér, 2009)

This study adds to the literature by investigating individual perceptions. It finds that individuals with financial working experience or who engage heavily in the stock market are influenced by this profit-maximising logic and show less preference for the negative screening strategy, which is empirically proved to be hurtful for financial returns (Capelle-Blancard & Monjon, 2010). This also indicates that return-focused values may dominate the external investment environment exposed to individual investors.

Models 2-6 investigate the impact of individuals' ethical, financial and practice perceptions on people's preferences for different strategies. In model 2, the belief that 'SR information in investment can help sustainable development' is treated as the proxy of pro-social motivation (pro-social motivation), which is suggested by Nilsson (2008) as perceived consumer effectiveness (PCE). This effectiveness refers to people believing an individual investment in SRI influences and improves social, ethical and environmental issues. This study finds that compared with people without pro-social motivation for SRI, investors who have non-financial motivation have a significantly lower probability of choosing a non-screening strategy relative to positive screening. Those investors are also more likely to adopt positive screening than negative screening. However, the statistics are insignificant, with z statistics equal to 1.26. The results partially support H_1, indicating that individual investors in China perceive positive screening as a more effective tool to make socially responsible changes through SRI, at least when compared with the non-screening strategy. This finding advances the usage of the PCE variable in investment behaviour research and suggests

Table 6.3 Multinominal logistic regression of individual differences and strategy preferences

Independent variable	Model 1			Model 2			Model 3		
	Non vs Positive screening	Non vs. Negative screening	Positive vs Negative screening	Non vs Positive screening	Non vs Negative screening	Positive vs Negative screening	Non vs Positive screening	Non vs Negative screening	Positive vs Negative screening
Intercept	-3.690***	-3.084***	0.606	-3.222***	-2.723**	0.499	-0.690	1.469	2.159**
	(-4.39)	(-3.71)	(1.23)	(-3.79)	(-3.23)	(0.99)	(-0.68)	(1.40)	(2.94)
Gender	0.750**	0.125	-0.625***	0.634*	0.0260	-0.608**	0.757**	0.182	-0.576**
	(2.94)	(0.50)	(-3.31)	(2.39)	(0.10)	(-3.16)	(2.86)	(0.68)	(-2.97)
Age	0.0945	-0.332*	-0.426***	0.110	-0.315*	-0.425***	0.270	-0.139	-0.409***
	(0.62)	(-2.29)	(-4.02)	(0.71)	(-2.12)	(-3.98)	(1.70)	(-0.90)	(-3.67)
Education level	0.486**	0.521**	0.0342	0.449*	0.472**	0.0234	0.378*	0.364	-0.0139
	(2.70)	(2.91)	(0.32)	(2.45)	(2.60)	(0.21)	(2.05)	(1.96)	(-0.13)
Finance working experience	-0.117	0.482	0.599*	0.0918	0.658	0.567*	-0.147	0.478	0.626*
	(-0.36)	(1.39)	(2.24)	(0.27)	(1.84)	(2.05)	(-0.44)	(1.29)	(2.26)
Equity investors	-0.0196	0.699**	0.719***	-0.0289	0.683*	0.712***	0.00863	0.692*	0.683***
	(-0.08)	(2.72)	(3.74)	(-0.11)	(2.55)	(3.64)	(0.03)	(2.52)	(3.48)
Investment horizon <=1 yr	0.208	0.0587	-0.149	0.208	0.112	-0.0961	0.121	-0.0682	-0.190
	(0.80)	(0.23)	(-0.78)	(0.77)	(0.42)	(-0.50)	(0.44)	(-0.24)	(-0.98)
Invested capital >1m	0.0957	0.158	0.0621	0.0360	0.164	0.128	0.161	0.300	0.139
	(0.27)	(0.44)	(0.22)	(0.10)	(0.43)	(0.44)	(0.44)	(0.78)	(0.47)
Pro-social motivation				-0.642*	-0.406	0.236			
				(-2.52)	(-1.60)	(1.26)			
Pro-social concern							-0.161***	-0.231***	-0.0691**
							(-5.11)	(-6.87)	(-2.64)
SRI knowledge									
Trust in Information sources									
Trade-off attitude									
Observations	643			618			622		
Pseudo-R-square	0.0541			0.0561			0.0964		

Table 6.3 continued

Independent variable	Model 4			Model 5			Model 6		
	Non vs Positive screening	Non vs. Negative screening	Positive vs Negative screening	Non vs Positive screening	Non vs. Negative screening	Positive vs Negative screening	Non vs Positive screening	Non vs. Negative screening	Positive vs Negative screening
Intercept	-2.804**	-2.775**	0.0291	-2.138	-0.301	1.837*	-0.0742	0.925	0.999
	(-3.04)	(-3.03)	(0.05)	(-1.85)	(-0.26)	(2.26)	(-0.07)	(0.86)	(1.26)
Gender	0.825**	0.150	-0.675***	0.605*	-0.0569	-0.662***	0.602*	-0.0472	-0.649***
	(3.08)	(0.57)	(-3.41)	(2.32)	(-0.22)	(-3.41)	(2.16)	(-0.17)	(-3.30)
Age	0.192	-0.250	-0.442***	0.162	-0.262	-0.424***	0.231	-0.236	-0.468***
	(1.20)	(-1.64)	(-3.96)	(1.07)	(-1.80)	(-3.90)	(1.40)	(-1.51)	(-4.25)
Education level	0.456*	0.506**	0.0496	0.468*	0.488**	0.0202	0.330	0.325	-0.00466
	(2.42)	(2.71)	(0.44)	(2.57)	(2.68)	(0.18)	(1.70)	(1.69)	(-0.04)
Finance working experience	0.262	0.678	0.416	-0.165	0.442	0.607*	-0.138	0.430	0.569*
	(0.76)	(1.83)	(1.46)	(-0.50)	(1.24)	(2.22)	(-0.39)	(1.15)	(2.07)
Equity investors	0.0781	0.799**	0.721***	0.0822	0.790**	0.708***	-0.193	0.529	0.722***
	(0.29)	(2.97)	(3.60)	(0.32)	(2.97)	(3.57)	(-0.70)	(1.91)	(3.64)
Investment horizon <=1 yr	0.197	0.0813	-0.115	0.168	0.0127	-0.155	0.261	0.149	-0.112
	(0.72)	(0.30)	(-0.58)	(0.63)	(0.05)	(-0.80)	(0.93)	(0.54)	(-0.57)
Invested capital >1m	0.309	0.330	0.0210	-0.0561	0.0788	0.135	-0.143	0.0361	0.179
	(0.84)	(0.89)	(0.07)	(-0.15)	(0.21)	(0.46)	(-0.37)	(0.09)	(0.62)
Pro-social motivation									
Pro-social concern									
SRI knowledge	-0.0590**	-0.0275	0.0316*						
	(-2.94)	(-1.36)	(2.22)						
Trust in Information sources				-0.0747	-0.126**	-0.0515			
				(-1.93)	(-3.20)	(-1.73)			
Trade-off attitude							-1.171***	-1.236***	-0.0653
							(-6.19)	(-6.38)	(-0.33)
Observations	603			614			613		
Pseudo-R-square	0.0637			0.0602			0.101		

Table 6.3 continued

Independent variable	Model 7		
	Non vs Positive screening	Non vs. Negative screening	Positive vs Negative screening
Intercept	2.560	6.056***	3.497**
	(1.63)	(3.60)	(2.94)
Gender	0.454	-0.241	-0.695**
	(1.42)	(-0.73)	(-3.21)
Age	0.480**	0.0415	-0.438***
	(2.60)	(0.23)	(-3.63)
Education level	0.221	0.171	-0.0496
	(1.03)	(0.79)	(-0.41)
Finance working experience	0.400	0.633	0.233
	(0.96)	(1.41)	(0.75)
Equity investors	-0.116	0.569	0.684**
	(-0.36)	(1.73)	(3.14)
Investment horizon <=1 yr	0.209	0.244	0.0348
	(0.65)	(0.74)	(0.16)
Invested capital >1m	-0.293	-0.0126	0.280
	(-0.64)	(-0.03)	(0.85)
Pro-social motivation	-0.723*	-0.624*	0.0992
	(-2.38)	(-1.99)	(0.47)
Pro-social concern	-0.127**	-0.231***	-0.104**
	(-2.86)	(-4.91)	(-3.10)
SRI knowledge	-0.0237	0.0283	0.0520**
	(-0.91)	(1.07)	(3.24)
Trust in Information sources	0.0109	-0.0376	-0.0485
	(0.20)	(-0.67)	(-1.33)
Trade-off attitude	-1.140***	-1.293***	-0.153
	(-5.20)	(-5.09)	(-0.63)
Observations	535		
Pseudo-R-square	0.159		

This table reports estimates from multinomial logistic regressions. Within each model, the left-hand column reports the log-odds ratio of the probability of choosing the non-screening strategy relative to the positive screening strategy. The dependent variable in the middle column reports the log-odds ratio of the probability of choosing the non-screening strategy relative to the negative screening strategy. The dependent variable in the right-hand column is the log-odds ratio of the probability of choosing positive screening relative to negative screening strategy. Gender is a binary variable equal to one if the respondent is male and zero otherwise. Finance working experience is an indicator variable equal to one of the respondents who have or had worked in the financial industry; the variable is zero otherwise. Equity investors is an indicator variable equal to one if respondents have stocks as one of their investment instruments; otherwise, it is zero. Pro-social motivation is an indicator variable equal to one if respondents have chosen "SR information in investment has impact on the sustainable development"; otherwise, it is zero. Pro-social concern is the sum of a series of Likert-type items scaling from 1 to 5. SRI knowledge is the sum of a series of Likert-type items of knowledge in SRI concepts scaling from 1 to 5. Trust in information is the sum of a series of Likert-type items of reliability of different information sources, scaling from 1 to 5. Trade-off attitude ranges from 1-3 for three levels of willingness to sacrifice financial return. Coefficients are reported with * p<0.05, ** p<0.01, *** p<0.001 and z statistics in parentheses below.

that people with higher PCE are more likely to adopt active SRI strategies.

Model 3 reports the results of the level of pro-social concern and its relationship with investors' strategies. Investors' strategy preferences are varied with their increasing concern for CSR. With more concerns about CSR issues, individuals are significantly more reluctant to choose non-screening and positive screening strategies relative to negative screening. People are most reluctant to choose non-screening among those three strategies. The results only partially support H2. The results confirm that individuals more aware of CSR issues are more likely to incorporate SR information in their screening process, consistent with existing literature (Barreda-Tarrazona et al., 2011; Nilsson, 2008). However, they do not provide evidence to support the statement that increasing awareness will lead individuals to adopt SR information positively. Instead, from the evidence, people are more likely to choose negative screening rather than positive screening. The results indicate that the increase in awareness of socially responsible issues shifts people's preference to a negative screening strategy.

Model 4 reports the impact of individuals' perception of their SRI knowledge on influencing investors' strategy decisions. The questionnaires designed a series of SRI-related concepts, and respondents were asked to rate their familiarity with each concept. The proxy measures the SRI knowledge individuals think they have. People with higher SRI knowledge levels are significantly more likely to choose positive screening than the other two strategies. This result is consistent with bivariate analysis, and H4 is supported, showing a positive relationship between SRI knowledge and intentions in positive screening strategy after controlling individual demographical and

investment features, especially education and financial occupation. This result means individuals who are more financially literate in SRI aspects can make more sophisticated financial decisions, which support the research on financial knowledge and investment decisions (Borgers & Pownall, 2014; Calvet et al., 2009). Investors' confidence in decisions can be facilitated by the knowledge they acquire from available and accurate information (Campbell and Kirmani, 2000; Wang, 2009). So, more accurate knowledge helps investors access and analyse information regarding mutual fund investments. SRI knowledge may enhance investors' understanding of the complexity of SRI and thus reduce the barrier to conducting a more active SRI strategy. The uncertainty of SRI, such as lack of related knowledge, hinges on investors' engagement in SRI. The rating of claiming to have higher SRI knowledge also indicates higher confidence (Hall et al., 2007), which leads to a more active strategy. The results imply the importance of SRI knowledge in individuals' decision-making regarding SRI.

Model 5 reports the results of trust in SR information access and its relationship with investors' strategy decisions. The results only show partial support for H_5. People considering SR information sources more reliable are significantly less likely to adopt a non-screening strategy relative to the negative screening strategy. However, statistical significance is not found in the comparison of the non-screening strategy with the positive screening strategy with regard to trust in information sources. Overall, the model pattern suggests that people's perceptions of the reliability of SR information influence their strategy choices in a way that when people show more trust in the source to receive SR information, they are more likely to use that information

as ethical criteria to screen out specific firms and industries. However, there is no evidence showing that their increasing trust in information sources can lead them to adopt SR information actively. This is consistent with the expectation in considering the development of SRI in China, where SR information quality is one of the major concerns for most investors (Marquis & Qian, 2014). The concern about the quality of the information hinders people from making more complicated decisions related to screening strategy.

Model 6 reports how investors' willingness to sacrifice for a financial return to non-financial value impacts investors' decision-making regarding SRI. Both questionnaires-based and archival research showed that certain investors are willing to trade financial returns for non-financial attributes (Glac, 2009; Riedl & Smeets, 2017). This study separates individuals' willingness to sacrifice financial return based on two scenario questions. Investors who are more willing to sacrifice financial return for social value are significantly associated with a lower probability of choosing traditional strategy relative to both negative and positive screening approaches. The H_3 is partially supported. The results can only provide significant evidence that individuals more willing to sacrifice returns for social value are more likely to adopt either a negative or positive screening strategy than a non-screening strategy. However, there is no significant evidence to separate preference for positive and negative screening strategies in terms of people's trade-off attitudes. Previous empirical studies confirm that SR investors are the ones willing to sacrifice a certain degree of financial performance for social value (Benson and Humphrey, 2008; Peifer, 2011; Marzuki and Worthington, 2015). This study is consistent with previous literature and adds to the

knowledge that the extent of the willingness to sacrifice return has an impact on their intention for different SR strategies.

Model 7 is an inclusive test that adds all the SRI perception variables in the model after controlling for investors' demographic and investment features. Investors' pro-social motivation separates them from choosing a traditional strategy or SR-based strategies (positive or negative screening). The evidence is more prominent in model 7 than in model 2. Compared with individuals who do not believe in the social impact of investment, individuals with pro-social motivations have a significantly lower probability of choosing non-screening relative to positive screening and negative screening. This evidence is consistent with the findings of Nilsson (2008), indicating that people who believe their actions can make a difference are more likely to invest responsively. However, the expectation of positive screening to be preferred to a negative screening strategy has not been significantly proven.

Pro-social concern remains significantly influencing people's intention for different strategies in model 7. Individuals with more concerns about CSR issues are more likely to adopt SR screening strategies rather than non-screening strategies. Compared with negative screening, individuals more concerned about CSR issues are less likely to choose a positive screening strategy. Like in model 3, individuals' awareness of socially responsible issues positively impacts people to engage in SRI as expected in H2, and this finding is also consistent with other literature discussing individuals' socially responsible awareness and their impact on SRI (Diouf et al., 2016; Nilsson, 2008). However, when comparing with SR screening (negative vs positive), the expectation that the more socially- responsible -aware investors are more likely to

adopt a positive screening strategy is not supported in both models 3 and 7. On the contrary, the evidence shows that those with higher concern for CSR issues are more likely to adopt a negative screening strategy rather than a positive screening. This evidence indicates that in the Chinese market, individuals tend to translate their concerns for CSR issues into avoiding specific firms that are irresponsible.

As for the trade-off attitude, similar results can be found in model 7, which means the trade-off attitude can only significantly separate individuals with more intentions for SR screens (positive and negative) and those without those preferences. However, the trade-off attitude variable is not a significant factor in differentiating negative screening and positive screening strategies.

SRI knowledge is significant in separating investors for negative and positive screening strategies. People with a positive perception of their SRI knowledge level are significantly more likely to adopt a positive strategy relative to a negative screening strategy when controlling the individual demographics and other SR-related variables. The higher the SRI knowledge literacy enables investors to be more positively screen SR information when making investment decisions, which may be due to knowing more about SRI reduce the barrier of conducting more complex decisions (Paetzold & Busch, 2014) or investors' feeling more confidence in actively using that information (Campbell & Kirmani, 2000; A. Wang, 2009). This finding enriched the existing literature on knowledge and information and its role in SRI decision-making.

Demographically, from model 7, we can conclude that female and younger investors

are more likely to choose a positive screening strategy. Equity investors are less likely to choose a negative screening strategy. These findings contribute to the existing knowledge on not only profiling SR investors but also understanding how they invest in SRI. With the introduction of SRI perception variables, the impact of individuals' demographic and investment attributes has weakened, indicating that socio-demographics alone cannot fully explain why individuals choose different strategies and thus support H_6.

It is challenging to interpret multinominal regression coefficients due to the fact that they can only provide the log-odd ratio of the probability of the effect for specific factors. In order to more easily evaluate the economic importance of the findings, this study calculated the hypothetical changes in the probability of each SRI strategy choice, as shown in Table 6.4.

Table 6.4 Estimated change in probabilities

Variables	Assumed change range in variables	Estimated change in probability		
		Non-screening	Positive screening	Negative screening
Gender	0-1	0.014	-0.139	0.125
Age	1-2	0.027	-0.102	0.075
Education level	4-5	0.019	-0.020	0.001
Finance working experience	0-1	0.050	0.014	-0.064
Equity investors	0-1	0.016	0.119	-0.136
Investment horizon <=1 yr	0-1	0.021	-0.005	-0.015
Invested capital >1m	0-1	-0.016	0.064	-0.042
Pro-social motivation	0-1	-0.065	0.055	0.009
Pro-social concern	17-22	-0.080	-0.050	0.140
SRI knowledge	14-25	-0.001	0.112	-0.107
Trust in Information sources	19-23	-0.004	-0.034	0.038
Trade-off attitude	1-3	-0.374	0.161	0.213

This table reports estimates of changes in the implied probabilities of non-screening, positive screening and negative screening. The probability is estimated using model 7 in Table 6.2. For each variable, the

change in the implied probability is calculated by assuming the variables change by the amount equal to the interquartile range (25th to 75th), except for binary variables, which change from 0 to 1. The variable "Trade-off attitude" changes from 1 to 3. The sample consists of 535 observations.

The implied changes assume that each independent variable changes from its value at the 25th percentile to its value at the 75th percentile1(except for binary variables changing from zero to one and trade-off attitude changing from 1 to 3), while the other independent variables remain constant at their respective mean values. The changes in probability are calculated based on the estimation of model 7 in Table 6.3.

The results, reported in Table 6.3, confirm that the trade-off attitude, which indicates people's willingness to sacrifice financial return for non-financial value, is most strongly linked with the choices of different investment strategies. Table 6.4 shows clearly how the estimated probability changes according to different trade-off attitudes. The estimated changes in the probability are sensitive to the change in individuals' attitude of trade-off between financial return and non-financial value of investments. For example, a trade-off attitude from no to yes decreases the probability of choosing a non-screening strategy by 37.4% and increases the possibility of choosing negative screening by 21.3%. Besides, people's CSR concerns are also strongly linked to their strategy choices, especially when considering non-screening and negative screening choices. The increase in CSR concern level from the 25th to the 75th percentile decreased the probability of choosing a non-screening strategy by 8%. It increased their intention to choose a negative screening strategy by 14%. These two findings are consistent with the view that there are ethical considerations in SRI behaviour. The importance of ethical aspects in SRI differentiated people's intention for strategies, especially how they differentiate non-screening and SR screening strategies. Besides,

individuals' literacy in terms of SRI knowledge is also associated with their decision-making. Increasing SRI knowledge enhances people's intention to choose a positive screening strategy. The results in Table 6.4 also indicate that demographical characteristics, gender and age, while statistically significant, have an impact on the probability of different strategy choices.

6.4 Robustness tests

The distribution of the questionnaire sample across provinces shows that Henan dominates the sample (Table 4.7). It is possible that the variable influence will be affected by characteristics designated in Henan provinces. In order to address the possible issue, two additional tests were conducted using a subsample that excluded Henan provinces and a subsample that only included Henan provinces (Table 6.5). In addition, a test controlled for province effect is also introduced in order to address possible provincial-level effects (Table 6.6). The tests are conducted based on the conclusive model 7 in Table 6.3. Within each model, the left-hand column reports the log-odds ratio of the probability of choosing the non-screening strategy relative to the positive screening strategy. The middle column reports the log-odds ratio of the probability of choosing the non-screening strategy relative to the negative screening strategy. The right column reports the log-odds ratio of the probability of choosing the positive screening strategy relative to the negative screening strategy.

People's attitudes towards trade-off financial returns for social values are the most robust variable through all tests. People with a positive trade-off attitude are more

Table 6.5 Robustness tests with and without Henan province

Independent variable	Subsample without Henan Province			Subsample of Henan Province		
	Non vs Positive screening	Non vs. Negative screening	Positive vs Negative screening	Non vs Positive screening	Non vs. Negative screening	Positive vs Negative screening
Intercept	0.950	4.099	3.149	5.051*	9.035***	3.983*
	(0.42)	(1.65)	(1.77)	(2.09)	(3.57)	(2.39)
Gender	0.278	-0.104	-0.383	0.620	-0.369	-0.988***
	(0.60)	(-0.21)	(-1.17)	(1.27)	(-0.76)	(-3.31)
Age	0.241	-0.0748	-0.316	0.797**	0.335	-0.463**
	(0.77)	(-0.23)	(-1.58)	(3.12)	(1.35)	(-2.93)
Education level	0.308	0.302	-0.00602	0.0221	-0.116	-0.138
	(0.97)	(0.94)	(-0.04)	(0.08)	(-0.40)	(-0.77)
Finance working experience	-0.0640	1.090	1.154*	1.251*	0.723	-0.529
	(-0.11)	(1.53)	(2.17)	(2.04)	(1.17)	(-1.23)
Equity investors	0.299	1.071*	0.772*	-0.507	0.0715	0.578
	(0.64)	(2.18)	(2.37)	(-1.06)	(0.15)	(1.90)
Investment horizon <=1 yr	0.0776	0.103	0.0257	0.324	0.244	-0.0798
	(0.16)	(0.20)	(0.08)	(0.68)	(0.51)	(-0.27)
Invested capital >1m	0.0697	0.382	0.312	-1.247	-0.850	0.397
	(0.12)	(0.57)	(0.62)	(-1.53)	(-1.01)	(0.85)
Pro-social motivation	-1.203**	-1.458**	-0.255	-0.141	0.237	0.378
	(-2.69)	(-3.06)	(-0.78)	(-0.31)	(0.52)	(1.33)
Pro-social concern	-0.067	-0.171*	-0.105*	-0.197**	-0.305***	-0.109*
	(-1.00)	(-2.43)	(-2.24)	(-2.86)	(-4.18)	(-2.14)
SRI knowledge	-0.009	0.047	0.057*	-0.054	-0.018	0.036
	(-0.25)	(1.24)	(2.35)	(-1.38)	(-0.45)	(1.60)
Trust in Information sources	0.0170	-0.0530	-0.0700	-0.0010	-0.0280	-0.0270
	(0.21)	(-0.64)	(-1.27)	(-0.02)	(-0.33)	(-0.53)
Trade-off attitude	-0.996**	-1.073**	-0.0778	-1.351***	-1.484***	-0.133
	(-3.25)	(-2.93)	(-0.23)	(-3.90)	(-3.88)	(-0.39)
Residence dummies	No	No	No	No	No	No
Observations	252			283		
Pseudo-R-square	0.1763			0.196		

This table reports estimates from multinomial logistic regressions for subsample with and without Henan province. Gender is a binary variable equal to one if the respondent is male and zero otherwise. Finance working experience is an indicator variable equal to one of the respondents who have or had worked in the financial industry; the variable is zero otherwise. Equity investors are an indicator variable equal to one if respondents have stocks as one of their investment instruments or zero otherwise. Pro-social motivation is an indicator variable equal to one if respondents have chosen "SR information in investment has impact on the sustainable development"; otherwise, zero. Pro-social concern is the sum of a series of Likert-type items scaling from 1 to 5. SRI knowledge is the sum of a series of Likert-type items of knowledge in SRI concepts scaling from 1 to 5. Trust in information is the sum of a series of Likert-type items of reliability of different information sources, scaling from 1 to 5. Trade-off attitude ranges from 1-3 for three levels of willingness to sacrifice financial return. Coefficients are reported with * p<0.05, ** p<0.01, *** p<0.001 and z statistics in parentheses below.

Table 6.6 Robustness test with residence dummies

Independent variable	Full sample			Full sample		
	Non vs Positive screening	Non vs. Negative screening	Positive vs Negative screening	Non vs Positive screening	Non vs. Negative screening	Positive vs Negative screening
Intercept	2.560	6.056***	3.497**	3.364	-8.535	-11.90
	(1.63)	(3.60)	(2.94)	(0.00)	(-0.00)	(-0.01)
Gender	0.454	-0.241	-0.695**	0.525	-0.187	-0.712**
	(1.42)	(-0.73)	(-3.21)	(1.52)	(-0.53)	(-3.09)
Age	0.480**	0.0415	-0.438***	0.487*	0.0367	-0.450***
	(2.60)	(0.23)	(-3.63)	(2.47)	(0.19)	(-3.55)
Education level	0.221	0.171	-0.0496	0.115	0.0563	-0.0583
	(1.03)	(0.79)	(-0.41)	(0.48)	(0.23)	(-0.43)
Finance working experience	0.400	0.633	0.233	0.379	0.620	0.241
	(0.96)	(1.41)	(0.75)	(0.87)	(1.34)	(0.75)
Equity investors	-0.116	0.569	0.684**	-0.0806	0.632	0.712**
	(-0.36)	(1.73)	(3.14)	(-0.24)	(1.82)	(3.08)
Investment horizon <=1 yr	0.209	0.244	0.0348	0.235	0.340	0.104
	(0.65)	(0.74)	(0.16)	(0.69)	(0.97)	(0.46)
Invested capital >1m	-0.293	-0.0126	0.280	-0.415	-0.165	0.250
	(-0.64)	(-0.03)	(0.85)	(-0.85)	(-0.32)	(0.74)
Pro-social motivation	-0.723*	-0.624*	0.0992	-0.712*	-0.568	0.144
	(-2.38)	(-1.99)	(0.47)	(-2.22)	(-1.72)	(0.66)
Pro-social concern	-0.127**	-0.231***	-0.104**	-0.127**	-0.234***	-0.107**
	(-2.86)	(-4.91)	(-3.10)	(-2.69)	(-4.79)	(-3.01)
SRI knowledge	-0.024	0.028	0.052**	-0.024	0.03	0.054**
	(-0.91)	(1.07)	(3.24)	(-0.86)	(1.08)	(3.15)
Trust in Information sources	0.0110	-0.0380	-0.0490	0.0150	-0.0390	-0.054
	(0.20)	(-0.67)	(-1.33)	(0.26)	(-0.66)	(-1.43)
Trade-off attitude	-1.140***	-1.293***	-0.153	-1.289***	-1.411***	-0.122
	(-5.20)	(-5.09)	(-0.63)	(-5.52)	(-5.24)	(-0.49)
Residence dummies	No	No	No	yes	yes	yes
Observations	535			533		
Pseudo-R-square	0.159			0.2093		

This table reports estimates from multinomial logistic regressions for the full sample controls with province dummies. Gender is a binary variable equal to one if the respondent is male and zero otherwise. Finance working experience is an indicator variable equal to one of the respondents who have or had worked in the financial industry; the variable is zero otherwise. Equity investors are an indicator variable equal to one if respondents have stocks as one of their investment instruments or zero otherwise. Pro-social motivation is an indicator variable equal to one if respondents have chosen "SR information in investment has impact on the sustainable development"; otherwise, zero. Pro-social concern is the sum of a series of Likert-type items scaling from 1 to 5. SRI knowledge is the sum of a series of Likert-type items of knowledge in SRI concepts scaling from 1 to 5. Trust in information is the sum of a series of Likert-type items of reliability of different information sources, scaling from 1 to 5. Trade-off attitude ranges from 1-3 for three levels of willingness to sacrifice financial return. Coefficients are reported with * $p<0.05$, ** $p<0.01$, *** $p<0.001$ and z statistics in parentheses below.

likely to adopt a screening strategy (positive or negative) rather than a non-screening strategy, which is robust through all subsamples and when introducing province dummies. Similar results are obtained regarding the key variables of this study when using a sample without Henan province. Consistent results are also found that people with pro-social motivation are more likely to adopt a screening strategy than a non-screening strategy (except for the test with only Henan province). Also, similar to the prior findings, the probability of adopting positive screening is higher when people have a high rating of their SRI knowledge level.

6.5   Summary

By using bivariate and multivariate analysis of 693 individuals across different provinces in China, this chapter examines how different factors influence individuals' choices among positive screening, negative screening and non-screening strategies. Unlike prior literature on SR investors' behaviour, which segments investors dichotomously into investing in SRI products or not, this study classifies investors according to their preferences for different strategies.

The results indicate that individuals' ethical perception of SRI separates people's intention for SR screening and non-screening strategies. Investors with moral consideration are more likely to incorporate SR information into their investment decision-making process through positive or negative screens. This evidence supports most literature on how SR investors differ from conventional investors (Diouf et al., 2016; McLachlan & Gardner, 2004; Nilsson, 2008) in terms of fulfilling pro-social goals through investments. Specifically, investors with SRI preferences are the

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investors who believe in the social impact of SRI, show more awareness of CSR and are more willing to forgo financial returns for social values. In general, the evidence further confirms existing literature that in emerging markets such as China, SR investors are those with pro-social considerations. They are motivated by the non-financial desire to engage in SRI.

Among individuals adopting positive or negative SR screens, those who show substantial concerns are more likely to adopt negative screenings, proving that people who are more aware of the importance of CSR intend to give up certain irresponsible firms. These results support and advance existing literature on how social concerns influence investors' behaviour. It supports the findings that environmental, social and governance concerns encourage individuals to invest in SRI (Diouf et al., 2016). It adds knowledge to the existing literature that Chinese individual investors with those concerns are encouraged to adopt the negative screening strategy. This adds information as to how SR investors invest in SRI.

The perception of SRI knowledge level is essential in differentiated preferences for positive and negative screening strategies. People who perceive themselves as having more knowledge related to SRI are more likely to adopt SR information actively by including firms that can generate better CSR performance. These results indicate that SRI information is important for investors to engage more actively in SRI in the Chinese market. The knowledge may help individuals to understand SRI better, which may reduce the barrier to conducting more complex decisions (Paetzold & Busch, 2014) or investors' feeling more confident in actively using that information (Campbell

& Kirmani, 2000; A. Wang, 2009). This finding enriched the existing literature on knowledge and information and its role in SRI decision-making.

Socio-demographics cannot fully explain why people choose specific strategies. The preferences are more determined by individuals' ethical and practical perceptions of SRI in the Chinese market. Nevertheless, demographically, young females are more likely to be SR investors and are also more likely to adopt a more active and complex positive screening strategy. This further confirms existing literature claiming the importance of female power and the young generation in promoting SRI (Cheah et al., 2011; Diouf et al., 2016). They not only have great potential to invest in SRI but also intend to incorporate SR information positively.

CHAPTER 7 PROVINCIAL DIFFERENCES AND STRATEGY PREFERENCES

7.1 Provincial INV and LTO scores

The above discussion is based on individual attributes, including individuals' ethical, financial, and practice perceptions of SRI, their demographics and investment features, and how these factors are associated with individuals' SRI strategy preferences. This chapter tests hypotheses 7 and 8 and discusses the association between provincial cultural differences and investors' strategy preferences. According to the previous discussion of cultural influence on SRI behaviour, this study proposes a mechanism regarding how cultural differences link with SRI strategy choices directly and through interacting with SRI knowledge level.

Table 7.1 reports the correlations among provincial-level culture and economics scores with individual SRI perception variables and strategy preferences. Provincial individualism score is shown to be significantly associated with individuals' preferences for different investment strategies and most of the SRI perception variables. Specifically, an individual's intention for adopting a negative screening strategy is significantly negatively correlated with provincial individualism score (correlation coefficient: -0.129 with $p<0.01$), which means the higher individualism score is related to lower intentions in choosing a negative screening strategy. Positive screening intention is positively correlated with this score (correlation coefficient: 0.086 with $p<0.05$), which indicates that a higher individualism score is positively related to a stronger intention for a positive screening strategy. The correlation coefficient between non-screening preferences and INV scores is small and

Table 7.1 Correlations between provincial culture and economic scores, individual SRI awareness and strategy preferences

	Individualism	LTO	logGDP	Pro-social motivation	Pro-social concern	SRI knowledge	Trust in SR information sources	Trade-off	Negative screening	Positive screening
LTO	-0.336***									
logGDP	0.522***	-0.283***								
Pro-social motivation	0.011	0.008	0.015							
Pro-social concern	-0.064	-0.009	-0.030	-0.006						
SRI knowledge	0.118**	-0.014	0.117**	0.067	0.250***					
Trust in SR information sources	-0.015	0.007	0.010	-0.067	0.382***	0.178***				
Trade-off attitude	-01074**	0.025	-0.053	0.053	0.319***	0.051	0.147***			
Negative screening	-0.129**	0.059	-0.060	-0.040	0.224***	-0.079*	0.093*	0.151***		
Positive screening	0.086*	-0.057	0.000	0.096*	-0.021	0.112**	-0.013	0.110**	-0.742***	
Non-screening	0.061	-0.002	0.083*	-0.078*	-0.281***	-0.045	-0.110**	-0.362***	-0.371***	0.348***

This table reports a pairwise correlation of all the variables. Pro-social motivation is a binary variable equal to 1 if respondents have chosen "SR information in investment has impact on the sustainable development"; otherwise, 0. Pro-social concern is the sum of a series of Likert-type items scaling from 1 to 5. SRI knowledge is the sum of a series of Likert-type items of knowledge in SRI concepts scaling from 1 to 5. Trust in information is the sum of a series of Likert-type items of reliability of different information sources, scaling from 1 to 5. INV's individualism score on the provincial level ranges from 0-100. LTO is a long-term orientation score on a provincial level ranging from 0-100. LogGDP is the logarithm value of the annual gross domestic product (GDP) per capita in different provinces. Negative screening is a binary variable equal to 1, with respondents choosing this strategy and 0 otherwise. Positive screening is a binary variable equal to 1, with respondents choosing this strategy and 0 otherwise. Non-screening is a binary variable equal to 1 with respondents choosing this strategy and 0 otherwise * p<0.05, ** p<0.01, *** p<0.001

statistically insignificant (correlation coefficient: 0.061).

As an underlying principle of conduct, culture is argued to have been more fundamental in determining human behaviours (Williamson, 2000). The above correlation indicates that the individualism score, which demonstrates the degree of self-interestedness and the level of autonomy (Hofstede, 2010), is reflected in individuals' dislike of the negative screening strategy. The negative screening strategy, which reflects giving up one's financial benefits for the general well-being of society and the environment, is empirically tested to be harmful for risk-adjusted return (Capelle-Blancard & Monjon, 2014; Renneboog et al., 2008). This violates the focus on the self-interest of individualism. Individualism is also positively correlated with SRI knowledge level (correlation coefficient: 0.118 with p<0.01), which indicates that people in more individualistic regions that share self-expression values and emphasise personal opinions are more confident, which is associated with higher SRI knowledge ratings. The individualism score is also negatively correlated with people's trade-off attitude at the 1% significant level. Higher individualistic regions are associated with less willingness to forgo financial returns.

In addition, the correlation between individualism, LTO and provincial GDP per capita (in logarithm value) shows that the individualism score is highly correlated with GDP per capita, which is confirmed by previous literature indicating a higher association between these two (Hofstede, 2010; Triandis, 1995). LTO, which is focused on postponed pleasure for future rewards, is positively associated with high development growth (Hofstede, 2010) but not the current economic situation (GDP per capita). In

Table 7.1, there is a negative association between higher LTO and GDP per capita, which indicates that the stronger intention to be thrifty and seek future rewards is due to dissatisfaction with the current economic condition, resulting in a significantly negative correlation between LTO and GDP per capita. The correlations of these two cultural dimension scores with GDP are consistent with the statement of existing literature regarding the relationship between cultural values and economic development.

In the previous chapter, the association between SRI perceptions and strategy preferences concludes that individuals' trade-off attitude between financial and social value impacts people's preferences for non-screening, positive or negative screening strategies. People willing to sacrifice financial returns prefer to choose SR screening strategies (positive or negative). Also, individuals' SRI knowledge has an impact on their preferences for SR screening strategies. People with higher SRI knowledge are more likely to adopt positive screenings than negative screenings. The correlations of individualism with those three strategies imply that people in highly individualistic regions are less associated with negative screening strategies. This association is expected to be built through their influence on trade-off attitude and self-rated SRI knowledge level, in which evidence shows that trade-off attitude is negatively correlated with individualism. SRI knowledge is positively correlated with individualism. The following section is focused on exploring the relationship between cultural values and people's preferences for different strategies.

7.2 Multinominal logistic regression analyses on provincial cultural scores and SRI strategy preferences

7.2.1 INV and SRI strategy preferences

Table 7.2 reports the test results for hypothesis 7. The multinomial logistics regression investigates the relationship between provincial individualism score and SRI strategy intentions. The variables are examined by using the following model specifications. Model 1 investigates the significance of the provincial individualism score and how it impacts SRI strategy preferences. Model 2 tests the significance of provincial individualism scores and how they impact SRI strategy intentions with consideration of cultural values interacting with SRI knowledge. Based on model 2, model 3 tests the subsample without Henan province. In order to provide a more straightforward interpretation, this study calculates the hypothetical changes in the probability of each SRI strategy choice in Table 7.3. The implied changes assume that each independent variable changes from its value at the 25th percentile to its value at the 75th percentile1(except for binary variables from zero to one and trade-off attitude from 1 to 3), while the other independent variables remain constant at their respective mean values. The changes in probability are calculated based on the estimation of model 2 in Table 7.2.

Regarding individualistic values and their linkage with strategy preferences, all three models show an insignificant relationship between provincial INV scores and individuals' preferences for different SRI strategies. Table 7.2 also shows that the small magnitude of the implied change of probability for different SRI strategies indicates that there may be no relationship between provincial individualism values and

Table 7.2 Multinominal Logistic Regression of individualism on Strategy preference

Independent variable	Model 1			Model 2			Model 3		
	Non vs. Positive screening	Non vs. Negative screening	Positive vs. Negative screening	Non vs. Positive screening	Non vs. Negative screening	Positive vs. Negative screening	Non vs. Positive screening	Non vs. Negative screening	Positive vs. Negative screening
Intercept	3.368	6.024**	2.655*	3.670	7.178*	3.508	3.271	6.717	3.446
	(1.91)	(3.28)	(2.03)	(1.23)	(2.38)	(1.76)	-0.93	-1.84	-1.45
Gender	0.488	-0.218	-0.706**	0.487	-0.224	-0.711**	0.359	-0.0529	-0.412
	(1.48)	(-0.65)	(-3.20)	(1.48)	(-0.67)	(-3.22)	-0.73	(-0.10)	(-1.20)
Age	0.536**	0.0627	-0.474***	0.535**	0.0604	-0.474***	0.309	-0.12	-0.429*
	(2.80)	(0.33)	(-3.85)	(2.79)	(0.32)	(-3.86)	-0.93	(-0.36)	(-2.03)
Education level	0.172	0.121	-0.0514	0.172	0.121	-0.0512	0.248	0.266	0.0176
	(0.79)	(0.55)	(-0.41)	(0.79)	(0.55)	(-0.41)	-0.76	-0.8	-0.1
Finance working experience	0.438	0.638	0.200	0.439	0.639	0.201	-0.0667	1.036	1.103*
	(1.02)	(1.39)	(0.64)	(1.02)	(1.39)	(0.64)	(-0.11)	-1.38	-2.03
Equity investors	-0.156	0.488	0.644**	-0.155	0.494	0.649**	0.225	0.91	0.685*
	(-0.48)	(1.45)	(2.91)	(-0.48)	(1.47)	(2.93)	-0.47	-1.8	-2.03
Investment horizon <=1 yr	0.211	0.273	0.0622	0.212	0.274	0.0622	0.114	0.215	0.101
	(0.64)	(0.81)	(0.29)	(0.64)	(0.82)	(0.29)	-0.23	-0.41	-0.3
Invested capital >1m	-0.397	-0.134	0.263	-0.403	-0.163	0.239	-0.0359	0.263	0.299
	(-0.83)	(-0.26)	(0.79)	(-0.84)	(-0.32)	(0.71)	(-0.06)	-0.36	-0.57
Pro-social motivation	-0.763*	-0.686*	0.0775	-0.768*	-0.694*	0.0742	-1.336**	1.657***	-0.321
	(-2.46)	(-2.15)	(0.37)	(-2.47)	(-2.17)	(0.35)	(-2.83)	(-3.32)	(-0.96)
Pro-social concern	-0.128**	-0.223***	-0.0947**	-0.127**	-0.221***	-0.0942**	-0.0656	-0.160*	-0.0944*
	(-2.85)	(-4.74)	(-2.80)	(-2.79)	(-4.65)	(-2.78)	(-0.96)	(-2.24)	(-1.96)
Trust in Information sources	0.00331	-0.0494	-0.0527	0.00187	-0.0503	-0.0522	-0.0000125	-0.08	-0.0799
	(0.06)	(-0.88)	(-1.44)	(0.03)	(-0.89)	(-1.42)	(-0.00)	(-0.95)	(-1.44)
SRI knowledge	-0.0325	0.0181	0.0506**	-0.0493	-0.0446	0.00469	-0.0804	-0.0714	0.00905
	(-1.21)	(0.66)	(3.12)	(-0.37)	(-0.33)	(0.06)	(-0.57)	(-0.50)	-0.1

Trade-off attitude	-1.195***	-1.336***	-0.141	-1.197***	-1.343***	-0.146	-1.093***	-1.139**	-0.0457
	(-5.31)	(-5.18)	(-0.57)	(-5.32)	(-5.20)	(-0.59)	(-3.40)	(-3.00)	(-0.13)
INV	-0.00265	0.00875	0.0114	-0.00661	0.000846	-0.000251	-0.0174	-0.0195	-0.00205
	(-0.21)	(0.71)	(1.51)	(-0.19)	(0.49)	(-0.01)	(-0.49)	(-0.54)	(-0.09)
INV*SRI knowledge				0.000226	0.000846	0.000620	0.00075	0.00136	0.000614
				(0.13)	(0.49)	(0.56)	(-0.42)	(-0.76)	(-0.54)
Observations	525			525			242		
Pseudo-R-square	0.1674			0.1678			0.1918		

This table reports estimates from multinomial logistic regressions. Within each model, the left-hand column reports the log-odds ratio of the probability of choosing the non-screening strategy relative to the positive screening strategy. The dependent variable in the middle column reports the log-odds ratio of the probability of choosing the non-screening strategy relative to the negative screening strategy. The dependent variable in the right-hand column is the log-odds ratio of the probability of choosing positive screening relative to negative screening strategy. Gender is a binary variable equal to one if the respondent is male and zero otherwise. Finance working experience is an indicator variable equal to one of the respondents who have or had worked in the financial industry; the variable is zero otherwise. Equity investors are an indicator variable equal to one if respondents have stocks as one of their investment instruments or zero otherwise. Pro-social motivation is an indicator variable equal to one if respondents have chosen "SR information in investment has impact on the sustainable development"; otherwise, zero. Pro-social concern is the sum of a series of Likert-type items scaling from 1 to 5. SRI knowledge is the sum of a series of Likert-type knowledge items in SRI concepts scaling from 1 to 5. Trust in information is the sum of a series of Likert-type items of reliability of different information sources, scaling from 1 to 5. Trade-off attitude ranges from 1-3 for three levels of willingness to sacrifice financial return. INV's individualism score on the provincial level ranges from 0-100. Coefficients are reported with * p<0.05, ** p<0.01, *** p<0.001 and z statistics in parentheses below

Table 7.3 Estimated change in probabilities

Variables	Assumed change range in variables	Estimated change in probability		
		Non-screening	Positive screening	Negative screening
Gender	0-1	0.0155	-0.1421	0.1266
Age	1-2	0.0295	-0.1096	0.0801
Education level	4-5	0.0137	-0.0171	0.0035
Finance working experience	0-1	0.0518	0.0073	-0.0592
Equity investors	0-1	0.0114	0.1146	-0.1260
Investment horizon <=1 yr	0-1	0.0218	-0.0008	-0.0210
Invested capital >1m	0-1	-0.0256	0.0597	-0.0340
Pro-social motivation	0-1	-0.0682	0.0522	0.0160
Pro-social concern	17-22	-0.0766	-0.0519	0.1285
SRI knowledge	14-25	-0.0098	0.1099	-0.1001
Trust in Information sources	19-23	-0.0076	-0.0347	0.0423
Trade-off attitude	1-3	-0.3888	0.1688	0.2199
INV	74-75	0.0003	0.0022	-0.0024
INV* SRI knowledge (=25th percentile)		0.0000	0.0015	0.0015
INV* SRI knowledge (=75th percentile)		0.0004	0.0026	-0.0030

This table reports estimates of changes in the implied probabilities of non-screening, positive screening and negative screening. The probability is estimated using model 2 in Table 7.2. Gender is a binary variable equal to one if the respondent is male and zero otherwise. Finance working experience is an indicator variable equal to one of the respondents who have or had worked in the financial industry; the variable is zero otherwise. Equity investors are an indicator variable equal to one if respondents have stocks as one of their investment instruments or zero otherwise. Pro-social motivation is an indicator variable equal to one if respondents have chosen "SR information in investment has impact on the sustainable development"; otherwise, zero. Pro-social concern is the sum of a series of Likert-type items scaling from 1 to 5. SRI knowledge is the sum of a series of Likert-type knowledge items in SRI concepts scaling from 1 to 5. Trust in information is the sum of a series of Likert-type items of reliability of different information sources, scaling from 1 to 5. Trade-off attitude ranges from 1-3 for three levels of willingness to sacrifice financial return. INV refers to the individualism score on the provincial level, which ranges from 0-100. For each variable, the change in the implied probability is calculated by assuming the variables change by the amount equal to the interquartile range (25th to 75th), except for binary variables, which change from 0 to 1. The variable "Trade-off attitude" changes from 1 to 3. The sample consists of 525 observations.

people's strategy preferences. After adding in the provincial cultural differences, individual features retain their impact in influencing strategy choices. Females are significantly more likely to choose the positive screening strategy compared with negative screening (significant at 1% level). From Table 7.3, the estimated probability of choosing positive screening increases by 14% compared with men. Females and

young individuals are still more likely to choose the positive screening strategy. Younger investors are significantly more attracted to positive screening relative to the other two strategies. Investors who are heavily engaged in the stock market show a dislike for the negative screening strategy compared with the positive screening strategy. The estimated probability of choosing negative screening decreased by 11% for those investors. Individuals' belief in pro-social influence through investments and their social awareness statistically increase their preferences for SR screening strategies. The estimated probability for not incorporating SR information decrease by 6% when people have the pro-social belief. Their trade-off attitude is also a significant driver for them to incorporate SR screening into investment decisions when considering cultural differences. More awareness of the CSR issues enables individuals to prefer negative screening more than positive screening strategies.

7.2.2 LTO and SRI strategy preferences

Table 7.4 reports the test results for hypothesis 8. The multinomial logistics regressions investigate the relationship between provincial LTO score and SRI strategy intentions. The variables are examined by using the following model specifications. Model 1 investigates the significance of the provincial LTO score and its impact on SRI strategy intentions. Model 2 tests the impact of provincial LTO scores and their interaction with SRI knowledge on SRI strategy intentions. Based on model 2, model 3 tests the subsample without Henan province. Table 7.3 reports the results of the multinomial logistics regressions. For all the models, the left column analyses the probability of choosing a non-screening strategy relative to positive screening, the middle column analyses the probability of choosing non-screening relative to negative screening, and

the right column reports the comparison for the probability of holding a positive screening strategy relative to negative screening strategy. In order to provide a more straightforward interpretation, this study also calculates the hypothetical changes in the probability of each SRI strategy choice in Table 7.5. The implied changes assume that each independent variable changes from its value at the 25th percentile to its value at the 75th percentile1(except for binary variables from zero to one and trade-off attitude from 1 to 3), while the other independent variables remain constant at their respective mean values. The changes in probability are calculated based on the estimation of model 2 in Table 7.4.

Regarding LTO values and their linkage with Strategy preferences, all three models show an insignificant relationship at a 5% significant level between provincial LTO scores and individuals' preferences for different SRI strategies. According to Table 7.4, the small magnitude of the implied change of probability for different SRI strategies indicates that there may be no relationship between provincial LTO values and people's strategy preferences. After adding in the provincial LTO differences, individuals' demographic and SR-related features are still persistent in determining people's preferences for different SRI strategies.

Table 7.4 Multinominal logistic regression of LTO on strategy preferences

Independent variable	Model 1			Model 2			Model 3		
	Non vs. Positive screening	Non vs. Negative screening	Positive vs. Negative screening	Non vs. Positive screening	Non vs. Negative screening	Positive vs. Negative screening	Non vs. Positive screening	Non vs. Negative screening	Positive vs. Negative screening
Intercept	2.530	7.079**	4.549**	1.735	4.698	2.963	0.312	2.825	2.514
	(1.16)	(3.14)	(3.01)	(0.42)	(1.16)	(1.12)	-0.07	-0.61	-0.81
Gender	0.506	-0.207	-0.713**	0.500	-0.211	-0.711**	0.377	-0.0336	-0.411
	(1.51)	(-0.61)	(-3.20)	(1.49)	(-0.62)	(-3.19)	-0.74	(-0.06)	(-1.16)
Age	0.509**	0.0569	-0.452***	0.507**	0.0526	-0.455***	0.235	-0.114	-0.349
	(2.67)	(0.30)	(-3.67)	(2.66)	(0.28)	(-3.68)	-0.7	(-0.33)	(-1.62)
Education level	0.195	0.150	-0.0443	0.189	0.143	-0.0463	0.282	0.293	0.0106
	(0.90)	(0.68)	(-0.36)	(0.87)	(0.65)	(-0.37)	-0.86	-0.88	-0.06
Finance working experience	0.413	0.615	0.201	0.422	0.627	0.205	-0.126	0.986	1.113*
	(0.96)	(1.34)	(0.64)	(0.98)	(1.36)	(0.65)	(-0.20)	-1.32	-2.05
Equity investors	-0.142	0.488	0.630**	-0.137	0.497	0.634**	0.241	0.902	0.662
	(-0.44)	(1.45)	(2.84)	(-0.42)	(1.47)	(2.86)	-0.49	-1.77	-1.95
Investment horizon <=1 yr	0.192	0.267	0.0746	0.198	0.274	0.0762	0.0795	0.25	0.17
	(0.58)	(0.79)	(0.34)	(0.60)	(0.81)	(0.35)	-0.16	-0.47	-0.49
Invested capital >1m	-0.435	-0.0862	0.349	-0.439	-0.108	0.331	-0.0702	0.355	0.426
	(-0.92)	(-0.17)	(1.04)	(-0.92)	(-0.21)	(0.99)	(-0.11)	-0.49	-0.8
Pro-social motivation	-0.742*	-0.671*	0.0718	-0.747*	-0.676*	0.0709	-1.255**	-1.608**	-0.353
	(-2.38)	(-2.09)	(0.34)	(-2.39)	(-2.11)	(0.33)	(-2.63)	(-3.19)	(-1.03)
Pro-social concern	-0.125**	-0.221***	-0.0958**	-0.125**	-0.221***	-0.0963**	-0.0606	-0.158*	-0.0976*
	(-2.78)	(-4.69)	(-2.81)	(-2.78)	(-4.69)	(-2.82)	(-0.88)	(-2.21)	(-2.00)
Trust in Information sources	0.00845	-0.0506	-0.0590	0.00863	-0.0483	-0.0570	0.0114	-0.0821	-0.0934
	(0.15)	(-0.89)	(-1.59)	(0.16)	(-0.85)	(-1.54)	-0.14	(-0.95)	(-1.62)
SRI knowledge	-0.0337	0.0181	0.0518**	0.0159	0.149	0.133	0.0179	0.172	0.154
	(-1.27)	(0.67)	(3.19)	(0.08)	(0.77)	(1.18)	-0.1	-0.88	-1.28
Trade-off attitude	-1.227***	-1.321***	-0.0943	-1.233***	-1.334***	-0.100	-1.178***	-1.093**	0.0853

	(-5.39)	(-5.10)	(-0.38)	(-5.39)	(-5.13)	(-0.40)	(-3.53)	(-2.84)	-0.23
LTO	0.00940	-0.00962	-0.0190	0.0234	0.0313	0.00789	0.0273	0.037	0.00978
	(0.37)	(-0.38)	(-1.24)	(0.36)	(0.49)	(0.20)	-0.4	-0.55	-0.24
LTO*SRI knowledge				-0.000846	-0.00223	-0.00139	-0.00075	-0.00236	-0.00161
				(-0.26)	(-0.68)	(-0.72)	(-0.24)	(-0.73)	(-0.81)
Observations	520			520			237		
Pseudo-R-square	0.1659			0.1666			0.1926		

This table reports estimates from multinomial logistic regressions. Within each model, the left-hand column reports the log-odds ratio of the probability of choosing the non-screening strategy relative to the positive screening strategy. The dependent variable in the middle column reports the log-odds ratio of the probability of choosing the non-screening strategy relative to the negative screening strategy. The dependent variable in the right-hand column is the log-odds ratio of the probability of choosing positive screening relative to negative screening strategy. Gender is a binary variable equal to one if the respondent is male and zero otherwise. Finance working experience is an indicator variable equal to one of the respondents who have or had worked in the financial industry; the variable is zero otherwise. Equity investors are an indicator variable equal to one if respondents have stocks as one of their investment instruments or zero otherwise. Pro-social motivation is an indicator variable equal to one if respondents have chosen "SR information in investment has impact on the sustainable development"; otherwise, zero. Pro-social concern is the sum of a series of Likert-type items scaling from 1 to 5. SRI knowledge is the sum of a series of Likert-type items of knowledge in SRI concepts scaling from 1 to 5. Trust in information is the sum of a series of Likert-type items of reliability of different information sources, scaling from 1 to 5. Trade-off attitude ranges from 1-3 for three levels of willingness to sacrifice financial return. LTO is a long-term orientation score on a provincial level ranging from 0-100. Coefficients are reported with * p<0.05, ** p<0.01, *** p<0.001 and z statistics in parentheses below.

Table 7.5 Estimated change in probabilities

Variables	Assumed change range in variables	Estimated change in probability		
		Non-screening	Positive screening	Negative screening
Gender	0-1	0.0167	-0.1430	0.1264
Age	1-2	0.0279	-0.1047	0.0767
Education level	4-5	0.0156	-0.0173	0.0017
Finance working experience	0-1	0.0505	0.0090	-0.0595
Equity investors	0-1	0.0126	0.1113	0.1113
Investment horizon <=1 yr	0-1	0.0211	0.0022	-0.0233
Invested capital >1m	0-1	-0.0257	0.0768	-0.0511
Pro-social motivation	0-1	-0.0666	0.0506	0.0160
Pro-social concern	17-22	-0.0768	-0.0542	0.1311
SRI knowledge	14-25	-0.0107	0.1133	-0.1026
Trust in Information sources	19-23	-0.0060	-0.0393	0.0453
Trade-off attitude	45294	-0.3983	0.1863	0.1863
LTO	57-58	0.0000	-0.0037	0.0038
LTO* SRI knowledge (=25th percentile)		0.0005	-0.0024	0.0019
LTO* SRI knowledge (=75th percentile)		-0.0007	-0.0046	0.0053

This table reports estimates of changes in the implied probabilities of non-screening, positive screening and negative screening. The probability is estimated using model 2 in Table 7.4. Gender is a binary variable equal to one if the respondent is male and zero otherwise. Finance working experience is an indicator variable equal to one of the respondents who have or had worked in the financial industry; the variable is zero otherwise. Equity investors are an indicator variable equal to one if respondents have stocks as one of their investment instruments or zero otherwise. Pro-social motivation is an indicator variable equal to one if respondents have chosen "SR information in investment has impact on the sustainable development"; otherwise, zero. Pro-social concern is the sum of a series of Likert-type items scaling from 1 to 5. SRI knowledge is the sum of a series of Likert-type knowledge items in SRI concepts scaling from 1 to 5. Trust in information is the sum of a series of Likert-type items of reliability of different information sources, scaling from 1 to 5. Trade-off attitude ranges from 1-3 for three levels of willingness to sacrifice financial return. LTO is a long-term orientation score on a provincial level ranging from 0-100. For each variable, the change in the implied probability is calculated by assuming the variables change by the amount equal to the interquartile range (25th to 75th), except for binary variables, which change from 0 to 1. The variable "Trade-off attitude" changes from 1 to 3. The sample consists of 520 observations.

7.3 Discussion of the insignificant cultural influence

The above analyses show that there is no significant relationship between provincial cultural values and people's strategy choices. Also, the interaction of cultural values with SRI knowledge level generates no statistically significant impact on people's preferences for different strategies. The insignificance may be due to the sample

distribution. The sample in this study is predominant in Henan province, which may reduce the variations in responses and thus result in the insignificant impact of provincial culture values on individual behaviours. Model 3 in Table 7.2 and 7.4 respectively test subsample without responses from Henan provinces. However, the analyses still generate insignificant results at the 5% level. After deleting Henan province from the sample, the total sample size is around 250, which leaves some provinces with limited responses, which may result in limited variances within each province.

The insignificance may indicate there is no relationship between cultural values and people's preferences for SRI strategies. However, existing literature indicates the contrary. Culture, known as unwritten socially shared values, helps form mental models for decision-making. As mentioned by North (1990), 'culture provides a language-based conceptual framework for encoding and interpreting the information that the senses are presenting to the brain (p. 37),' thereby assists forming individuals' perceptions and influencing their decisions and behaviours (Zheng et al., 2012). Specifically, individualism concerning autonomy and self-interests tends to be more acceptable to unilateral decision-making among managers (Crossland & Hambrick, 2011). It is expected in this study that individualistic values enhance people's attitudes on the importance of financial and non-financial attributes of SRI. People in more individualist regions are self-expressive in translating their attitudes into intentions for different SRI strategies. Empirically, in the study of Labidi et al. (2021), they use SRI fund flows to represent people's social considerations in SRI and find that individualism is not significantly related to SRI fund flow but significantly positively

related to conventional fund flow. In addition, in their study, significant results are found in cultural values of masculinity and uncertainty avoidance. Societies with high masculinity values are negatively associated with SRI money flows. This dimension refers to the degree of distinction of emotional gender roles. The distinction is that men are more 'assertive, tough and focused on material success, whereas women are 'modest, tender, and concerned with the quality of life' (Hofstede, 2010, p. 76). A more feminine society is where both women and men are more inclined to agree with feminine qualities. In most of the literature profiling SR investors, females show a strong inclination to SRI (Cheah et al., 2011; Diouf et al., 2016; Valor et al., 2009). Labidi et al.'s (2021) study suggests that feminine values have a positive influence on individuals' SRI activities.

In this study, females are also positively significantly more likely to sacrifice financial return for pro-social values and more likely to adopt a positive screening strategy, holding the belief that pro-social impact can be obtained through investing socially responsibly. Combined with prior literature, clustered shared values are influential in individual SRI behaviours. Only it may not be clustered by geographical locations in this study.

In this study, the cultural variations have been described at the provincial level, which indicates that the geographical borders of provinces are also boundaries for cultural values clusters. The critics of equating culture with the nation have already been mentioned in the literature, claiming that national borders are imperfect in indicating shared values among citizens (Kaasa et al., 2014; Lenartowicz et al., 2003). Culture

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convergence and modernisation blur the cultural differences among countries (Inglehart & Welzel, 2005). Using smaller geographic areas to generate culture dimensions provides only a partial solution. Even though provincial culture variation has been found in this study, the adoption of geography as the sorting mechanism to separate cultural values may be the reason for the insignificant results in this study. Due to the easier accessibility of transportation and information communication through advanced technology, shared value and belief may be clustered in terms of other attributes, such as socio-demographical features. Hofstede (1980, 2001) reports correlations between his cultural indices with personal characteristics, such as age, gender, and occupational rank. Taras et al. (2016), by conducting a meta-analysis of 558 studies that used Hofstede's cultural values framework, reveals that demographic and environmental characteristics are more appropriate for clustering shared values.

In relation to the above discussion, after considering cultural impact, individuals' demographical information, such as gender and age, are associated with people's intentions for different strategies. Female and young individuals participating in stock investments are more likely to adopt positive screening strategies. The essence of culture is a system of enduring values which reflect personally or socially preferable codes of conduct and end-states of existence (Hofstede, 2001; Rokeach, 1973). The persistent, significant results of socio-demographics, such as gender, age and investment situation in influencing strategy preferences, indicate that those features may be more salient in clustering individuals' shared values and influence their ethical and financial preferences in SRI.

7.4 Summary

This chapter mainly discusses the relationship between provincial cultural differences and people's SRI strategy choices. This study has been able to identify cultural value differences across provinces in terms of individualism and long-term orientation dimension under Hofstede's framework. However, these two proxies for culture differences generate insignificant results in explaining individual SRI strategy preferences. Insignificance only means that the data cannot provide conclusive evidence of an effect, whereas it does not mean such an effect cannot exist. The insignificance may be due to sample distribution or insufficient sample size on the provincial level.

In terms of individual attributes discussed in the previous chapter, most of the variables remain statistically significant. Female and young individuals participating in stock investments are more likely to adopt positive screening strategies; this conclusion is consistent with previous findings without considering provincial differences. People's concern for pro-social issues demonstrates the importance they perceive non-financial attributes; the more importance they consider non-financial aspects, the more likely they are to adopt a negative screening strategy, which indicates that a negative screening strategy is a way to demonstrate their ethical requirement through SRI. People with pro-social motivation are more likely to consider SR-incorporated strategies than traditional non-screening strategies, indicating that non-financial motivation is important in determining whether people will consider SR information in their decision-making. The results imply that in the Chinese market, individual-level differences in socio-demographics, SR awareness, and knowledge level are more

prominent in influencing people's behaviour than provincial cultural values.

The contrasting insignificance of provincial culture value and persistent significance of individual socio-demographical differences in explaining SRI strategy preferences indicate that culture can explain individuals' SRI behaviour, only it is more prominent in social groups at the industrial, organisational or demographical level but not in geographical level.

CHAPTER 8 CONCLUSIONS AND IMPLICATIONS

8.1   Introduction

The results obtained from primary data collected from questionnaire responses in terms of individuals' perceptions and attitudes toward SRI, combined with provincial cultural differences generated from the WVS dataset, provide examinations of the determinants of people's SRI strategy preferences within China. This study offers insight into understanding Chinese individual investors and their ethical, financial, and practical perceptions of SRI. This chapter presents a discussion of the results, the limitations of the research, the implications of the results on academics and practice, and the possible avenues for future research.

8.2   Discussion of the results

The two research objectives are answered through three stages: an exploratory questionnaire to provide an overall understanding of individuals' ethical, financial and practice perceptions regarding SRI; a multinominal logistic regression analysis investigating the influence of individuals' pro-social attitude, knowledge and information on SRI strategy decisions; an additional analysis regarding cultural differences and the effect on SRI strategy decisions.

The questionnaire collected 871 responses, with 693 questionnaire respondents being of good quality. This sample provides insightful information about SRI for Chinese individual investors. The majority of the respondents (51%) are in the age range between 31-40, with invested capital under 100 thousand RMB. This is the active group in the investment market (Dai et al., 2016; Jones et al., 2021) in the Chinese

market. The respondents are also diverse across most of the provinces in China, which allows this study to provide an overview perspective of how individual investors perceive SRI throughout China. The questionnaire addresses the following five aspects: the motivation to incorporate SR information in investment decisions, the pro-social concern over different SR issues, the trade-off attitude for financial return, and the SRI knowledge and trust in SR information sources.

Concerning those five aspects, this study finds a widespread belief in the importance of SR information in investments. Both financial materiality and social impact are the drivers of incorporating socially responsible information in investment decisions. Identifying possible social impact in SRI indicates that individual investors appreciate SRI with non-financial functions other than only obtaining financial achievement. This recognition reflects the possible impact on their preferences for SR screening strategy (Nilsson, 2008). Individuals with a higher level of education (bachelor's degree and above) respond that they are more focused on the financial materiality of SR information, such as the impact on investment returns and risks. Previous research implies that higher education level has a positive relationship with investors' holding of SRI funds (Junkus & Berry, 2010; Pérez-Gladish et al., 2012). This research indicates that higher educated investors may engage in SRI motivated by its financial materiality. Respondents with longer time horizons (one year above) hold the belief that doing SRI can have a social impact. They are also more concerned about the risk impact of SR information, which is consistent with their institutional counterparts (Krueger et al., 2020).

The second set of questions focuses on people's concerns about CSR issues. Overall, people show a high level of concern over different corporate responsibility issues, among which the top concern is operation-related, such as production and corporate compliance. Issues regarding employment well-being and environmental protection rate are relatively low. In relating the general CSR concern with individuals' characteristics, the cross-sectional analysis indicates that older investors are more aware of socially responsible issues in investments.

The third set of questions focuses on people's trade-off attitude between financial return and social value, which reflects people's attitude toward the importance of social responsibility measured by financial performance. Overall, they show a high willingness to sacrifice financial return, especially prefer to reject corporations performing poorly in corporate social aspects. Females show a stronger willingness to forgo financial performance in return for social performance, suggesting that female investors are likely to be motivated by non-financial attributes of SRI. People with higher education are less willing to forgo financial return, which demonstrates their emphasis on financial achievement in SRI. This finding provides contradictive results compared with Borgers and Pownall (2014) but further confirms the previous findings that highly educated people engaging in SRI are motivated by financial materiality.

The fourth and fifth sets of questions focus on individuals' practice perspectives regarding SRI in China. Their SRI literacy is limited, with most people only knowing the basic meaning of SRI-related terminologies. The results are consistent with the findings of China SIF (2021). This study further finds that concepts that commonly

appear and are well-known in the international market, such as "ESG investing" and "sustainable finance", receive relatively low ratings compared with concepts more commonly mentioned in the Chinese market, such as "Targeted Poverty Alleviation" and "Rural Revitalization". This finding provides proof for Sandberg *et al.* (2009) explanation of the heterogeneity in terminology resulting from cultural differences and how SRI emerged and developed within that region.

Regarding SR information sources, people rely more on government releases and research reports to gain SR information for decision-making, which is consistent with the crucial role of government in promoting SRI in China. The rating for the reliability of the firm disclosure as an SR information source is relatively low. This indicates the general concern from the market regarding the reliability of CSR reports within China market (Wang & Li, 2016). In general, the findings of this exploratory questionnaire contribute to the archival research on SR investors outside the developed markets. It provides an overall picture of how individual investors in China perceive SRI from ethical, financial and practical viewpoints.

Further investigation of perceptions and their links with peoples' SRI strategies provides insights into how the pro-social attitude, individuals' perceived knowledge, and information impact their possible behaviours. It also investigates how provincial cultural values explain SRI strategy preferences. In order to give an overview, the key findings are presented in Table 8.1.

Hypothesis	Key findings	Theory/Prior research
Hypothesis 1-6 Individual differences and strategy preferences (Chapter 6)		
H1: Individuals who believe in the socially responsible impact of investment are more likely to adopt a positive screening strategy.	People who believe in the pro-social impact of investment are more likely to choose both positive and negative screening strategies than non-screening strategies.	Nilsson (2008); Sandberg and Nilsson (2015)
H2a: Individuals with higher pro-social concerns are more likely to adopt screening (positive and negative strategies) than non-screening strategies. H2b Compared with the negative screening strategy, individuals with higher pro-social concerns are more likely to adopt a positive screening strategy.	With the increase in pro-social concern, individuals are more likely to choose a negative screening strategy and less likely to choose a non-screening strategy.	Carlsson Hauff and Nilsson (2023); Diouf et al., (2016); Nilsson (2008)
H3a: Individuals who are more willing to sacrifice returns over social value are more likely to adopt a negative screening strategy. H3a: Individuals who are less willing to sacrifice returns over social value are more likely not to consider SR information (non-screening strategy).	People with more willingness to forgo financial returns are more likely to choose both positive and negative screening strategies than non-screening strategies.	Derwall et al., (2011); Glac, (2009)

Table 8.1 continued

H$_4$: Individuals with higher SRI knowledge are more likely to adopt a positive screening strategy than other strategies.	People are more likely to choose a positive screening strategy than the other two strategies when SRI knowledge levels are increased. However, this result is weakened when other SR variables are considered.	Borgers and Pownall (2014); Diouf et al., (2016); Paetzold and Busch (2014)
H$_{5a}$: Individuals with lower trust in SR information sources are less likely to adopt screening strategies (both negative and positive screening) than non-screening strategies. H$_{5b}$: Individuals with lower trust in SR information sources are less likely to adopt the positive screening strategy than a negative screening strategy.	With the increasing trust in SR information sources, people are more likely to adopt screening strategies than non-screening strategies. Yet, the results are relatively weak and not persistent when considering other SR variables.	Marquis and Qian (2014)
H$_6$ Although socio-demographic characteristics help explain certain intentions for different SRI strategies, their significance is moderated when associated with other variables	Female, young individuals are more likely to adopt a positive screening strategy. The significance of other socio-demographic variables is weakened when SR variables are added to the analysis.	Diouf et al., (2016); Nilsson, (2008)

Hypothesis 7 and 8 Provincial cultural differences and SRI strategy preferences (Chapter 7)

H7a People are more likely to adopt a positive screening strategy in higher individualistic regions. H7b People are more likely to adopt a negative screening strategy in more collectivistic regions. H7c: There is a stronger positive relationship between individuals' SRI knowledge and the likelihood of adopting a	The results are not statistically significant. These hypotheses are not supported.	Labidi et al., (2021); Renneboog et al., (2008) ; Sandberg and Nilsson, (2015) ; Vitell et al., (1993)

positive -screening strategy in higher individualistic

H8a People are more likely to adopt the non-screening strategy than positive screening strategy in high LTO regions. H8b People are less likely to adopt a negative screening strategy in high LTO regions. H8c: There is a stronger positive relationship between individuals' SRI knowledge and the likelihood of adopting a positive -screening strategy in short-term orientation regions.	The statistics are not statistically insignificant. These hypotheses are not supported.	Hofstede (2010); Minkov and Hofstede (2012) Campbell et al. (2000); Wang, (2009)

The findings indicate that the perceived importance of pro-social aspects has an impact on how people would like to incorporate SR information in their decision-making process. People who believe investing can improve society prefer to incorporate SR information. The more they pay attention to socially responsible issues, the more they tend to adopt SR screening strategies, especially negative screening strategies. The results imply that pro-social impact and concern motivated the incorporation of SR information.

They are also willing to sacrifice financial returns to incorporate that information, which further confirms there is an ethical concern when they choose different strategies. The extent of concerns on SR issues is translated into stronger ethical requirements reflected in their preferences for negative screening strategy. This study expands existing literature that classifies investors according to whether they invest in SRI or the amount of their SRI (Diouf et al., 2016; Lewis & Mackenzie, 2000). By linking pro-social attitudes and different screening strategies, this study can directly associate pro-social awareness with specific behaviour. This study provides a better understanding of how socially responsible awareness plays a role in SR investors' decision-making. A negative screening strategy is more of an instrument to realise the ethical requirements and keep consistency in their moral identity (Glac, 2009; Sandberg & Nilsson, 2015). Considering the limited knowledge and concern for SR information quality in the development in China, the ones who are better at receiving

the knowledge are more likely to adopt a positive screening strategy. This finding adds to the existing literature on the influence of information in socially responsible investment decision-making (Barreda-Tarrazona et al., 2011; Diouf et al., 2016).

When investigating the linkage between SR variables and SRI strategy decisions, this study controls for individuals' demographics and investment features. It is found that individuals' socio-demographic features are important in separating people from their different preferences in strategies. Young females in this sample are more likely to adopt a positive screening strategy. This finding is consistent with the existing literature (Ballestero, 2015; Bauer & Smeets, 2015; Singh et al., 2021). It expands the literature on profiling SR investors and how they prefer to incorporate SR information. Young female groups are more active in engaging in SR because they are probably more aware of socially responsible issues and are more motivated by the pro-social aspects of doing SRI. Females in this sample are also more likely to forgo financial return, which indicates they consider non-financial goals important in SRI. Socio-demographics are important in explaining the behaviours of respondents regarding SRI. However, the importance is related to certain groups of people who are more prone to ethical considerations than others, such as female individuals. These features alone cannot fully explain why investors prefer a specific strategy. Their ethical, financial and practical perceptions of SRI influence their intentions.

The addition of provincial cultural differences has elaborated the relationship of how pro-social importance influences people's behaviour. There is no literature discussing societal level differences and their determinacy in SRI behaviour. In order to fill the gap of lacking societal-level determinants in SRI preferences, this study captures the provincial effect from a cultural perspective. This study adopts the Hofstede dimension using a world value survey from the most recent 3 waves (Haerpfer et al., 2022) in order to differentiate cultural differences. In this study, Hofstede (2010)'s framework of cultural dimensions is adopted innovatively to differentiate subcultures across provinces within China. As shown in the study of Tang and Koveos (2008), most of the dimensions (except musicality) are prone to changes in economic dynamics, especially in countries such as China, where the economic landscape has changed dramatically over the past 20 years. In considering the uneven development of economics and the expanded geographical landscapes across provinces, the World Value Survey (WVS) dataset of Wave 5 (2005-2009), wave 6 (2010-2014), and Wave 7(2017-2022) in China are used to generated Hofstede's dimension scores across provinces. The factor analysis of selected items in WVS shows that two dimensions, individualism and long-term vs short-term orientation, are prone to be salient in differentiating shared values and norms across provinces. The generated scores are then used as a societal-level factor in determining the intentions of different SRI strategies. The innovative adaption of Hofstede's framework within a nation provides empirical feasibility of Hofstede's notion of his work being applied in generating

subculture regions within the nation (Minkov & Hofstede, 2012b). The results of variation in terms of individualism and LTO values across provinces within China provide enriched data for finance and accounting research based on the Chinese market, especially in the corporate governance and management field, where cultural influence is mostly discussed.

By combining these two datasets, this study provides a more inclusive investigation of different individual and provincial level factors that determine their intentions in SRI strategies, adding to existing questionnaire-based research in the field of individual attitude and SRI behaviour (Diouf et al., 2016; Glac, 2009, 2012). Concerning how shared values and norms influence people's intention in SRI strategies, a theoretical mechanism is built in this study to discuss the interactive effect of culture scores and people's SRI knowledge level on the intentions for different strategies. However, no statistically significant evidence has been found of the relationship between provincial culture values and individual strategy preferences. The insignificant shared culture value cluster using geographical typology and the persistent significance of individuals' socio-demographical differences in explaining SRI behaviour indicates that the influence of culture values is possibly prominent in social groups formed under industrial, organisational or community contexts.

8.3　Limitations of the study

In generalisation of the findings of this study, two issues should be noticed: first, the questionnaire sample is likely biased toward females and highly educated individuals. The reason is that individuals with such demographics are probably more open and active in answering questionnaires and are more socially aware. Nevertheless, understanding the views and actions of such individuals is particularly important because, as shown in this study and previous literature, female investors with higher education are more likely to engage in SRI (Cheah et al., 2011; Diouf et al., 2016; Nilsson, 2008). The investigation of how their SRI behaviours are determined can assist in incentivising them to engage more in SRI and thus help shape corporate social responsibility policies and future practices in incorporating SR information in individual investments.

Second, there may be social desirability issues when using a questionnaire as an instrument for research. The issue of social desirability bias in survey-based research is one limitation that cannot be ignored. Social desirability bias refers to biased responses from people to achieve a particular social impression of society (Kaiser et al., 1999). It has been viewed as a potential risk in limiting the influence of self-report attitude, belief and behaviour variables in research (Bruni & Schultz, 2010). This study has tried to minimise the effect of this issue by adopting a fully anonymous questionnaire and using a web-based platform to mitigate the appearance of the

researcher in order to reduce respondents to provide preferable answers (Dillman, 2009; Dodou & De Winter, 2014).

Even though the process of designing and distributing the questionnaire has tried to limit the impact to a minimum, the issues cannot be fully addressed. Consequently, the answers may be inflated, especially regarding respondents' ethical perceptions. For instance, the links between the willingness for trade-off and preferences for negative screenings might be inflated due to people's tendency to choose these two options to be more socially desirable. Respondents may overstate their pro-social concerns and intentions for SR-related strategies to be socially desirable. The results need to be carefully interpreted when considering this issue.

Even though this study has collected 871 responses, with 693 of good quality for analysis, it is insufficient when investigating provincial-level impact. Some provinces only have a limited number of responses, which limits the generalisation of provincial influence on SRI intentions. The insignificant cultural impact results are also partly due to the insufficient sample size. Increasing the sample size, especially the number of respondents within each province, can improve the cultural explanation of SRI behaviours.

8.4   Contributions, implications and avenues for future research

Instead of using secondary data, this study provides primary data regarding people's attitudes and perceptions and investigates how and why people's strategy preferences vary. The knowledge contribution of this study is mainly threefold: First of all, it fills the gap in profiling SR investors in emerging markets. It adds knowledge to the existing literature in this area that mainly focuses on understanding SR investors in the developed markets. It provides a picture of how individual investors understand SRI from ethical, financial and practical viewpoints. The female and the young generation are the more active group of SR investors. This study advances existing literature more specifically to separate different investors regarding their preferences for different screening strategies. Secondly, it provides an analysis of the behaviours in considering the uniqueness of emerging markets, where information asymmetry and CSR information quality are major concerns in SRI (Marquis & Qian, 2014). This study implies that the level of SRI knowledge and the reliability of SR information are influential in how people incorporate SR information. Thirdly, it explains people's investment behaviour in the context of SRI from a cultural perspective. Even though no significant results have been found in provincial culture values, findings suggest that value systems are still insightful variables in explaining SRI behaviours.

The self-reported attitude, belief and intention do not necessarily mean actual respective behaviour (Boulstridge & Carrigan, 2000). This research aims to investigate

preferences and intentions for SRI, which indicates that people's perceptions are influential in their SRI investing preferences. Opportunities for future research can further explore other channels to indirectly depict people's ethical perceptions through observing individuals' pro-social behaviour, such as community work engagement and pro-social comments on media. Also, research can focus on acquiring individual investors' actual trading activities, equity positions, and SRI fund choices to gain information on their actual SRI behaviour. In order to increase the questionnaire response rate, this study purposely simplifies the investment strategy into SR screening (positive and negative screening) and non-screening. It also confines the strategy to a socially responsible issue: environmental protection. Future research can expand on the choices of strategies, for instance, including shareholder engagement or real-life SRI funds strategies, to provide a more generalised conclusion.

Regarding methodology, the cultural differences within China are generated by innovatively adopting Hofstede's' cultural dimension in studying subculture regions. As mentioned in cultural literature, there is limited research on cultural values beyond the national level (Minkov & Hofstede, 2012b), and there is limited literature that puts this into practice. In most cultural economics studies, China is viewed as a highly collectivist country with homogenous values (Harrison, 1995). With an expanded geographical area and uneven economic development, it is insightful to consider the varied values and beliefs across provinces within China and apply them to studying

attitudes and perceptions regarding SRI. This study analyses and concludes two prominent dimensions that vary across different regions within China: individualism and long-term orientation (LTO). The results provide insightful information on peoples' shared value changes across provinces. The generation of those two dimensions at the provincial level is probably due to how the economic and technological forces advance and incur changes in cultural values (Dheer et al., 2015).

The two cultural dimensions imply that people are heterogeneous regarding their customary beliefs and values, which may influence their behaviours and decision-making. The finding provides insights for accounting, finance, and management research based on the Chinese market, which should consider value as a factor when investigating corporate and individual behaviours. This study focuses only on Chinese individual investors and their perceptions regarding SRI. The cultural differences address the variation of shared values across regions within China. Future research can design and distribute the questionnaire across borders to collect a more international sample to compare how national culture impacts SR investors and their strategy decisions.

Additionally, the results contribute to cultural literature on the existence of subcultures within a country. The combination of individual differences and provincial cultural values in explaining SRI behaviours indicates that using geographical typology to

equate clustered cultural values may only provide a partial discussion of how value and belief systems influence behaviours. The variation of cultural values across different regions in China creates opportunities for financial services providers to offer designated investment plans, products and marketing strategies in different regions. Future research can further explore how other social and demographical groups can generate shared cultural values.

Besides the academic contribution of the findings, the results also provide insights into the further development of SRI. The ethical consideration of individual investors reflected in their choices of strategies shows that awakening social awareness can be a nudge for people engaging in SRI, especially for young female investors in the Chinese market. They are also more likely to adopt a positive screening strategy, which indicates their possible power to use investment as a drive to push corporations to be more socially responsible. These results suggest that younger and female investors appreciate the importance of social consciousness and social action of a business in determining a firm's success (Cheah et al., 2011). For investee firms, in light of this study, firm management should pay attention to the demographic characteristics of their shareholders and consider taking action to ensure that their CSR agendas are aligned with their SRI shareholders' perceived expectations. Firms intending to attract female SRIs should focus their efforts on improving social and environmental performance as well as taking proactive steps to impact broader society positively.

For policy makers, the increasing appreciation of the power of the young generation and female investors can contribute to improving the quality of CSR in China, which is argued to have limited substantive influence (Marquis & Qian, 2014). The encouragement of female representation at the firm level is implied to improve the management of diversity and enhance social awareness within firms, thus improving the quality of disclosure of CSR information and the substance of CSR activities.

For financial service providers, such as investment firms and financial advisors, marketing policies focusing more on females and young people may increase the efficiency of promoting SRI by integrating non-financial attributes into investment and enhancing the social impact of investing activities. For instance, fund firms can design products and target their sales strategies to young female investors, addressing social issues that intrigue this specific group of investors. SRI providers can focus on marketing how individual investments can help solve social, environmental and ethical problems to attract female and young investors.

Another implication of this study lies in the influences of SRI knowledge and its impact on investors' decision-making. The overall limited knowledge regarding SRI demonstrates a lack of education in socially responsible investment for individual investors. Policymakers and the market need to provide more specific SRI knowledge regarding varied terminologies and principles to integrate SR information. On the one

hand, according to the findings, self-reported SRI knowledge has a significant influence on investors' preferences for positive screening, which is regarded as an effective way to improve firms' socially responsible performance. The improvement of the overall education of individual investors regarding SRI may effectively improve their engagement and preferences for this specific strategy.

On the other hand, the findings reveal that the low rating of firm disclosure reported in the questionnaire indicates great concern about the SR information quality, especially on the firm level. The poor quality of SR information hinders investors from gaining more knowledge and confines their ability to engage in SRI. The findings imply that there is expected to be an increasing demand for transparency in publishing ESG performance on the firm level. For policymakers, more specific regulations regarding CSR disclosure can provide guidelines for both firms and investors in evaluating CSR incidents.

8.5 Summary

This chapter provides an overall discussion of the limitations, implications and contribution of the findings of this research. By surveying individuals across China, this research provides a complete picture of how individual investors in China understand SRI. Further, analysing individual and provincial differences provides explanations of what drives individuals' SRI strategy preferences. Individuals' ethical

concerns and their SRI knowledge are essential factors in their preferences for different strategies. Also, young females are more likely to engage in SR screening strategies, more specifically, the positive screening approach. These findings provide valuable suggestions for financial service providers and policymakers to design and develop SRI products and policies focusing on different groups of investors.

Additionally, this study, by adopting Hofstede's culture framework into the analysis of individual behaviour, provides an interdisciplinary perspective of understanding SRI. The contrasting strong explanation power of gender and age in explaining preferences compared with the insignificant provincial cultural factors provide insights that shared value clustering based on criteria other than geographical areas may exist within China in explaining SRI behaviours. Further cultural discussion in accounting and financial research can approach value systems that exist in other social groups and do not merely equate culture with nation geographically.

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Appendix A：Variable description and data source

Variables	Description	Data source
	Variables in Chapter6	
Strategy	A categorical variable with three categories: "non-screening", "positive screening", and "Negative screenings"	Survey item (Q18)
Pro-social motivation	A dummy variable set equal to one if choose "SR information is important for sustainability development in investment", and zero otherwise	Survey item (Q15A)
Pro-social concern	a sum of five 5-scale Likert-type items.	Survey item (Q17)
SRI knowledge	a sum of eight 5-scale Likert-type items.	Survey item (Q13)
Trade-off attitude	A categorical variable 1=No, 2=in between and 3=Yes	Survey item (Q19, Q20)
Trust in information sources	a sum of six 5-scale Likert-type items	Survey item (Q21)
Gender	A dummy variable set equal to one if male and zero otherwise	Survey item (Q1)
Age	An ordinal variable with five categories: 1="18-30",2="31-40",3="41-50",4="51-60",5="above 60"	Survey item(Q2)
Education level	An ordinal variable with five categories: 1=" Primary or Middle school graduate ",2="High school",3="College",4="Undergraduate",5="Postgraduate or above"	Survey item (Q3)

Finance working experience	A dummy variable set to one = working in the financial industry, zero otherwise	Survey item(Q5)
Investment Horizon<=1 yr	A dummy variable set to one=investment horizon shorter than 1 year, zero otherwise	Survey item (Q12)
Investment capital>1m	A dummy variable set to one=current investment capital larger than 1 million RMB, zero otherwise	Survey item (Q11)
Equity investors	A dummy variable is set to one if stock is one of the major instruments used, and zero otherwise.	Survey item (Q10)

Additional variables in Chapter 7

LogGDP	Logarithm value of annual per capita gross domestic product (GDP) in different provinces	National Bureau of Statistics of China
INV	Individualism score across provinces ranges from 0-100	Hofstede (2010) and WVS
LTO	Long-term orientation score across provinces ranges from 0-100	Hofstede (2010) and WVS
Negative screening	Binary variable equal to 1 with respondents choosing this strategy and 0 otherwise.	Survey item (Q18)
Positive screening	Binary variable equal to 1 with respondents choosing this strategy and 0 otherwise.	Survey item (Q18)
Non-screening	Binary variable equal to 1 with respondents choosing this strategy and 0 otherwise.	Survey item (Q18)

Appendix B: Participant Information Sheet and Consent Letter (Chinese version)

Participant Information Sheet

受访信息说明

院系：会计与金融

研究题目：The Heterogeneity of Socially Responsible Investment (SRI) in China

各位受访者您好，我叫崔丹，是一名来自英国思克莱德大学的博士在读生。以下问卷的主要目的是为我博士期间论文研究做数据支撑。该说明主要针对问卷内容进行解释。如您针对问卷仍有其他疑问，可以联系以下邮箱：dan.cui@strath.ac.uk. 谢谢您的参与。

研究目的是什么？

研究的主要目标是了解中国社会责任投资的投资行为。该问卷主要提供以下信息：中国投资者对于社会责任投资（SRI）的认识程度，中国投资者对于社会责任投资的财务属性和社会属性的看法以及在投资中所用到的策略方法。通过该问卷，可以了解中国社会责任投资的发展状况，并为研究中国社会责任投资的异质性及其文化层面的解释提供数据支撑。

受访者必须参加么？

参与问卷调查是自愿行为，您在参与过程中有权随时退出答题。

受访者需要做什么？

受访者会收到一份调查问卷，题目全部为客观题，题目总量为 21 题（会根据您的回答情况有略微变化)。总用时在１０－１５分钟左右。

为什么会被邀请参与该问卷调查？

该问卷的受访者需是中国境内各省有一定投资经验的个人。

哪些信息会被收集？

问卷主要分为两大部分，第一部分是个人信息，主要包括受访者的如性别，年龄，受教育程度等信息；受访者的投资现状；社会信任度信息三方面。第二部分是针对投资人对于社会责任投资的认知及投资策略的信息。

谁能够获取利用这些信息？

问卷信息的采集采取匿名形式并完全保密，只有研究者本人（崔丹）及其博士导师有获取这些信息的权利。

信息的储存

所有通过问卷采集的信息会储存在思克莱德大学的云服务器 University One Drive 上。只有研究者本人（崔丹）及其博士导师有获取这些信息的权利。这些信息在研究者攻读博士学位期间会一直保存在 One Drive 上。博士学位攻读

完毕后，数据会转移至大学 Pure 系统中封存。其在 pure 上会封存五年，期间研究者本人可将其做其他研究。 五年后，经研究者本人同意，学校将删除这些数据。

如果你想要了解更多关于该研究项目的进展情况或希望推荐其他人来完成问卷，请联系 dan.cui@strath.ac.uk. 在您开始进行问卷调查之前，请先在受访者告知书上签字，谢谢。

谢谢您抽时间阅读以上信息，如果您想了解关于该研究项目的进展情况可参阅以下网站：https://pureportal.strath.ac.uk/en/persons/dan-cui. 也可通过以下联系方式了解和问卷相关的研究成果的发布和反馈。

研究者联系方式：

崔丹

Email：dan.cui@strath.ac.uk

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  0086-18838123931

英国思克莱德商学院

研究者博士导师联系方式：

Julia Smith

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Tel: 0044 548 4958

英国思克莱德商学院

该研究已获思克莱德大学道德委员会的通过。如果在研究过程中或研究结束后，您仍有疑问或希望针对对个人信息的保护及对问卷的情况做更深入了解，也可联系以下机构：

思克莱德大学道德委员会

Research &Knowledge Exchange Services

University of Strathclyde

Graham Hill Building

50 George Street

Glasgow

G1 1QE

电话： 0141 548 3707

Email： ethics @strath.ac.uk

Consent letter

问卷告知书

院系名称：会计与金融

研究题目：中国社会责任投资的异质性

- 本人确认已阅读并理解受访者情况说明中关于该研究及问卷的内容，

- 本人确认已阅读并理解我的个人信息是如何被采集及利用的（如信息如何被储存及储存时间）。

- 本人了解自己参与问卷调查是完全自愿的，也可以随时无理由终止调查。

- 本人理解我可以要求研究者不使用部分个人信息：如性别，收入来源以及投资情况。

- 本人理解该问卷以无记名形式收集的数据（数据不会识别出我本人身份）。不能要求对已用于研究的数据进行撤回。

- 本人理解该研究记录下的信息均会保密，任何可识别出我身份信息的内容不会公布与众。

- 本人确认参加此次研究。

受访者姓名：		
签字：	日	期：

Appendix C: Participant Information Sheet and Consent Letter (English version)

Participant Information Sheet for Individual Investors in China

Name of department: Accounting and Finance

Title of the study: The Heterogeneity of Socially Responsible Investment (SRI) in China

Introduction

I am Dan Cui, a Doctoral student at Strathclyde Business School. The following survey will be used for my doctoral research. Any queries regarding this questionnaire could be answered through my university email dan.cui @strath.ac.uk. Thanks for your time to participate in this survey.

What is the purpose of this research?

The purpose of the research aims at understanding the behaviours of socially responsible investors (SRI) in China. The survey helps provide insights on how much Chinese individual investors know about SRI, their attitude towards the trade-off of SRI social and financial goals, and strategies for conducting such investment. The research aims to provide a vivid description of the development of SRI in China. This survey provides information for further analysis of the heterogeneity of SRI and seeks to explain this heterogeneity from a cultural perspective.

Do you have to take part?

Participation in the survey is voluntary. Participants have a right to withdraw from

the research without detriment.

What will you do in the project?

The participants will be asked to finish a questionnaire, which takes about 10-15 minutes to finish.

Why have you been invited to take part?

The participants are expected to be individual investors in China who preferably have some experience or knowledge of investment. The sample is expected to be scattered over the provinces of mainland China to show possible differences among different regions.

What information is being collected in the project?

The survey is divided into two major sections. The first is personal information, which includes demographical information and investment situation. Another section surveys investors' awareness of socially responsible investing as well as strategies being adopted when doing SRI.

Who will have access to the information?

The survey information will be kept confidential and anonymous. The researcher and her PhD supervisor will have access to the information for research purposes only.

Where will the information be stored and how long will it be kept for?

The data will be stored in the university One Drive, which my supervisor and I have access to. The data is stored, and all the information collected from the survey includes personal information as well as SRI awareness information. It will be stored on one

drive during my Ph.D. and will be securely stored in Pure after my Ph.D. completion for 5 years. During the five years stored in Pure, the data could be used for other research or publications initiated by the secondary investigator. After five years, the information related to people's personal situation as well as their awareness of SRI, probably varied and became obsolete and thus lost research value. Then University could delete the data after acquiring consent from the secondary investigator. Thank you for reading this information – please ask any questions if you are unsure about what is written here.

What happens next?

If you would like to know more about this project or willing to participate, please contact the following email: dan.cui@strath.ac.uk . A consent form is needed to be signed to confirm your willingness to participate in the survey**.** The progress of research will be updated at the following website:

https://pureportal.strath.ac.uk/en/persons/dan-cui. Participants can also contact the below details at a later date if they wish to view the published work or get more feedback on the research.

Thanks for your attention

Researcher contact details:

Dan Cui

Email: dan.cui@strath.ac.uk

Tel:0044 7360958820

Strathclyde Business School

Chief Investigator details:

Julia Smith

Email: julia.smith@strath.ac.uk

Tel: 0044 548 4958

Strathclyde Business School

This research was granted ethical approval by the University of Strathclyde Ethics Committee.

If you have any questions/concerns, during or after the research, or wish to contact an independent person to whom any questions may be directed or further information may be sought, please contact:

Secretary to the University Ethics Committee

Research & Knowledge Exchange Services

University of Strathclyde

Graham Hills Building

50 George Street

Glasgow

G1 1QE

Telephone: 0141 548 3707

Email: ethics@strath.ac.uk

Consent Form for individual investors in China

Name of department: Accounting and Finance

Title of the study: the Heterogeneity of Socially Responsible Investment in China

- I confirm that I have read and understood the Participant Information Sheet for the above project and the researcher has answered any queries to my satisfaction.

- I confirm that I have read and understood the Privacy Notice for Participants in Research Projects and understand how my personal information will be used and what will happen to it (i.e. how it will be stored and for how long).

- I understand that my participation is voluntary and that I am free to withdraw from the project at any time, up to the point of completion, without having to give a reason and without any consequences.

- I understand that I can request the withdrawal from the study of some personal information and that whenever possible, researchers will comply with my request. This includes the following personal data:

  - Personal information related to my gender, income and my investment behaviours

- I understand that anonymised data (i.e. data that do not identify me personally) cannot be withdrawn once they have been included in the study.

- I understand that any information recorded in the research will remain confidential and no information that identifies me will be made publicly available.

- I consent to being a participant in the project.

(PRINT NAME)	

Appendix D: The questionnaire (Chinese version)

社会责任投资(SRI)认知问卷

1.您的性别： [单选题] *
  ○男　　　○女

2. 您的年龄段： [单选题] *
  ○18~30　　　○31~40　　　○41~50　　　○51~60　　○60 以上

3. 您的受教育程度 [单选题] *
  ○小学或初中毕业

  ○高中毕业

  ○专科毕业

  ○本科毕业

  ○研究生毕业

4. 您所居住的省份: [单选题] *

○安徽省	○湖北省	○内蒙古自治区	○天津市
○北京市	○河北省	○宁夏回族自治区	○台湾省
○重庆市	○海南省	○青海省	○新疆维吾尔自治区
○福建省	○黑龙江省	○四川省	○西藏自治区
○广东省	○湖南省	○山东省	○云南省
○甘肃省	○吉林省	○上海市	○浙江省
○广西壮族自治区	○江苏省	○陕西省	○香港特别行政区
○贵州省	○江西省	○山西省	○澳门特别行政区

○河南省   ○辽宁省

5 您的全职工作是否如金融行业有关？ [单选题] *

○是 _____ *

如选是，请写出具体的金融行业名称（如证券，基金，银行，信托，财务咨

询等）

○否

6.您目前工作单位的类别： [单选题] *

○民营企业

○中外合资企业

○外资企业

○国有企业

○政府及事业单位

○自主创业

○在校学习

7. 您是否具有一年以上的海外生活，留学或工作的经历？

○是

○否

8.一般来说,您认为大多数人是可以信任的么？ [单选题] *

○是

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○不是

9.请问您对以下这些人是非常信任、比较信任、不太信任、非常不信任？[矩阵单选题] *

	非常信任	比较信任	一般信任	不太信任	完全不信任
家人	○	○		○	○
邻居和同事	○	○		○	○
熟人	○	○		○	○
第一次见面的人	○	○		○	○
其他国籍的人	○	○		○	○

10 下列投资工具，您常用的是哪些？（限选三种）

○股票

○债券

○公募基金

○私募基金

○银行理财

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○现金及货币类产品

○其他

11 您目前有多少资金（人民币）正在进行投资理财？ [单选题] *

○10 万以下

○10 万到 100 万之间

○100 万到 600 万之间

○600 万以上

12 您主要以多长的时间为周期来考虑您的投资？ [单选题] *

○1 年及以下

○1 至 5 年（包含 5 年）

○5 年至 10 年（包含 10 年）

○10 年以上

13 在本次调查问卷之前，您是否听过下列名词：[矩阵多选题] *

	非常了解	比较了解	仅知道含义	只听说过但不知道含义	没听说过
社会责任投资（SRI）	□	□		□	□
ESG 投资	□	□		□	□

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绿色金融	☐	☐		☐	☐
可持续发展投资	☐	☐		☐	☐
环保节能减排投资	☐	☐		☐	☐
新能源投资	☐	☐		☐	☐
低碳，碳中和投资	☐	☐		☐	☐
精准扶贫金融	☐	☐		☐	☐
乡村振兴	☐	☐		☐	☐
三农投资	☐	☐		☐	☐
影响力投资		☐		☐	☐

14 在投资时，你认为企业在环保，社会责任，员工权益和商业道德方面的信息重要么

○非常重要

○重要

○不重要

○不相关

15A 企业在环保，社会责任，员工权益和商业道德方面的信息重要的原因是什么？（限选三个）（在 14 题选择"非常重要""重要"时，出现这道题）

[ ]影响投资收益

[ ]影响投资风险

[ ]关乎企业在市场中的信用

[ ]影响社会的可持续发展

[ ]政府政策时常提起

[ ]媒体，咨询机构及社会公众时常讨论

[ ]其他＿＿＿＿＿

15B 企业在环保，社会责任，员工权益和商业道德方面的信息不重要的原因是

什么？（限选三个）（在 14 题选择"不重要""不相关"时，出现这道题）

[ ]不影响投资收益

[ ]不影响投资风险

[ ] 即使知道这些信息，也不能判断企业到底在这些方面做得好不好

[ ]没有获取这些信息的渠道

[ ]不确定这些信息是否能够推动社会可持续发展

[ ]其他＿＿＿＿＿

16 你会不会因为一个企业的生产运营和你的价值观不符而放弃投资？

[ ] 会

[ ]不会

[ ]视其投资回报而定

17. 在进行投资决策时，您对企业下列方面的表现，关心程度如何？[矩阵多选题] *

	非常关心	比较关心	偶尔关心	不大关心	完全不关心
环境保护与治理	□	□	□	□	□
员工关怀及管理	□	□	□	□	□
生产链条的安全及可持续发展	□	□	□	□	□
产品质量的管理	□	□	□	□	□
企业运营的合法合规	□	□	□	□	□
管理层的社会	□	□	□	□	□

责任承担					
企业对外公益事业和慈善事业	☐	☐	☐	☐	☐

18.面对高污染，高能耗的行业，你会

[ ]放弃投资这个行业

[ ]选择积极改善环境问题，减少能耗的企业投资

[ ] 选择投资收益高的企业投资

[ ]其他_____

19.下面两个企业，你会选择哪一个投资？

企业 A： 在环境保护，员工福利等社会责任方面不断改善提高，投资收益接近市场平均水平

企业 B： 在社会责任方面没有作为，投资收益超出市场平均水平

[ ]企业 A

[ ]企业 B

２０.下面两个企业，你会选择哪一个投资？

企业 A： 在环境保护，员工福利等社会责任方面不断改善提高，投资收益

接近市场平均水平

企业 B： 在环境保护，社会方面有不负责情况，投资收益超出市场平均水

平

[ ]企业 A

[ ]企业 B

21 下列获取企业在社会责任方面信息的渠道，您认为其可靠性如何？[矩阵多

选题] *

	非常可靠	比较可靠	一般可靠	不大可靠	完全不可靠
政府及监管机构发布的信息	□	□	□	□	□
企业自身主动披露的信息	□	□	□	□	□
媒体报道，商业评论和排名	□	□	□	□	□
研究机构的数据及研究报告	□	□	□	□	□
同事，家人提	□	□	□	□	□

供的信息					
自己向企业了解的信息	☐	☐	☐	☐	☐

Appendix E: The questionnaire (English version)

SRI Awareness investigation for individual investors

1. Your gender is □Male □Female

2. The age group you belong to is

□18-30 □31-40 □41-50 □51-60 □above 60

3. Your education level is

□Primary or Middle school graduate

□High school graduate

□College graduate

□Undergraduate

□Postgraduate

4. Which province are you living in (here is designed to have rolling bars to choose

from)?

○Anhui	○Heilongjiang	○Shaanxi
○Beijing	○Hunan	○Shanxi
○Chongqing	○Jilin	○Tianjin
○Fujian	○Jiangsu	○Taiwan
○Guangdong	○Jiangxi	○Xinjiang
○Gansu	○Liaoning	○Xizang
○Guangxi	○Neimenggu	○Yunan

○Guizhou   ○Ningxia   ○Zhejiang

○Henan   ○Qinghai   ○Hongkong

○Hubei   ○Sichuang   ○Macao

○Hebei   ○Shangdong

○Hainan   ○Shanghai

5. Are you currently working in the Finance industry, or is your work related to the Finance industry

□yes, please specify_____(example: invest banking, trust, asset management, etc)

□no

6. The type of institutions that you are working in

□Private-owned firms

□Joint venture

□ Foreign firms

□State-owned firms

□Governments or government-related institutions

□self-employed

□education in-progress

7. Do you have a year or more experience (studying, working, or living) overseas?

□yes

□no

8. In general, do you think that most people can be trusted?

□Yes   □No

9. Please choose the level of trust you feel for the following group of people

	Trust completely	Trust somewhat	Neutral	Do not trust very much	Do not trust at all
Your family					
Your neighbour					
People you know personally					
People you meet for the first time					
People from another nation					

10. Please specify the top three investment instruments you used most.

□Stocks

□Bonds

□Mutual funds

□Private funds

□Asset management products from banks

□Cash or money market products

□other. Please specify_____

11. Please choose the amount of capital that you are personally investing.

□ under 100 thousand RMB

□ 100 thousand to 1 million RMB

□ 1 million to 6 million RMB

□ above 6 million

12. According to your own investment, please indicate your usual investment horizon

when making an initial investment.

□ less than one year

□ 1 to 5 years

□ 5 to 10 years

□ more than 10 years

13. Prior to this survey, please evaluate your knowledge of the following terms

	know very well about it	know well about it	only know the meaning of it	only have heard of it	never have heard of it
Socially responsible investing					
ESG investing					
Green finance					
Sustainable investing					
Emission reduction investment					
New energy investing					
Carbon finance					
Rural revitalization					
Agriculture upgrading					
Impact investing					
Targeted poverty alleviation					

14. When you invest in a company, do you think it is important to consider corporate environmental, social, and governance information?

□it is very important

□it is important

□it is not important

□it is not at all important

15A Why do you think that corporate environmental, social, and governance information is important? (only those who answer "it is crucial" and "it is important " will answer this question)

□influential to financial return

□influential to investment risks

□influential to the sustainable development

□often mentioned by governments and policymakers

□often heard from media

□influential to the credibility of investees

□other

15B Why do you think that corporate environmental, social, and governance information is not important? (only those who answer "it is not important" and "it is not relevant" will answer this question)

□ Unrelated to financial returns

□ Unrelated to financial risks

□ lack of standards to evaluate which firms are socially responsible and which are not

□ no information access

□ not certain whether SRI could encourage sustainable development for society

□ other_____

16 Will you give up investment because it is against your value of life or belief system?

□Yes

□No

□It depends on the return on the investment

17. When making investment decisions, please indicate the importance of the following information in your investment decision-making process.

	Very important	important	Moderately important	Slightly important	unimportant
environmental protection					
employee welfare					
production security and sustainability					
product quality and customer services					
regulation compliance					
social behaviour of management					
philanthropic activities					

18 Please choose your most possible investment strategy for the high-pollutant, high-energy-consuming industries.

□ I will give up investing in the industry altogether

□ I will choose companies that are innovating in cutting the consumption of energy and reducing pollution

□ I will choose those that are highly profitable and generate good returns

□ other _____

19 Suppose you have two options to invest

Company A: perform well in corporate social responsibility and generate average investment return

Company B: no improvement or deterioration in corporate social responsibility performance, generating abnormal investment return.

Which company will you choose to invest in?

□A   □B

20 Suppose you have two options to invest

Company A: perform well in corporate social responsibility and generate average investment return

Company B: deteriorate in corporate social performance, generate abnormal investment return

21 Please indicate the reliability you think of the following access of SR information.

	The most reliable	Very reliable	Neutral reliable	Slight unreliable	Not at all reliable
Information disclosed by regulative					

authority					
Disclosure from firms themselves					
media reports, commercial comments, or ranking					
research reports or professional database					
The information gained from colleagues, family, and friends					
information acquired by yourself from companies					

Appendix F: Selected items of WVS for factor analysis in Chapter 4

	WVS question	WVS scale	Item name	Rescale
INV				
	Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between.-abortion	1=never justifiable to 10 = always justifiable	Justify-abortion	
	Justifiable:homosexuality		Justify-homo	
	Justifiable: divorce		Justify-divorce	
	Justifiable: euthanasia		Justify-euthanasia	
	Justifiable: suicide		Justify-suicide	
	Do you agree strongly, agree, disagree, or disagree strongly?- One of my main goals in life has been to make my parents proud	1 = agree strongly to 4 = disagree strongly	Disagree Parent Proud	
	How would you place your views on this scale?-Private versus state ownership of business	1=Private ownership of business should be increased 10=Government ownership of business should be increased	Private vs State-owned	Scale reversed

LTO	Which, if any, do you consider to be especially important in child qualities? Thrift saving money and things	1=important；0=not important	Thrift	
	Which, if any, do you consider to be especially important in child qualities? Determination/perseverance	1=important；0=not important	Perseverance	
	How proud are you to be of nationality of this country?	1=very pround, 4=not at all pround		
	The extent that you think the following statement is describing you: the importance of helping others	not at all like me=1 to very much like me=6	not help other	scale reversed
	The extent of agreement that leisure time is important in life	very important=1 to not at all important=4	leisure time not important	
	The extent of agreement work should come first even if it means less spare time	Strongly agree=1 Strongly disagree =5	workfirst	scale reversed
	The choice to describe yourself as being religious, not religious and atheist	1=religious, 2=not religious,3=atheist		

UA	Could you tell me for each whether you trust people from this group completely, somewhat, not very much or not at all?-you know personally	1=trust completely to 4=do not trust at all	Trust-personal	
	Trust-people you first met		Trust-firstmet	
	could you tell me how much confidence you have in them: is it a great deal of confidence, quite a lot of confidence, not very much confidence or none at all?-Government	1=a great deal to 4=none at all	Confidence-government	
	Confidence-Justice system		Confidence-justice	
	Confidence-civil service system		Confidence-civilservice	
	Confidence-police		Confidence-police	
	Worries: Losing my job or not finding a job	1=very much to 4=not at all	Worry-job	scale reversed
	Justifiable:avoiding a fare on public transportation	1=never justifiable to 10 = always justifiable	Unjustify-avoidfare	scale reversed

	Please scale how essential you think it is as a charactersitics of democracy-People obey their rules	0=it is against democracy 1=not an essential charactheristics to 10=an essential characteristics of democracy	Obeyrule	1=an essential characteristics of democracy 0=others
MAS-FEM	Would you say it is very important, rather important, not very important or not important at all in life? –Work	1= very important to 4=not at all important	Work	scale reversed
	Important in life-Friends		Friends	scale reversed
	Important in life-Leisure time		Leisuretime	scale reversed
	Which of them comes closer to your own point of view? A. Protecting the environment should be given priority, even if it causes slower economic growth and some loss of jobs B. Economic growth and creating jobs should be the top priority, even if the environment suffers to some extent	1=protect environment 2=economic growth	Environment vs Economics	

How would you place your views on this scale? Competition is good or harmful or inbetween	1=competition is good to 10=competition is harmful	competition	scale reversed
Schwartz: It is important to this person to be rich; to have a lot of money and expensive things	1= not at all like me 2= not like me 3= a little like me 4= somewhat like me 5=like me 6= very much like me	Rich	
Which, if any, do you consider to be especially important in child qualities? Tolerance and respect for other people	1=important；0=not important	Tolerance	
Schwartz: It is important to help people living nearby	1= not at all like me 2= not like me 3= a little like me 4= somewhat like me 5=like me 6= verymuch like me	Helpother	

Appendix G: Factor analysis for other cultural dimensions

Power Distance (PD)

Power distance refers to the perception of less powerful people regarding power and equality and their acceptance and expectation of inequality (Hofstede, 2011). The acceptance of inequality in power is differentiated among individuals from societies of large and small power distance. In a society with a large power distance, the less powerful members depend on influential members, while in a society with a small power distance, the relationship is interdependent. Hierarchy is respected in large power-distance cultures. Hofstede (2010) illustrates this dimension from different institutions, such as family, community and workplaces. For instance, parents and older relatives are respected and feared regarding family relations. Children are a source of security for parents when they are old. There is a strong pattern of dependence on seniors, which also spread into other social institutions such as schools.

Empirically, scholars find that this dimension is highly correlated with individualism (Beugelsdijk et al., 2018). Beugelsdijk and Welzel (2018) applied ecological correlation analysis with Hofstede dimension score using WVS survey data between 1981 and 2014. They retained 15 items that have adequate coverage across countries with enough variations. Their conclusion shows that individualism and power distance are one factor. Hofstede (2010) also stated that cultures that depend more on in-group relationships (families and closest friends) are also more dependent on influential members. 'Most extended families have patriarchal structures, with the head of the

family exercising strong moral authority' (p. 58). Minkov (2017) and Van de Vliert (2020) both explained from their findings that these two dimensions are manifestations of variation between in-group and out-group relations. Both dimensions address the degree of individual freedom and their intercedence with in-group members. Therefore, in this thesis, the items in individualism also represent PD dimensions.

Uncertainty Avoidance (UA)

According to Hofstede, uncertainty avoidance refers to the extent to which culture members feel threatened by ambiguous or unknown situations (Hofstede, 2010). In his work, he uses three items in the IBM survey related to job stress, desire for rules and time working for IBM as an expression of the level of anxiety in the face of uncertainty in the future. In cultures with high uncertainty avoidance, individuals tend to avoid ambiguous situations and prefer predictability in their personal and professional lives. They seek out rules, structures, and patterns to reduce uncertain circumstances. Additionally, they may engage in more risk-taking behaviours to reduce ambiguity because risks are often more attached to specific situations or objects and, therefore, less ambiguous.

Empirically, replicating this dimension using data from the European Social Survey highlights the relevance of anxiety and stress (Minkov and Hofstede, 2014). In addition, Venaik and Brewer (2010) conclude that Hofstede's Uncertainty Avoidance captures

the rule and order orientation. Hofstede's original UA scores are based on work-related values to proxy stress and security. However, in the WVS dataset, no item related to work stress exists. In Beugelsdijk's (2018) study, they generate this dimension by using items that capture societal trust levels and confidence in political and legal institutions. In this thesis, the following items are picked up to proxy the societal trust among respondents:

- **The extent of trust in people you know personally (trust-personal)**

- **The extent of trust in people you first met (trust-firstmet)**

In addition, items to proxy the confidence respondents rated on governmental and legal institutions are also added:

- **The extent of confidence in government (confidence-government)**

- **The extent of confidence in the justice system (confidence-justice)**

- **The extent of confidence in the civil service system (confidence-civil service)**

- **The extent of confidence in police (confidence-police)**

A high level of uncertainty avoidance is associated with a lack of social trust (Minkov & Hofstede, 2014) and lower confidence in political and justice institutions (Beugelsdijk & Welzel, 2018), which generate stress, anxiety and a desire for rules. The trust and confidence items are scaled at 1 higher degree of trust/confidence and 4 lower degrees of trust/confidence. Details of the description of items can be found in Appendix F. The following item is added to proxy the stress and anxiety at work:

- **The extent of worry people feel about losing or not finding a job (worry-job).**

In order to proxy high uncertainty avoidance, this item should correlate highly with a lack of trust and confidence in society. The level of anxiety generates a strong desire for rules, which is the other facet of uncertainty avoidance. The following two items are used to proxy the orientation of rules.

- **The extent of how essential obeying rules is in defining democracy (obey rule)**

- **The extent of the justifiability of the behaviour of avoiding a fare on public transportation (unjustify-avoidfare)**

Table Statistics Summary of UA

Variable	Mean	SD	Skewness	Kurtosis	KMO	N
trust-personal	0.0110	0.1649	-0.3217	4.2961	0.53	30
trust-firstmet	-0.0131	0.1969	-1.1835	5.4796	0.65	30
confidence-government	-0.0419	0.2489	-0.3671	2.7931	0.85	30
confidence-justice	-0.0431	0.1894	-0.5300	2.2691	0.78	30
confidence-civilservice	-0.0475	0.2370	-0.9619	3.5225	0.80	30
confidence-police	-0.0455	0.2254	-0.2973	2.0698	0.68	30
worry-job	0.0069	0.2558	-0.6945	3.7548	0.36	29
obeyrule	0.0138	0.1710	0.8893	4.0297	0.38	29
unjustify-avoidfare	-0.0103	0.2857	-3.0463	14.4489	0.64	30

This table reports the statistics of all the items selected to conduct factor analysis for the UA dimension. All the items are from the WVS dataset waves 5,6 and 7. The original items are z-scored and averaged on the provincial level.

The above table is the statistical test for sample adequacy to conduct factor analysis for these items. The overall KMO is 0.69, which is tolerable for sample adequacy in general (Kaiser, 1985), yet the two items 'obeyrule' and 'worry-job' have relatively

low individual values. Table 2 shows the results of the factor analysis using different items. Model 1 is the one-factor model with all 9 items. Model 2 is a two-factor model with 7 items with obey rule and worry-job removed due to low KMO and high uniqueness. According to the LR test and AIG, the two-factor model is preferable.

Model 1 shows that the lack of confidence in social and governmental institutions is weakly clustered with people's lack of trust in people (low factor loading: 0.24 and 0.12). The societal trust level is correlated with a moderate degree of anxiety in work (losing a job or not finding a job), with factor loading only 0.21. This anxiety and lack of trust did not generate a desire for rules. The factor loading for obeying a rule and the unjustified-avoid fare is low and negative, which indicates these items are not in line with the Hofstede concept and that uncertainty avoidance is not a prominent regional cultural difference among provinces.

Model 2 shows the results of the 2-factor model after removing low KMO value items. Factor 1 accounts for 70% of the variances and is a proxy of respondents' confidence in the current social and governmental institutions; factor 2 can be explained as a proxy of trust. The table shows that no single vital factor is generated from existing items. From existing literature, few pieces of research have replicated the UA dimension by associating anxiety with rule orientation, as Hofstede' defined. The factor analysis only generates a factor that reveals provincial differences in attitudes towards social trust

Table 2 Factor analysis for UA

	Model1				
	Maximum likelihood		Iterated principal factor		
Items	Factor1	Uniqueness	Factor1	Uniqueness	
Eigenvalue	3.45		3.45		
Trust-personal	0.24	0.94	0.24	0.94	
Trust-firstmet	0.12	0.98	0.16	0.97	
Confidence-government	0.82	0.33	0.81	0.34	
Confidence-justice	0.96	0.08	0.96	0.07	
Confidence-civilservice	0.89	0.22	0.84	0.30	
Confidence-police	0.94	0.12	0.95	0.10	
Worry-job	0.21	0.95	0.25	0.94	
Obeyrule	-0.12	0.99	-0.17	0.97	
Unjustify-avoidfare	-0.25	0.94	-0.29	0.92	
AIC	55.42				
BIC	67.72				
LR test χ2	31.61				
Cronbach's α	0.65				

	Model2					
	Maximum likelihood			Iterated principal factor		
Items	Factor1	Factor 2	Uniqueness	Factor1	Factor2	Uniqueness
Eigenvalue	3.36	1.03		3.37	1.05	
Trust-personal	0.07	0.64	0.59	0.04	0.75	0.43
Trust-firstmet	0.08	0.38	0.85	0.09	0.41	0.82
Confidence-government	0.84	-0.10	0.29	0.85	-0.07	0.27
Confidence-justice	0.97	0.07	0.06	0.96	0.10	0.06
Confidence-civilservice	0.91	-0.29	0.08	0.92	-0.25	0.08
Confidence-police	0.92	0.15	0.14	0.90	0.17	0.16
Worry-job						
Obeyrule						
Unjustify-avoidfare	0.20	-0.60	0.59	0.23	-0.45	0.74
	31.98					
	50.19					
	5.08					
	0.68					

This table reports factor loadings of generating UA dimension. Model 1 shows a 9-item analysis using both maximum likelihood and Iterated principal methods. Model 2 shows a 7-item analysis using these two methods. All the original items are from WVS waves 5, 6 and 7, which are z-scored and averaged to the provincial level to conduct the analysis.

and security. However, there is a weak link between the trust level and the desire for

rules. Therefore, using the WVS dataset, it is challenging to proxy Hofstede

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uncertainty avoidance within China across different provinces.

MAS-FEM

This dimension refers to the degree of distinction of emotional gender roles. The distinction is that men are more 'assertive, tough and focused on material success, whereas women are "modest, tender, and concerned with the quality of life' (Hofstede, online edition pp76). A more feminine society is where both women and men are more inclined to agree with feminine qualities of modesty, tenderness, and concern for the quality of life. According to Hofstede (2010), the masculinity-femininity scale can be reflected in the distribution of roles between husband and wife in the family context. A society with a high MAS score preferred a dominant, tough father and a submissive, tender mother, while in a society with a low MAS score, the distinctive roles of mother and father are minor. Hofstede's masculinity in a culture is measured by gender role differences. In a high MAS culture, girls and boys are brought up differently, so there is a large distance between these two genders in terms of work goals and societal values. While in FEM societies, this gap is small (Hofstede, 2001).

Empirically, no work is based on the WVS items generating this dimension. Minkov and Kaasa (2021) used work-related items in the International Social Survey Programme. They follow the definition of Hofstede on the MAS-FEM dimension and find that this dimension did not replicate. Beugelsdijk and Welzel (2018) claim that it

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is hard to find items related to this dimension in WVS data. In this thesis, an initial selection of items is conducted according to Hofstede's MAS-FEM theoretical conception, and a two-factor model is applied in order to examine whether items of the MAS pole and FEM pole cluster together respectively. All the items are standardised before applying the above procedure.

Items that are more addressed on relationships and helping others are FEM values, and items focusing on achievement and material success are MAS values. For MAS values, we have the following potential items:

- The extent of the **importance of work (work)**.

- **The extent of emphasis on Economics rather than protecting the environment (Environment vs Economics).**

- **The extent of emphasis on competition (competition)**

- **The importance of being rich (rich)**

For FEM values:

- The extent of the **importance of friends (friends) and leisure time (leisure time)**.

- **Being tolerance and respecting others a desirable trait of the child (tolerance)**

- **The importance of helping others (helpother)**

Table 3 summarises the statistics of all the potential items for MAS-FEM. There are several items with relatively low KMO (lower than 0.5). Items with low KMO values

affect the overall adequacy of the sample in running factor analysis. Therefore, three

items with KMO values lower than 0.5 (item 'friend', item 'leisuretime' and item 'rich')

are removed from the analysis.

Table 3 Statistics Summary of MAS-FEM

Variable	Mean	SD	Skewness	Kurtosis	KMO	N
Friends	-0.0013	0.1719	0.2251	3.0253	0.32	30
Leisuretime	0.0332	0.1567	0.7520	3.4508	0.40	30
Work	-0.0177	0.1506	-0.4612	2.7413	0.84	30
Environment vs Economy	0.0028	0.1722	0.8223	3.8365	0.51	30
Competition	-0.0013	0.1726	-0.3201	2.7537	0.72	30
Rich	0.0058	0.2634	0.3873	4.4140	0.36	28
Tolerance	-0.0143	0.1906	-0.4075	2.2510	0.61	30
Helpother	0.0293	0.3562	-0.1086	2.8748	0.72	28

This table reports the statistics of all the items selected to conduct factor analysis for the MAS-FEM dimension. All the items are from the WVS dataset waves 5,6 and 7. The original items are z-scored and averaged on the provincial level.

The below results show that the structure of the factor is consistent and reached a high

inner consistency (Cronbach's α equal 0.74) using maximum likelihood and IPA

methods. However, the factor loadings show that the factor has some MAS values and

FEM values, which indicate that people are beholding both masculine and feminine

values. Therefore, there are no variations in MAS-FEM at the provincial level in China.

Table 4 Factor analysis for MAS-FEM

Items	Maximum likelihood		Iterated principal factor	
	Factor 1	Uniqueness	Factor1	Uniqueness
Eigenvalue	2.11		2.11	
Work	0.48	0.77	0.51	0.74
Environment vs Economy	-0.56	0.69	-0.56	0.69
Competition	0.50	0.75	0.48	0.77
Tolerance	0.66	0.57	0.66	0.57
Helpother	0.94	0.11	0.94	0.12
AIC	10.94			
BIC	17.60			
LR test χ^2	34.07			
Cronbach's α	0.74			

This table reports factor loadings of generating MAS-FEM dimension using both maximum likelihood and Iterated principal methods. All the original items are from WVS waves 5, 6 and 7, which are z-scored and averaged to the provincial level to conduct the analysis.