# National Culture and Investors Behavior: What is new? A Systematic Literature Review

#### Wilson Eduardo Ikeda

PhD student, Presbyterian University Mackenzie, São Paulo, Brazil,
Research Center in Business Science (NECE),
University of Beira Interior, Covilhã, Portugal

wilson\_ikeda@uol.com.br

https://orcid.org/0000-0003-1362-7622

#### Ana Paula Matias Gama

Associated professor with accreditation at University of Beira Interior Research Center in Business Science (NECE),

Covilhã, Portugal

amatias@ubi.pt

https://orcid.org/0000-0002-8064-6244

## **Denis Forte**

Associate Professor, Presbyterian University Mackenzie, São Paulo, Brazil

denis.forte@mackenzie.br

https://orcid.org/0000-0002-2933-2039

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#### **Abstract**

This systematic literature review and bibliometric analysis provides a unique perspective on the intersection of national culture and investor behavior. The study draws from a dataset of 80 peer-reviewed articles published between 2006 and 2023. The bibliometric analysis identified the most researched countries, influential journals, authors, articles, and subjects. A computer-assisted thematic analysis was conducted using Reinert's method to quantify thematic classes and their prevalence statistically. Results from the content analysis group the impact of national culture on investor behavior into two primary categories: (i) investor behavior, further divided into two clusters: 'Culture, Information and Behavior' and 'Cultural Factors and Behavior', and (ii) the decisionmaking process of investors, also split into two clusters: 'Social Responsibility and Cultural Preferences', and 'Culture and Investors' Decision-Making". These findings underscore the complexity and diversity of investor behavior across different national cultures. Further, by conducting a word correspondence analysis, we scrutinize the papers based on the researched country or region, their economic status, and cultural philosophy, which allows us to propose potential topics for future research, highlighting the need for further research in this area. This study serves as a valuable resource for future research, offering insights that can help shape the direction of subsequent investigations into the intricate relationship between national culture and investor behavior.

**Keywords**: national culture, investor behavior, behavioral biases, Hofstede's culture dimensions, systematic literature review

#### 1. Introduction

Hofstede (2011) defines "culture" as the collective mindset that differentiates one group of people from others. It implies that culture is always a collective phenomenon, and this shared programming of the mindset groups apart. The author suggests that 'culture' is often associated with tribes, ethnic groups, nations, and organizations. Cultural aspects of society, nation, and gender, learned from early childhood, are deeply embedded in our minds, more so than occupational or organizational cultures acquired at school or work. While people can adapt to new occupational or organizational cultures when they change jobs, societal cultures are typically anchored in values (often subconscious), which represent a general preference for certain situations over others.

National culture can be understood as the dominant customs and traditional beliefs embraced by most people within a particular nation. This culture plays a crucial role in shaping investors' reactions to abrupt shifts in information and guiding their investment choices (Chang & Lin, 2015). Hofstede (2011) provides a quantifiable measure of national culture through six dimensions: power distance, individualism, masculinity, uncertainty avoidance, long-term orientation, and indulgence.

There are criticisms about Hofstede's dimensions, such as the obsolescence of Hofstede's country score based on IBM subsidiaries in 1970 (Beugelsdijk et al.,2015) and the external validity and internal consistency of scale (Gerlach & Eriksson, 2021). Despite them, since its publication in 1980, Hofstede's Cultural Dimensions Theory has gained broad acceptance. It has catalyzed cross-cultural research in various academic fields, from sociology to international administration (Orr & Hausen, 2008). Numerous empirical research projects have employed at least one dimension of Hofstede's model (Gerlach & Eriksson, 2021).

About 6,900 languages are spoken globally (Anderson, 2012), dietary habits differ from one region to another (Gilbert & Khokhar, 2008), and there are certain social norms we should be aware of before traversing the globe (Spring, 2008). However, traditional finance assumes that each investor seeks to maximize the return on their investments without taking on much risk (Fama, 1970) and rarely recognizes the investor's cultural diversities (Nadler & Breuer, 2019). Nevertheless, scholars in the field of behavioral finance have been investigating the impact of cultural factors on individuals' choice of investments, investment durations, and willingness to take risks (e.g. Mourouzidou-Damtsa et al., 2019; Aren & Hamamci, 2020; Srivastava et al., 2020; Grahan et al. 2022). Ultimately, behavioral finance demonstrates that while there is a single way to behave rationally, there are countless ways to behave irrationally (Shiller, 2016).

This paper delves into national culture using Hofstede's Cultural Dimensions and individual investor behavior. Despite the growing body of research in this area, a comprehensive understanding of why and how national culture impacts investors' behavior remains elusive. Through a systematic literature review and bibliometric analysis, this review sheds light on the relationship between national culture and investors' behavior and its biases and proposes avenues for future exploration.

## 2. Research Methodology

This research combines bibliometrics and a systematic literature review (SLR). While Bibliometrics is widely used as the primary method to map out the structure of knowledge in a particular field of research (Ninkov *et al.*, 2022), an SLR is a structured methodology that provides a well-defined protocol for identifying, selecting, and critically evaluating literature. It adheres to comprehensive methodology and analysis principles, rigor, objectivity, and transparency (Tranfield *et al.*, 2003).

The research was grounded on theoretical and methodological principles, following the five-step process proposed by Khan et al. (2003): (i) formulating the research questions, which involved planning the search strategy and creating appropriate keywords; (ii) locating relevant studies; this step focused on identifying suitable repositories and target journals, (iii) selecting and evaluating papers: papers were chosen and assessed based on specific inclusion and exclusion criteria, (iv) analyzing and synthesizing the studies: the selected studies were then thoroughly examined and integrated, and (v) reporting findings and insights: the final step involved presenting the results and derived knowledge from the research. The methodology used in this paper is illustrated in Figure 1.

Data was collected in November 2023 from the Web of Science (WoS) core collection platform, a leading database for published articles and citations managed by Clarivate Analytics, to gather relevant information for this study. The WoS is the world's oldest and most authoritative database for research publications and citations. It was founded by Eugene Garfield in 1964 based on the Science Citation Index and has since grown in its selective scope (Birkle et al., 2020).

## [Insert Fig. 1]

The following search keywords were used to compound a query to select documents in all the searchable fields: (i) investor and its variants AND (ii) behavior and its variants AND (iii) culture and its variants OR (iv) Hofstede cultural dimensions: 'power distance' OR 'uncertainty avoidance' OR individualism OR collectivism OR Masculinity OR Femininity OR 'long term orientation' OR 'short term orientation' OR indulgence OR restraint. This first step results in 544 documents over the years 1996 to 2023.

The second step was to restrict the research by selecting articles from the document type menu, Business OR Business Finance OR Economics, from the Web of Science categories menu in the WoS search and written in English. This further step reduces the sample to 314 articles from 1997 to 2023.

The abstracts of the articles were examined as part of the screening process. If there was any uncertainty about their relevance, the full papers were read for clarification. Two hundred thirty-four articles were excluded as related to corporate-related investments or decisions (169 occurrences), different investments other than the stock market such as cryptocurrency (26), government policy (10), the consumer (9), forecast or another mathematical modeling (4), financial education (4), government policy (4) and other subjects (8). The final database used for this review comprised 80 articles published between 2006 and 2023.

For a systematic literature review, a computer-aided thematic analysis was utilized. This method is recognized for overcoming numerous challenges inherent in conventional thematic analysis while adhering to the fundamental tenets of a systematic literature review (Niedbalski & Ślęzak, 2021). Reinert's technique was chosen to statistically measure the frequency and organization of thematic classes.

Reinert's approach is centered on enhancing the internal likeness of words within thematic categories and the distinctions between such categories. The stability of the outcomes is inherently incorporated as the stopping criterion for the algorithm. The tree diagram generated by this method illustrates a hierarchy of thematic classes, where the closeness of classes suggests a shared vocabulary. With these findings, the analyst can decipher and conceptualize the significance of the classes. The method commonly employs lists of the most distinctive content words and the most representative text segments, determined by their chi-square ( $\chi$ 2) values, as standard tools (Reinert, 1990)

The software IRaMuTeQ was utilized to carry out the analyses and is based on R and Python (Loubère & Ratinaud, 2014). Reinert's approach centres solely on content words such as nouns, verbs, adjectives, and adverbs. Grammatical endings are eliminated in this method to form "lexemes". Additional steps in corpus processing encompass converting words to lowercase and eliminating accents. All these features are conveniently accessible in IRaMuTeQ and are coupled with the identification of word syntax (Sarrica et al., 2016; Ratinaud, 2018).

## 3. Results

## 3.1 Bibliometric Analysis

Following Donthu et al. (2021), a bibliometric analysis is conducted to pinpoint the most impactful elements of the papers in the sample. It includes the most researched countries, influential journals, authors, and articles. Our comprehensive analysis reveals that although the highest number of authors are from the United States (19 authors), more than 44% of authors are from Asia, mainly from Taiwan (12 authors), India (11), Japan (10), China (8), and Malaysia (5). Authors from Australia (5), New Zealand (4), and France (4) are also significant for the set of our sample. Table 1 shows the described results. Most articles have been published in the Pacific-Basin Finance Journal, Journal of International Financial Markets Institutions & Money, Journal of Behavioral and Experimental Finance, and Review of Behavioral Finance. These journals account for a quarter of the papers in our sample. The Journal of Empirical Finance has the highest total citations at 420, followed by the Pacific-Basin Finance Journal with 137 citations. Chui et al. (2010) and Hofstede (2001) are the most cited references among our sample, with 16 articles citing each. Our sample's most globally cited paper is "Investor Sentiment and Stock Returns: Some International Evidence" (Schmeling, 2009), with 420 citations. The most prolific author is Yi-Hsien Wang from the Department of Banking & Finance at Chinese Culture University, who wrote three articles in our sample. His university - Chinese Culture University located in Taiwan – is the most productive institution to produce seven papers in our set.

## [Insert Table 1]

## 3.1.1 Publication patterns

Fig. 2 shows our sample over the years. From 2006 to 2010, the effects of culture and information on the investors' behavior (Wang *et al.*, 2006; Schmeling, 2009; Speidell, 2009; Forner & Sanabria, 2010; Smith *et al.*, 2010), the influence of culture on investors' preferences (Ng & Wu, 2010), and the role of cultural factors on investors' decisions (Wang *et al.*, 2010) were presented and discussed. In this set of papers, Schmeling (2019) is the first to examine Hofstede's dimensions of consequences, more specifically, individualistic vs. collectivist countries. His study reveals that the influence of sentiment on stock returns is more pronounced in countries with less market integrity and a cultural inclination towards herd behavior and overreaction, which are collectivist countries.

## [Insert Fig. 2]

Over the next five years, the articles discussed the investor's response to natural disasters, epidemics, and climate changes (Hood *et al.*, 2013; Wang *et al.*, 2013), the role of information and culture on investors' behavior (Nguyen & Trong, 2013; Azuma *et al.*, 2014; Cheema & Nartea, 2014; Huang, 2015), the influence of culture preferences (Durand *et al.*, 2013), the role of cultural factors on investors' decisions (Chen & Chien, 2011; Abu Bakar *et al.*, 2014; Chia *et al.*, 2015), and the effect of behavioral biases and national culture on investors' decision (Chang & Lin, 2015). Chang and Lin (2015) evaluated 50 countries to assess herding behavior and concluded that a higher investor herding tendency occurs when investors present excessive optimism and a weaker

disposition effect. They also point out that higher power distance, lower individualism, and higher masculinity are closely associated with the exhibition of herding.

From 2016 to 2020, the topics discussed are: investors' biases and culture (Chen et al., 2017; Kohsaka et al., 2017; Balkanska, 2018; Danrimi et al., 2018; Docherty & Hurst, 2018; Nguyen et al., 2018; Breitmayer et al., 2019), cultural factors influences on investors' decision-making (Bergsma & Jiang, 2016; Wasiuzzaman, 2018; Lingaraja et al., 2019; Chen et al., 2020), the role of information in the investors' behavior (Adachi et al., 2017; Duxbury & Yao, 2017; Todea & Buglea, 2017; Beer et al., 2018; Chang et al., 2018; Jalilvand et al., 2018; Qadan & Zoaua'bi, 2019; Singh & Bhattacharjee, 2019; Misra et al., 2020; Hung et al., 2020), cultural preferences (Kushnirovich, 2016; Berk et al., 2017; Afego, 2018; Liston-Perez et al., 2018; Nakai et al., 2018; Azzi & Suchard, 2019; Bondia et al., 2019; Chen et al., 2019; Cueva et al., 2019; Lee, Pantzalis and Park, 2019; Lee, Switzer, and Wang, 2019; Misra et al., 2019; Zhan, 2019; Chang, 2020), and the investor's response to natural disasters, epidemics, and climate changes (Kao et al., 2018; Wang et al., 2018). Breitmayer et al. (2019) explore the relationship between national culture and the disposition effect, which is the tendency of investors to hold losing investments too long and sell winning investments too soon. The researchers analyzed brokerage data from 387,993 traders across 83 countries and found significant variation in the degree of the disposition effect globally. They find that cultural dimensions of long-term orientation and indulgence are linked to a higher disposition effect, explaining why investors from certain nationalities are more prone to this behavior. Therefore, the study suggests that cultural factors, along with age and gender, can influence investment behaviors and contribute to the disposition effect.

More recently, from 2021 to 2023, discussions are about influences on investors' behaviors due to culture associated with information (Mbarki et al., 2022; Nakajima &

Inaba, 2022; Aman et al., 2023; Lee et al., 2023; Omori & Kitamura, 2023), cultural preferences (Gutsche et al., 2021; Sharma & Chakraborty, 2021; Ahmed et al., 2022; Ferretti & Sciandra, 2022; Garg et al., 2022; Sourirajan & Perumandla, 2022; Vyas et al., 2022; Liu et al., 2023; Lobao, 2023; Shah, 2023; Zeng et al., 2023), the influences of cultural factors on investors' decision-making (Mahendra et al., 2021; Huang et al., 2022), COVID 19 pandemia (Fernandez-Perez et al., 2021; Shrotryia & Kalra, 2023 Tran & Tran, 2023), and behavioral biases (Khan et al., 2021; Shandu & Alagidede, 2022; Cakici & Zaremba, 2023). Lobao (2023), one of the most recently published papers, investigates the extent of price clustering in Islamic stocks listed in Indonesia, Malaysia, and Pakistan. The findings reveal a mild level of price clustering in Islamic stocks, with investors showing a preference for prices ending at zero and five. This phenomenon is positively associated with the price level and relative bid-ask spread, supporting the negotiation hypothesis that investors prefer round prices to minimize negotiation costs. However, the existence of price clustering contradicts the efficient market hypothesis that prices should follow a random walk. The study also suggests that Muslim investors, assumed to be the primary traders of Islamic stocks, share a preference for round prices in some settings.

#### 3.1.2 Most and least researched countries

Examining our sample of 80 papers, we determined the number of countries researched. Naturally, the most studied countries influence the overall conclusions, while less studied ones could be opportunities for future studies.

Overall, 136 countries were involved (Europe – 39; Asia Pacific – 32; Latin America and the Caribbean – 23; Sub-Saharian Africa – 22; Middle East – North Africa (MENA) – 18; and North America – 2)—table 2 lists all these countries. Eighty-eight countries represent Western culture, Islamic culture is followed by third-two countries, Confucian culture is represented by thirteen countries, and Hindu culture is represented

by three countries researched. From an economic perspective, twenty-four countries are emerging, twenty-three developed, and twenty-four are considered frontier countries.

## [Insert Table 2]

In our collection of eighty studies, we have thirty-five articles focusing on emerging countries, twenty-eight on developed countries, three on frontier countries, ten with a global perspective, and four encompassing both emerging and developed countries. Regarding cultural contexts, thirty articles pertain to countries with Confucian culture, fifteen to Western culture countries, ten to Hindu culture countries, five to Islamic culture countries, and twenty to countries with mixed cultures.

#### 3.1.3 Most Prolific Contributors

We pinpoint the key journals and authors using VOSviewer software. Our study highlights ten premier journals, determined by a) the total count of published papers and b) the number of citations. The journals that meet these standards at the highest level are detailed in Table 3.

## [Insert Table 3]

The Pacific-Basin Finance Journal is the top publication, with seven papers published and the second most cited, with 137 citations. The first one in the number of citations is the Journal of Empirical Finance. The journals that appeared in both rankings are Pacific- Basin Finance Journal (first in publications and second in citations), Journal of International Financial Markets Institutions & Money (second in publications and eighth in the number of citations), Journal of Behavioral and Experimental Finance (third in both rankings), and Financial Management (seventh in publications and fifth in citations).

A similar procedure was made to identify the top institutions based on a) the number of articles written by its researchers and b) the number of citations received. Table 4 shows the results of the most prolific institutions regarding the number of papers and citations received.

## [Insert Table 4]

The Chinese Culture University in Taiwan is the most productive institution among our sample, while Leibniz University Hannover in Germany is the most cited. The Chinese Culture University (first in productivity and fourth in citation), Auckland University of Technology in New Zealand (third and second, respectively), Curtin University in Australia (fourth in productivity and fifty in citations), National Cheng Kung University in Taiwan (ninth in publications and eleventh in citations), Washington State University (fifth in production and twelfth in citations), Monash University in Australia (sixth and fourteenth), and University of Tokyo (seventh in productivity and fifteenth in number of citations) are top 15 in both rankings.

Table 5 shows the top influential authors based on a) the number of papers written and b) the number of citations received, as well as their institutions and countries.

## [Insert Table 5]

Yi-Hsien Wang from the Department of Banking & Finance at Chinese Culture University in Taiwan is the most productive author with three papers in our sample, and Maik Schmeling from the Department of Economics at Leibniz Universität Hannover in Germany is the author who most received citations at the date.

Table 6 presents the top-cited articles. The most cited paper is "Investor Sentiment and Stock Returns: Some International Evidence" (Schmeling, 2009), with 420 citations. The study examines the impact of investor confidence on the anticipated returns of stocks

in 18 developed countries. The results indicate a negative correlation between sentiment and overall stock market returns across these nations - when sentiment is high, future returns are typically lower, and the opposite is true. The research further reveals that the sentiment's effect on stock returns is more significant in countries with less market integrity and a cultural tendency towards herd mentality and overreaction.

The research by Chang and Lin (2015), "The Effects of National Culture and Behavioral Pitfalls on Investors Decision-making: Herding Behavior in International Stock Markets," is the second most cited. This research focuses on identifying the factors influencing investor decisions in global stock markets, emphasizing the impact of national culture and behavioral biases. They find that Confucian and less advanced equity markets are prone to herding behaviors. The research also establishes a significant correlation between national culture indices and the manifestation of herding. It also indicates that behavior biases, such as excessive optimism and weaker disposition effects, have a substantial role in investors' propensity to herd.

## [Insert Table 6]

The third most cited paper is from Fernades-Perez et al. (2021) – "COVID-19 pandemic and stock market response: A culture effect". This study is pioneering in exploring how national culture impacts stock market responses to a worldwide health disaster. The research finds that in countries with less individualism and more uncertainty avoidance, stock markets saw more significant drops and heightened volatility during the initial three weeks after the country's first COVID-19 case was announced.

## 4. Content Analysis

## 4.1 National Culture and Investors' Behavior Biases

Within our sample, thirty-two papers include Hofstede's cultural dimensions, and twenty-six referred to investors' behavioral biases (only thirteen studies both domains simultaneously, which indicates opportunities for future research). Table 7 shows the papers with Hofstede's cultural dimensions, and Table 8 presents studies with behavioral biases.

## [Insert Table 7]

Herding is the most recurrent behavioral bias in our sample. The herd effect was globally researched along with the dimension of uncertainty aversion (Schmeling, 2009), Hofstede's five dimensions (except indulgence) by Chang and Lin (2015), and the six dimensions of Hofstede by Zhan (2019). In Europe, it was studied along with the dimensions of individualism and uncertainty aversion (Beer *et al.*, 2018) and with five dimensions of Hofstede (except indulgence) by Danrimi et al., 2018. Japan and Bangladesh (Ahmed *et al.*, 2022) were the countries individually studied to assess the herd effect. In the case of Japan, the study was along with the dimension of individualism (Afego, 2018).

## [Insert Table 8]

These studies conclude that herding is more likely to occur in countries: (i) with a collective profile (Schmeling, 2009); (ii) with Confucian philosophy (Chang & Lin, 2015) as in the case of Japan (Afego, 2018); (iii) with a high degree of uncertainty aversion (Schmeling, 2009; Beer et al., 2018); (iv) high level of power distance (Chang & Lin, 2015); (v) low level of individualism (Chang & Lin, 2015; Beer et al., 2018; Zhan, 2019); (vi) low level of masculinity (Chang & Lin, 2015; Danrimi et al., 2018); (vii) excess optimism, low overconfidence, and high disposition effect (Chang & Lin, 2015). The herd effect was also detected in Bangladesh, suggesting that cultural mindset and political

developments in the country, especially in proximity to elections, influence the investor's decision-making process (Ahmed et al., 2022).

Overconfidence was the topic investigated in the bias of individual investor behavior in four studies. Three of these studies were conducted globally. One considers Hofstede's dimensions of individualism and uncertainty avoidance (Nguyen & Truong, 2013), and another considers the dimensions of individualism and long-term orientation (Docherty & Hurst, 2018). More recently, the third study analyzed investor overconfidence before and during COVID-19 (Shrotryia & Kalra, 2023). The fourth research investigated whether the difference in trading volume between men and women in Europe could be related to the phenomenon of overconfidence attributed to the male sex (Cueva et al., 2019).

The main findings of these studies are: (i) overconfidence, individualism, and short-term orientation do not explain the myopia of the investor more focused on short-term stock price changes than on long-term fundamentals (Docherty & Hurst, 2018); (ii) Before COVID-19 pandemia, overconfidence was detected in Japan, the United States, China, and Vietnam but during the pandemia, overconfidence remained in China and Vietnam and was detected in Taiwan, Turkey, and Jordan, showing that none of the developed stock markets revealed a strong bias of overconfidence during the pandemic, suggesting a loss or decline in investor confidence (Shrotryia & Kalra, 2023); (iii) The informational content of stock markets is higher in more individualistic countries (associated with overconfidence, self-attribution biases, and high risk preference) and countries with low uncertainty avoidance (Nguyen & Truong, 2013; Danrimi et al., 2018); (iv) The disparity between men and women in stock trading cannot be attributed to overconfidence. Risk aversion, financial literacy, or competitiveness also did not prove

to be determinants to explain the disparity. It may be a combination of these factors or others that have not been studied (Cueva et al., 2019).

Disposition Effect is also presented in four papers. The only global study was Beitmayer et al. (2019), which involved all dimensions of Hofstede. Kohsaka et al. (2018) conducted simulations to study the disposition effect with Japanese university students. Balkanska (2018) studied the disposition effect on investors based on analysts' forecasts of stock prices. Shandu and Alagidede (2022) examined the disposition effect and long-term orientation in South African investors.

The primary conclusions drawn from these studies were: (i) the Disposition Effect becomes more pronounced as risk tolerance for losses increases (Kohsaka et al., 2017); (ii) the Disposition Effect detected in the United States was observed in situations with a wider dispersion of analyst forecasts. It implies that investors tend to sell their profitable investments when they encounter a higher degree of uncertainty in information (Balkanska, 2018); (iii) countries with low levels of Long-Term Orientation are more susceptible to the Disposition Effect (Breitmayer et al., 2019); (iv) countries with low levels of Indulgence are more susceptible to the Disposition Effect (Breitmayer et al., 2019); (v) men are more susceptible than women to the Disposition Effect in South Africa due to lower levels of Long-Term Orientation (Shandu & Alagidede, 2022).

Other biases such as mental account bias (Chen & Chien, 2011; Chen et al., 2017), familiarity (Ng & Wu, 2010), cultural bias (Cheema & Nartea, 2014; Mahendra et al., 2021; Shah, 2023), superstition bias (Chen et al., 2020), representativeness bias (Khan et al., 2021), socially responsibility bias (Garg et al., 2022), and recency bias (Cakici & Zaremba, 2023) are also found in our sample.

From these studies, the only one to be considered global and explore all Hofstede's cultural dimensions is written by Cakici and Zaremba (2023). They claim that investors typically concentrate on recent data, often downplaying the importance of older information. As a result, companies with low recent returns but high past returns tend to outperform those with high recent and low past returns. This mispricing is common in countries with high individualism and shareholder protection. Additionally, it becomes more pronounced after market downturns and during extreme volatility (Cakici & Zaremba, 2023).

The other research that comprises a region is Shah (2023), whose study suggests that, in the Middle East and North Africa (MENA) region, the return on bank stocks is primarily observed in countries that exhibit greater individualism and masculinity, along with lower power distance and uncertainty avoidance. Also, they point out that cultural biases can cause investors to overreact in the stock market (Shah, 2023).

Other investigations are from the Asia-Pacific Region. Five studies have investigated Chinese culture. Their conclusions are: (i) the investment choices of Chinese investors are swayed by their peers who hold accounts at the same brokerage branch through word-of-mouth communication, indicating a familiarity bias (Ng & Wu, 2010); (ii) the cultural tradition of granting sizable bonuses to employees in years of profit is a key contributor to the anomaly of small firms in January, as seen in the Taiwanese stock market. It indicates a house money bias effect (Chen & Chien, 2011; Chen et al., 2017); (iii) the intensity of net purchasing is significantly higher for lots ending with the digit eight compared to other numbers in the Hong Kong stock market. However, the acquisition of information by traders can somewhat mitigate the influence of the lucky-8 superstition. Therefore, investors can restrain their prejudiced conduct in the decision-making process with the aid of information acquisition (Chen et al., 2020); and (iv) it

seems that cultural variances in aspects such as individualism, overconfidence, self-attribution/self-enhancement, and optimism significantly influence the ultimate trajectory of the relationship between Information Uncertainty and both future and momentum returns (Cheema & Nartea, 2014).

From India, Mahendra et al. (2021) assess the presence of an anomaly-based trading strategy for individual and institutional investors and discover that the retrograde motion of Mercury creates an asymmetry or leverage effect in Indian stock indices, positively impacting market returns. Consequently, the effect of cultural factors on behavioral bias in Indian stock indices leads to asymmetric information and market anomalies. Furthermore, Garg et al. (2022) indicate that investors' values (like collectivism and biospheric values), biases (such as social responsibility bias and reliance on expert bias), and their perception of Socially Responsible Investment (SRI) performance positively influence their intentions towards SRI. The research also shows that attitude mediates all hypothesized relationships, except those between collectivism and intention and reliance on expert bias and intention toward SRI. Furthermore, it was found that investors with high social self-efficacy are more likely to intend toward SRI.

Finally, Khan et al. (2021) identified a moderating impact of long-term orientation on the influence of representativeness bias on investment decisions in Pakistan. According to them, this implies that investors' long-term orientation can diminish representativeness bias's impact on investment decisions. Nevertheless, no substantial moderating effect was found for availability bias.

## 4.2 Reinert's Method Analysis

Thorough examinations were carried out utilizing IRaMuTeQ. The software's default parameters were employed in these examinations, which included 40 instances per text

segment, 10 end clusters, and a maximum limit of the 3000 most common forms. The abstracts from our sample of 80 papers were broken down into 337 text segments. Of these, 293 segments, comprising 86.94% of the total, were categorized into four classes.

The theme of investor behavior and culture is divided into two main categories. The first category, related to investors' behavior, is subdivided into two clusters: 'Culture, Information and Behavior', accounting for 38.91% of the theme, and 'Cultural Factors and Behavior', making up 13.65%. The second category focuses on the decision-making process of investors. It is also divided into two clusters: 'Social Responsibility and Cultural Preferences', which constitutes 23.55% of the theme, and 'Culture and Investors' Decision-Making', representing 23.89% of the theme. These classes comprehensively understand how culture and behavior influence investors' decisions.

Fig. 3 shows these clusters with the most significant words of each class and their  $\chi^2$  values ( $\chi^2$  greater than 3.85 means statistically significant at 95% level) and suggestions for future research topics.

# [Insert Fig. 3]

# 4.3 Correspondence Analysis

Fig. 4 shows the correspondence analysis of the cluster's vocabulary and the positioning of words from each class to one another. Correspondence Analysis is a method for visualizing data through counts, compositions, or other ratio-scale data. It gives different levels of importance to the rows and columns according to their margins. Correspondence Analysis is part of a broader set of techniques that rely on singular value decomposition, and it can be considered the counterpart of Principal Component Analysis for categorical or ratio-scale data. The technique utilizes the margins as weights to perform the traditional

scale of rows and columns based on their interpoint chi-square ( $\chi^2$ ) distances (Greenacre, 2010). Fig. 4 shows the positioning of words from each class to one another.

## [Insert Fig. 4]

Through the classes' vocabulary distribution, the horizontal axis can be interpreted as cultural preferences ranging from general socio-responsibilities to specific cultural aspects, such as astronomy in India and superstitions in Chinese culture. The vertical axis can be interpreted as investors' behavior and information. It can also be observed that the classes' Social Responsibility and Cultural Preferences' and 'Culture and Investors' Decision-Making' are intertwined, indicating the influence, conscious or not, of cultural preferences on investors' decisions.

Fig. 5 depicts the most relevant words in the papers that researched developed countries, emerging countries, frontier countries, and global approaches. In developed countries' related articles, the words reveal a mainly herd approach (Schmeling, 2009; Afego, 2018; Beer et al., 2018; Danrimi et al., 2018) and concern with abnormal returns (Huang, 2015; Ferretti & Sciandra, 2022; Nakajima & Inaba, 2022), as well as the effect of market information (Afego, 2018; Balkanska, 2018; Qadan & Zoua'bi, 2019; Chen et al., 2020; Gutsche et al., 2021) such as company reports (Adachi et al., 2017; Danrimi et al., 2018; Ferretti & Sciandra, 2022; Nakajima & Inaba, 2022) and news (Azuma et al., 2014; Chia et al., 2015; Huang, 2015; Aman et al., 2023).

## [Insert Fig. 5]

On the other hand, studies with emerging countries are related to Chinese bonus culture (Chen & Chien, 2011; Chen et al., 2017), investment and trading strategies (Duxbury & Yao, 2017; Lingaraja et al., 2019; Mahendra et al., 2021; Sharma et al., 2021), investors' decisions (Ng & Wu, 2010; Jalilvand et al., 2018; Bondia et al., 2019;

Misra et al., 2019; Misra et al., 2020; Khan et al., 2021; Shandu & Alagidede, 2022; Vyas et al., 2022; Tran & Tran, 2023), and investors' risk perception (Wang et al., 2006; Singh & Bhattacharjee, 2019). The words from Frontiers market research are related to investors' perspectives (Speidell, 2009) and the relationship between investors' behavior factors and investment performance (Ahmed et al., 2022).

In the case of Global studies, the most prominent words referred to investors' mood studies (Abu Bakar et al., 2014; Bergsma & Jiang, 2016), research related to COVID-19 (Fernandez-Perez et al., 2021; Shrotryia & Kalra, 2023), culture (Chang & Lin, 2015; Bergsma & Jiang, 2016; Breitmayer et al., 2019), stock market volatility and movement (Zhan, 2019), and information (Nguyen & Truong, 2013; Docherty & Hurst, 2018).

A significant distinction observed in studies from developed and emerging nations is the frequent appearance of the term' government' in the latter (for instance, Azzi & Suchard, 2019; Shah, 2023; Tran & Tran, 2023), which is absent in the former. Conversely, the term 'corporate' is commonly found in studies from developed countries (Smith et al., 2010; Durand et al., 2013; Nakai et al., 2018; Ferretti & Sciandra, 2022; Nakajima & Inaba, 2022; Aman et al., 2023). However, in the context of emerging countries, it is only mentioned in the study's abstract by Vyas and Metha (2022).

In summary, papers from developed countries have been dealing with the influence of company information on investors' behavior and the determinants of herding and abnormal returns on the stock market; from emerging countries, authors are investigating investors' strategies, risk perceptions, decision-making process, and government role; from frontier countries, investigators are working on investors' perspectives and the relationship between investors' behavior factors and investment performance; and in a global basis, authors are investigating investors' reaction

influenced by factors such as culture, information and the consequences like herding, volatility, and movements.

Fig. 6 shows the most relevant words in the articles researched in Western, Confucian, Hindu, and Islamic countries. In Western countries, financial behaviors such as herding (Beer et al., 2018; Danrimi et al., 2018), sentiment (Schmeling, 2009; Beer et al., 2018; Liston-Perez et al., 2018; Qadan & Zoaua'bi, 2019; Ferretti & Sciandra, 2022), and disposition effect (Balkanska, 2018; Shandu & Alagidede, 2022) and together with 'financial' (Forner & Sanabria, 2010; Kushnirovich, 2016; Balkanska, 2018; Danrimi et al., 2018; Cueva et al., 2019; Lee, Switzer, and Wang, 2019; Qadan & Zoaua'bi, 2019; Ferretti & Sciandra, 2022) are the most important words in these articles.

For Confucian countries-related studies, January is an important month in Chinese culture (Chen & Chien, 2011; Chia et al., 2015; Chen et al., 2017). The word 'trader' (Chen et al., 2020; Hung et al., 2020), 'transaction' (Duxbury & Yao, 2017; Azzi & Suchard, 2019; Chang, 2020), 'reaction' (Nakajima & Inaba, 2022; Omori & Kitamura, 2023; Zeng et al., 2023), and 'momentum' (Hood et al., 2013; Cheema & Nartea, 2014; Afego, 2018) complement the set of most relevant words in these papers.

## [Insert Fig. 6]

For papers from Hindu countries, the most important words reflecting investor's behavior – 'intention' (Garg *et al.*, 2022; Sourirajan & Perumandla, 2022), 'perception' (Singh & Bhattacharjee, 2019), bias (Bondia *et al.*, 2019; Mahendra *et al.*, 2021) and 'social' aspects (Misra *et al.*, 2019; Sharma & Chakraborty, 2021) for the 'investment' (Vyas *et al.*, 2022) 'decision' (Misra *et al.*, 2020).

Research made from Islamic countries showed these relevant words: 'price' (Lobao, 2023), 'performance' (Jalilvand et al., 2018; Ahmed et al., 2022), 'volatility (Wasiuzzaman, 2018), and 'decision' (Khan et al., 2021).

Overall, while Western authors are dealing with the causes and consequences of investors' behaviors, investigating cultural preferences and information influences, Confucian scholars are focusing on understanding the consequences of cultural aspects (mainly in Chinese culture) and information (especially in Japan) and their influences on investors' behavior. Meanwhile, Hindus investigate cultural factors to reflect investors' intentions and perceptions. Islamic authors are working on understanding the performance and investors' decision-making influenced by cultural preferences.

## 5. Concluding remarks

This research utilizes bibliometrics and a systematic literature review, adhering to the five-step method suggested by Khan et al. (2003). We scrutinized and evaluated 80 articles from 2006 to 2023 from the Web of Science database. VOSviewer and IRaMuTeQ software tools were employed for bibliometric and content analyses, respectively. Our exploration covers the most and least researched countries, influential journals, authors, and articles. Our content analysis starts with thoroughly understanding papers concerning national culture and behavioral biases. The content analysis categorizes the theme of investor behavior and culture into two primary categories: (i) investor behavior, further divided into two clusters: 'Culture, Information and Behavior' and 'Cultural Factors and Behavior', and (ii) the decision-making process of investors, also split into two clusters: 'Social Responsibility and Cultural Preferences', and 'Culture and Investors' Decision-Making'. These categories offer a holistic understanding of the impact of national culture on investors' behavior decisions. By conducting a word correspondence analysis, we scrutinize the papers based on the researched country or region, their economic status,

and cultural philosophy, which allows us to propose potential topics for future research. We, thus implement a research strategy that ensures the reproducibility of our findings, which underscore the complexity and diversity of investor behavior across different national cultures, highlighting the need for further research in this area. A potential limitation of our study could be an avenue for future systematic literature reviews that might explore the theme using other databases like Scopus and Google Scholar. This study serves as a valuable resource for future research, offering insights that can help shape the direction of subsequent investigations into the intricate relationship between national culture and investor behavior.

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Fig. 1 – Research Methodology

#### Step 1 - Research Questions

What are the main themes linking national culture and individual investor behavior in the stock market? What are the most and least researched countries in these themes? What are the most prolific contributors (journals, affiliations, authors)? What are the most cited articles?

# Step 2 – Locate Relevant Studies Database: Web of Science

#### Step 3 – Selecting and Evaluating Papers

#### Step 3a – Search

Search Term: ('power distance' OR 'uncertainty avoidance' OR individualism OR collectivism OR masculinity OR femininity OR 'long term orientation' OR 'short term orientation' OR indulgence OR restraint OR cultur\*) AND behavio\$r\* AND investor\* 

544 documents

Step 3b - Filtering

WoS Categories: Business OR Business Finance OR Economics

Document type: article

**Language:** English ⇒ 314 articles

Step 3c - Final Sample

The exclusion of articles does not relate to individual investors in the stock market \$\infty\$ 80 articles

## Step 4 – Analyzing and Synthesizing the Studies

Bibliometric Analysis

Content Analysis

## Step 5 – Reporting findings and insights

Influential aspects

- a) Most prominent Journals
- b) Most Productivity Affiliations
- c) Most Cited and Prolific Authors
- d) Most cited articles
- a) Articles Themes by Published Years
- b) Most and Least Researched Countries
- c) Comprehensive Analysis of National Culture and Behavior Biases Papers
- d) Themes Clustering
- e) Correspondence Analysis
- f) Word Analysis by Countries Researched
- e) Future Research Topics

Fig. 2 Publication Years

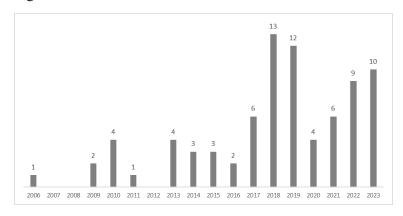


Fig. 3 - Categorization and Future Research Topics

Cluster	Keyword	χ²	Future Research Topics
	company	31,69	-Are investors' behavioral biases and risk preferences in the capital markets identical t
	return	17,04	those suggested by the cultural indexes?
	sentiment	16,43	-How does mood impact understanding daily stock price patterns, such as that around
	abnormal	14,58	merger announcements?
Culture,	uncertainty	14,33	-How do cultural differences influence information uncertainty's impact on
Information, and	january	13,55	overconfidence and stock returns?
Behavior	juridary	13,55	- How are the information effects of advertising over a longer time horizon and on
(38.91%)	information	12,23	different types of investors?
(38.31%)			-Since investors focused on recent information only, underestimating the relevance of
	bonus	11,26	data from the distant past, what are the effects of this bias on commodities,
	avaidanaa	0.76	cryptocurrencies, or corporate bonds?
	avoidance	9,76	-How additional information provided by firms may affect an investor's updated
	individualism	9,76	interpretation over time
Cluster	Keyword	$\chi^2$	Future Research Topics
CIUSCEI	indices	45.05	rature research ropies
	lunar	38,05	-
		32,39	- How do cultural factors suggest different investors' behaviors in stock markets?
	garch	,	<del></del>
Cultural Factors	cover phase	32,17 32,17	<ul> <li>How do calendar anomalies with cultural influences such as Chinese New Year affectinvestors' moods?</li> </ul>
and Behavior	i		-
(13.65%)	moon	32,17	- How does culture or religion influence investor behavior?
	mercury	32,17	- What impacts stock market returns due to weather, temperature, and calendar?
	cycle	32,17	- What are the effects of culture on the exchange rate?
	retrogratory	25,65	
	asymmetric	25,65	
Cluster	Keyword	$\chi^2$	Future Research Topics
	social	48,36	
	investment	42,08	- Could investor confidence be explained through cultural factors and traditional savin
Control	intention	26,70	habits?
Social	socially	23,28	- Are risk tolerance and investment behavior different not only through culture but als
Responsibility and	responsible	19,89	for the investor's generation?
Cultural	goal	19,89	- To what extent can the effect of regularly talking about investments be traced back
Preferences	risk	17,45	social signaling or word-of-mouth learning across countries?
(23.55%)	habit	16,51	- What are the drivers for socially responsible investment across cultures?
	perception	15,39	
	awareness	13,17	
	•		<del>,</del>
Cluster	Keyword	$\chi^2$	Future Research Topics
	role	30,62	- Do peer effects significantly contribute to the phenomenon of local bias?
	emerge	27,70	-What possible connections exist between individuals' time preferences and the
			-What possible connections exist between individuals' time preferences and the tendency to exhibit the disposition effect in their investment behavior?
Culture and	emerge	27,70	tendency to exhibit the disposition effect in their investment behavior?
Culture and Investors'	emerge market	27,70 17,38	tendency to exhibit the disposition effect in their investment behavior?
	emerge market contrast	27,70 17,38 16,21	tendency to exhibit the disposition effect in their investment behavior? - What is the estimated impact on investor welfare from succumbing to the dispositio
Investors'	emerge market contrast play	27,70 17,38 16,21 14,83	tendency to exhibit the disposition effect in their investment behavior?  - What is the estimated impact on investor welfare from succumbing to the dispositio effect?
Investors' Decision-Making	emerge market contrast play investor	27,70 17,38 16,21 14,83 13,60	tendency to exhibit the disposition effect in their investment behavior?  - What is the estimated impact on investor welfare from succumbing to the dispositio effect?  - How do we understand the dynamics of investors in emerging markets?  - What is the buying decision of individual investors in the stock market?
Investors' Decision-Making	emerge market contrast play investor find	27,70 17,38 16,21 14,83 13,60 12,92	tendency to exhibit the disposition effect in their investment behavior?  - What is the estimated impact on investor welfare from succumbing to the dispositio effect?  - How do we understand the dynamics of investors in emerging markets?

Fig. 4 – Correspondence Analysis

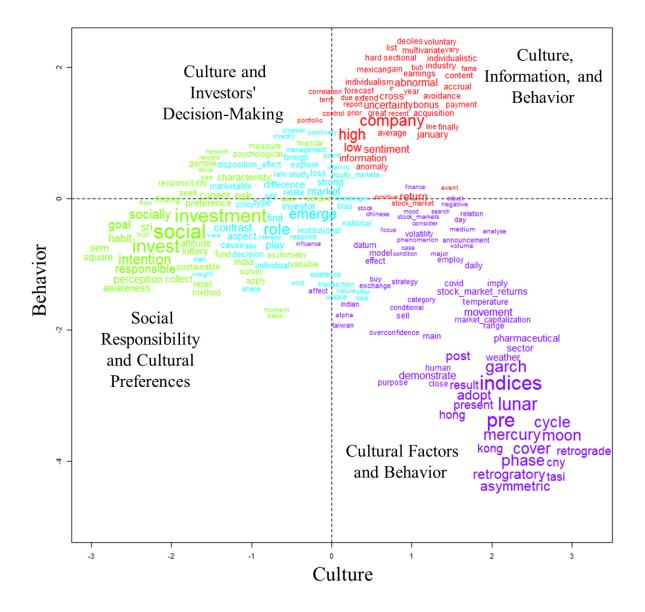


Fig. 5 – Word Analysis by Researched Countries' Economy Situation

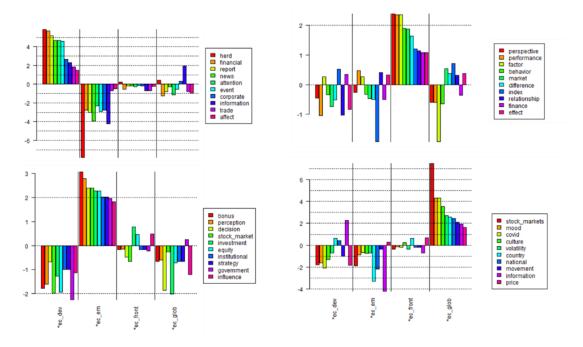


Fig. 6 – Word Analysis by Researched Countries' Culture

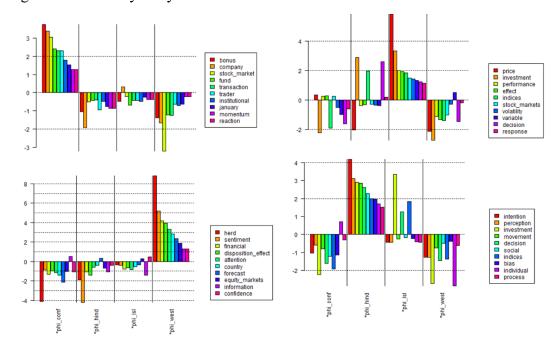


Table 1 – Countries Productivity

Country	Authors
United States	19
Taiwan	12
India	11
Japan	10
China	8
Australia	5
Malaysia	5
France	4
New Zealand	4
Canada	3
England	3
Germany	3
Italy	3
U Arab Emirat	3

Table 2 – Countries researched

Rk	Country	#	Rk	Country		Rk	Country	#	Rk	Country	#
1	Japan	25	36	Chile		71	Slovakia	3	106	Haiti	1
2	India	23	37	Philippines		72	Bahrain	2	107	Honduras	1
3	Taiwan	20	38	Poland	9	73	Botswana	2	108	Iceland	1
4	China	19	39	South Korea	9	74	Costa Rica	2	109	Iran	1
5	United States	19	40	Turkey	9	75	Georgia	2	110	Iraq	1
6	Spain	16	41	Colombia	8	76	Ghana	2	111	Laos	1
7	Italy	15	42	Czech Republic	8	77	Ivory Coast	2	112	Libya	1
8	Belgium	14	43	Romania	8	78	Kazakhstan	2	113	Macedonia	1
9	Germany	14	44	Hungary	7	79	Mauritius	2	114	Madagascar	1
10	Netherlands	14	45	Qatar	7	80	Mongolia	2	115	Malta	1
11	United	14	46	United Arab	7	81	Namibia	2	116	Moldova	1
	Kingdom			Emirates		00					
12	Austria	13	47	Egypt	6	82	Serbia	2	117	Mozambique	1
13	Finland	13	48	Peru	6	83	Tunisia	2	118	Myanmar	1
14	France	13	49	Russia	6	84	Ukraine	2	119	Nepal	1
15	Ireland	13	50	Saudi Arabia	6	85	Zambia	2	120	Nicaragua	1
16	Israel	13	51	Slovenia	6	86	Afghanistan	1	121	Palestine	1
17	Sweden	13	52	Sri Lanka	6	87	Albania	1	122	Papua	1
18	Australia	12	53	Bangladesh	5	88	Algeria	1	123	Paraguay	1
19	Denmark	12	54	Croatia	5	89	Angola	1	124	Rwanda	1
20	Hong Kong	12	55	Venezuela	5	90	Armenia	1	125	Senegal	1
21	Malaysia	12	56	Vietnam	5	91	Azerbaijan	1	126	Suriname	1
22	Pakistan	12	57	Bulgaria	4	92	Belarus	1	127	Swaziland	1
23	Portugal	12	58	Estonia	4	93	Benin	1	128	Tajikistan	1
24	Singapore	12	59	Jordan	4	94	Bolivia	1	129	Tanzania	1
25	Canada	11	60	Kuwait	4	95	Bosnia	1	130	Trinidad Tobago	1
26	Greece	11	61	Latvia	4	96	Burkina	1	131	Uganda	1
27	Mexico	11	62	Lithuania	4	97	Faso Cambodia	1	132	Uruguay	1
28	New	11	63	Luxembourg	4	98	Cameroon	1	133	Uzbekistan	1
	Zealand			Luxemoourg			Cumeroon			OZOCKISTAN	
29	Norway	11	64	Morocco	4	99	Cyprus	1	134	West Sahara	1
30	Switzerland	11	65	Oman	4	100	Dominican	1	135	Yemen	1
31	Indonesia	10	66	Jamaica	3	101	Ecuador	1	136	Zimbabwe	1
32	South Africa	10	67	Kenya	3	102	El Salvador	1			
33	Thailand	10	68	Lebanon	3	103	Gabon	1			
34	Argentina	9	69	Nigeria	3	104	Guatemala	1			
35	Brazil	9	70	Panama	3	105	Guyana	1			

Table 3 – Most Prolific Journals

Rank	Name of Journal	Paper	Rank	Name of Journal	Citation
1	Pacific-Basin Finance	7	1	Journal of Empirical	420
	Journal			Finance	
2	Journal of	5			
	International Financial		2	Pacific-Basin Finance	127
	Markets Institutions &		2	Journal	137
	Money				
3	Journal of Behavioral	4	3	Journal of Behavioral	87
	and Experimental			and Experimental	
	Finance			Finance	
4	Review of Behavioral	4	4	International Review of	69
	Finance			Economics & Finance	
5	Economics Letters	2	5	Financial Management	66
	European Journal of	2	6	Journal of Business	62
6	Finance			Economics and	
				Management	
7	Financial	2	7	Journal of Accounting	56
	Management			and Public Policy	
8	International Journal	2	8	Journal of International	46
	of Managerial Finance			Financial Markets	
	•			Institutions & Money	
9	International Review	2	9	Journal of Economic	45
	of Financial Analysis			Psychology	
10	Journal of Behavioral	2	10	Review of Financial	40
	Finance			Studies	

Table 4 – Top Affiliations

Rank	<b>Affiliation</b>	<b>Country</b>	<b>Paper</b>	Rank	<b>Affiliation</b>	<b>Country</b>	<u>Cita</u>
1	Chinese Culture University	Taiwan	7	1	Leibniz University Hannover	Germany	420
2	National Changhua University of Education	Taiwan	3	2	Auckland University of Technology	New Zealand	84
3	Auckland University of Technology	New Zealand	2	3	National University Kaohsiung	Taiwan	69
4	Curtin University	Australia	2	4	Chinese Culture University	Taiwan	68
5	Washington State University	United States	2	5	Curtin University	Australia	57
6	Monash University	Australia	2	6	American University	United States	56
7	University of Tokyo	Japan	2	7	University of Richmond	United States	56
8	Universitat d'Alacant	Spain	2	8	Virginia Commonwealth University	United States	56
9	National Cheng Kung University	Taiwan	2	9	Chinese Academy of Sciences	China	45
10	Waseda University	Japan	2	10	University of Illinois	United States	45
11	Amity University Noida	India	2	11	National Cheng Kung University	Taiwan	43
12	Concordia University	Canada	2	12	Washington State University	United States	43
13	Dayalbagh Educational Institute	India	2	13	Michigan State University	United States	40
14	Indian Institute of Technology	India	2	14	Monash University	Australia	38
15	University of Delhi	India	2	15	University of Tokyo	Japan	38

Table 5 – Most Productive Authors

<b>Author</b>	uthor <u>Institution</u>		<b>Paper</b>	<u>Citat</u>
Wang, Yi-Hsien	Chinese Culture University	Taiwan	3	63
Nguyen, Nhut H.	Auckland University of	New Zealand	2	84
	Technology			
Nakai, Miwa	Kobe University	Japan	2	16
Lee, Seungho	University of Aberdeen	Scotland	2	12
Misra, Rupali	Dayalbagh Educational	India	2	12
	Institute			
Srivastava, Sumita	Amity University	India	2	12
Chang, Matthew C.	Chinese Culture University	Taiwan	2	2
Schmeling, Maik	Leibniz Universität	Germany	1	420
	Hannover			
Chang, Chih-	National University of	Taiwan	1	69
Hsiang	Kaohsiung			
Lin, Shih-Jia	National University of	Taiwan	1	69
	Kaohsiung			
Fernandez-Perez,	Auckland University of	New Zealand	1	60
Adrian	Technology			
Gilbert, Aaron	Auckland University of	New Zealand	1	60
	Technology			
Indriawan, Ivan	Auckland University of	New Zealand	1	60
	Technology			
Adhikari, Ajay	American University	United States	1	56
Andrews, Robert L.	Virginia Commonwealth	United States	1	56
	University			
Smith, Joyce an der	University of Richmond	<b>United States</b>	1	56
Laan				
Tondkar, Rasoul H.	Virginia Commonwealth	United States	1	56
	University			

Table 6 – Most cited articles

Author(s)	<u>Title</u>	<u>citations</u>
Schmeling (2009)	Investor sentiment and stock returns: Some international evidence	420
Chang & Lin (2015)	The effects of national culture and behavioral pitfalls on investors decision-making: Herding behavior in international stock markets	69
Fernandez-Perez et al. (2021)	COVID-19 pandemic and stock market response: A culture effect	60
Smith et <i>al.</i> (2010)	The impact of corporate social disclosure on investment behavior: A cross-national study	56
Wang et al. (2013)	An Investor's Perspective on Infectious Diseases and their Influence on Market Behavior	54
Wang et al. (2006)	Psychological mechanisms of investors in Chinese Stock Markets	45
Huang (2015)	Thinking Outside the Borders: Investors' Underreaction to Foreign Operations Information	40
Ng & Wu (2010)	Peer Effects in the Trading Decisions of Individual Investors	36
Adachi <i>et al.</i> (2017)	Google search intensity and its relationship to the returns and liquidity of Japanese startup stocks	33
Bergsma & Jiang (2016)	Cultural New Year Holidays and Stock Returns around the World	30
Cheema & Nartea (2014)	Momentum returns and information uncertainty: Evidence from China	30
Durand <i>et al</i> . (2013)	The price of sin in the Pacific-Basin	27
Abu Bakar <i>et al.</i> (2014)	Does Mood Explain the Monday Effect?	25
Nguyen & Truong (2013)	The information content of stock markets around the world: A cultural explanation	24
Hood et al. (2013)	Investor response to a natural disaster: Evidence from Japan's 2011 earthquake	24

Table 7 – Papers with Hofstede's Culture Dimensions

<b>Culture Dimension</b>	Author(s)	Title
Only Individualism / Collectivism	Forner and Sanabria	Post-Earnings Announcement Drift in Spain and Behavioural Finance Models
	(2010) Durand <i>et al.</i> (2013)	The price of sin in the Pacific-Basin
	Chema and Nartea (2014)	Momentum returns and information uncertainty: Evidence from China
	Berk <i>et al</i> . (2017)	Psychological price barriers in frontier equities
	Todea and Buglea (2017)	Individualism and stock price reaction to market-wide information
	Afego (2018)	Index shocks, investor action and long-run stock performance in Japan: A case of cultural behaviouralism?
	Liston-Perez (2018)	Does investor sentiment predict Mexican equity returns?
	Lee, Switzer, and Wang (2019)	Risk, culture and investor behavior in small (but notorious) Eurozone countries
	Garg <i>et al</i> . (2022)	As you sow, so shall you reap: Assessing drivers of socially responsible investment attitude and intention
	Lee <i>et al</i> . (2023)	Information asymmetry, east-west cultural differences, and divergence in investor reactions
	Sourirajan and Perumandla (2022)	Do emotions, desires and habits influence mutual fund investing? A study using the model of goal-directed behavior
	Vyas et al. (2022)	Investigating socially responsible investing behaviour of Indian investors using structural equation modelling
Only Masculinity/Feminini ty	Smith <i>et al</i> . (2010)	The impact of corporate social disclosure on investment behavior: A cross-national study
Only Short-Long term Orientation	Khan <i>et al</i> . (2021)	The impact of heuristic biases on investors' investment decision in Pakistan stock market: moderating role of long-term orientation
	Shandu and Alagidede (2022)	The disposition effect and its manifestations in South African investor teams
Only Uncertainty Avoidance	Schmeling (2009)	Investor sentiment and stock returns: Some international evidence
	Bondia <i>et al</i> . (2019)	The unspoken facets of buying by individual investors in the Indian stock market

	Tran and Tran (2023)	Stock markets' reaction to COVID-19: the joint impact of uncertainty avoidance culture and government response-evidence from emerging countries
	Zeng <i>et al</i> . (2023)	Will investors' excitement last? Determinants of investors' responses to cross-border acquisitions by Chinese firms
Individualism + Uncertainty	Nguyen and Truong (2013)	The information content of stock markets around the world: A cultural explanation
Avoidance	Abu Bakar <i>et al.</i> (2014)	Does Mood Explain the Monday Effect?
	Beer <i>et al</i> . (2018)	Investors' sentiment and accruals anomaly: European evidence
	Fernandez-	COVID-19 pandemic and stock market
	Perez <i>et al.</i> (2021)	response: A culture effect
Individualism +	Docherty and	Investor Myopia and the Momentum
Long-Term	Hurst (2018)	Premium across International Equity
Orientation		Markets
Power Distance + Individualism + Masculinity +	Huang (2015)	Thinking Outside the Borders: Investors' Underreaction to Foreign Operations Information
Uncertainty Avoidance	Shah (2023)	Has the heterogeneity of culture, investor sentiment and uncertainty altered bank stock returns in the MENA region?
Power Distance + Individualism + Masculinity + Uncertainty	Chang and Lin (2015)	The effects of national culture and behavioral pitfalls on investors decision-making: Herding behavior in international stock markets
Avoidance + Long term Orientation	Danrimi <i>et al.</i> (2018)	Investors' herding practice: do IFRS and national economic culture matter?
Power Distance + Individualism +	Breitmayer <i>et</i> al. (2019)	Culture and the Disposition Effect
Masculinity +	Chen et al.	Socially Responsible Investment by
Uncertainty	(2019)	Generation Z: a cross-cultural study of
Avoidance + Long		Taiwanese and American investors
term Orientation + Indulgence	Zhan (2019)	Individualism, synchronized stock price movements, and stock market volatility
	Cakici and Zaremba	Recency bias and the cross-section of international stock returns
	(2023)	

Table 8 – Papers with Investors' Behavioral Biases Discussion

Bias	Author(s)	Title
Herding	Schmeling	Investor sentiment and stock returns: Some
	(2009)	international evidence
	Chang and	The effects of national culture and behavioral
	Lin (2015)	pitfalls on investors decision-making: Herding
		behavior in international stock markets
	Afego	Index shocks, investor action and long-run stock
	(2018)	performance in Japan: A case of cultural
		behaviouralism?
	Beer et al.	Investors' Sentiment and Accruals Anomaly:
	(2018)	European Evidence
	Danrimi <i>et</i>	Investors' herding practice: do IFRS and national
	al. (2018)	economic culture matter?
	Zhan (2019)	Individualism, synchronized stock price
		movements, and stock market volatility
	Ahmed et al.	Do socio-political factors affect investment
	(2022)	performance?
Overconfidence	Nguyen and	The information content of stock markets around
	Truong	the world: A cultural explanation
	(2013)	
	Docherty	Investor Myopia and the Momentum Premium
	and Hurst	across International Equity Markets
	(2018)	
	Cueva et al.	Boys will still be boys: Gender differences in
	(2019)	trading activity are not due to differences in
		(over)confidence
	Shrotryia	COVID-19 and overconfidence bias: the case of
	and Kalra	developed, emerging and frontier markets
	(2023)	
Disposition	Kohsaka <i>et</i>	Disposition Effect and Diminishing Sensitivity: An
Effect	al. (2017)	Analysis Based on a Simulated Experimental Stock
		Market
	Balkanska	Disposition effect and analyst forecast dispersion
	(2018)	
	Breitmayer	Culture and the Disposition Effect
	et al. (2019)	
	Shandu and	The disposition effect and its manifestations in
	Alagidede	South African investor teams
	(2022)	
Other biases	Ng and Wu	Peer Effects in the Trading Decisions of Individual
	(2010)	Investors
	Chen and	Size effect in January and cultural influences in an
	Chien (2011)	emerging stock market: The perspective of
		behavioral finance
	Cheema and	Momentum returns and information uncertainty:
	Nartea	Evidence from China
	(2014)	

Chen et al.	The role of house money effect and availability
(2017)	heuristic in investor behavior
Chen et al.	Lucky lots and unlucky investors
(2020)	
Khan et al.	The impact of heuristic biases on investors'
(2021)	investment decision in Pakistan stock market:
	moderating role of long-term orientation
Mahendra et	Financial Astrology and Behavioral Bias: Evidence
al. (2021)	from India
Garg et al.	As you sow, so shall you reap: Assessing drivers of
(2022)	socially responsible investment attitude and
	intention
Cakici and	Recency bias and the cross-section of international
Zaremba	stock returns
(2023)	
Shah (2023)	Has the heterogeneity of culture, investor sentiment
	and uncertainty altered bank stock returns in the
	MENA region?