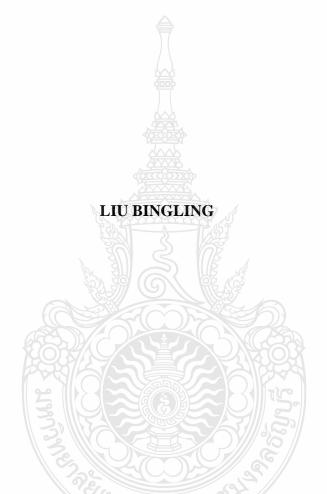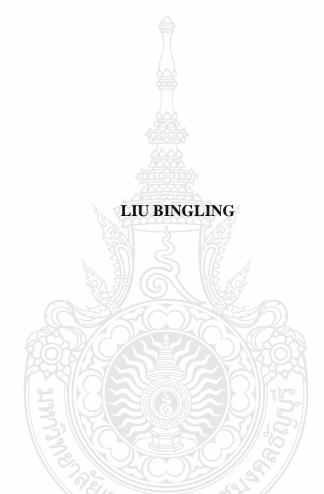# THE ASSOCIATION BETWEEN SOCIAL MEDIA MARKETING AND CONSUMERS' GREEN PRODUCTS PURCHASING INTENTION IN CHINA

LIU BINGLING

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF
PHILOSOPHY PROGRAM IN BUSINESS ADMINISTRATION
FACULTY OF BUSINESS ADMINISTRATION
RAJAMANGALA UNIVERSITY OF TECHNOLOGY THANYABURI
ACADEMIC YEAR 2023
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Dissertation Title	The Association between Social Media Marketing and Consumers' Green Products Purchasing Intention in China
Name – Surname	Mrs. Liu Bingling
Program	Business Administration
Dissertation Advisor	Assistant Professor Kanokporn Chaiprasit, Ph.D.
Academic Year	2023

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ABSTRACT

This study focuses on the impact of social media marketing on consumers' green purchasing behavior in China, and attempts to explain whether and how social media marketing affects consumers' green purchasing behavior in China. In the impact of social media marketing on consumers' purchase of green products, this paper contends that brand equity and brand image play the mediating roles, while product knowledge plays a moderating effect between social media marketing and consumers' purchasing intention of green products.

This article adopts quantitative analysis methods to test the research hypotheses proposed in this article. This study collected 500 first-hand data in the form of a survey questionnaire then processed and analyzed the data using PROCESS and SPSS statistical software.

Results showed that social media marketing has a direct effect on purchasing intention of green products, brand equity mediates social media marketing and purchasing intention of green products, moderated by product knowledge, brand image mediates social media marketing and purchasing intention of green products, moderated by product knowledge. The article introduces the impact and processes of SRHRM. Theoretical implications highlight the novel examination of the relationship between social media marketing, brand image, and consumers' intentions to purchase environmentally friendly products.

Keywords: social media marketing, consumers' green products, purchasing intention, purchasing behavior, brand equity

Acknowledgements

Time flies, and the years slip by like a shuttle weaving through fabric, marking the passage of countless moments that have culminated in this dissertation. Reflecting on this journey, I am filled with a deep sense of gratitude and appreciation for the experiences and people who have supported me along the way.

I would like to express my deepest gratitude to the Faculty of Business Administration at RMUTT for providing me with the academic environment and resources essential for the successful completion of my doctoral studies. The support and encouragement from the faculty and staff have been invaluable throughout my journey.

My heartfelt appreciation goes to my advisor, Assistant Professor Kanokporn Chaiprasit, whose guidance, insight, and unwavering support have been pivotal in shaping this dissertation. Her expertise and constructive feedback have been instrumental in enhancing the quality of my research. I am profoundly grateful for her mentorship, which has inspired and motivated me to persevere and excel.

I am deeply indebted to my family. My husband, Liu Nianzi, has given me boundless patience, love, and support. His understanding and encouragement have been my pillars of strength during the demanding phases of my research. To my three children, Liu Ziyang, Liu Ziyu, and Liu Zixu, thank you for your love and patience. Your smiles and laughter have lightened many challenging days and have been a driving force behind my determination to succeed.

I would also like to extend my gratitude to my fellow classmates. Your camaraderie, intellectual discussions, and mutual support have enriched my academic experience and provided a sense of community. The shared experiences and collective wisdom have been an integral part of my doctoral journey.

In conclusion, this dissertation is a testament to the collective support and encouragement from my academic institution, advisor, family, and peers. I am profoundly grateful to each and every one of you for your contributions to this significant milestone in my life.

Liu Bingling

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CHAPTER 1
INTORDUCTION

1.1 Background of the Study

Economic expansion has resulted in substantial material riches for humanity, yet it has also led to ecological, resource, and environmental crises. Globally, numerous issues have surfaced, including soil contamination, drastic forest diminution, significant loss of soil and water, critical air and water contamination, land desertification and diminution, climate heating, critical ozone layer devastation, species extinction, oceanic environmental challenges, ecosystem deterioration, among others. The robust ascent of the second industrial revolution spurred additional economic growth. Amidst the swift build-up of material riches, individuals have developed the principles of widespread consumption and pleasure-seeking. The widespread centralized approach to production and consumption has inflicted significant harm on the environment, leading to escalating issues like overuse of resources and environmental contamination (Tian, 2017). The predicament of air and water pollution has ensnared Britain, Germany, and various other nations. Western nations required close to a century to finalize their therapy. The evolution of environmental contamination and management in Western nations reveals a shift in human perception of nature, transitioning from a disregard for it to a valuation of it, simultaneously shifting human environmental principles from scientific to scientific. China's industrialization has also paid a huge cost of resources and environment. China's environmental problems have become increasingly prominent, the ecosystem is facing the situation of degradation, and the haze in many regions is serious. Although the overall trend is improving, the environmental pollution still needs to be further curbed. One of the main reasons for ecological environmental problems is that human beings consume natural resources excessively and destroy the environment（Tanner & Wölfing Kast, 2003).

From the perspective of consumers, individual consumption behavior has certain harm to the environment. For example, household appliances using Freon as refrigerant will damage the environment. Freon as refrigerant has been used for hundreds of years because of its low price, good refrigeration effect and strong safety performance.

However, its release into the air will destroy the ozone layer and destroy the ecological environment. Therefore, China has also implemented a ban on fluorine. Agenda 21, unveiled at the United Nations Conference on Environmental Development, identifies environmental degradation due to poor consumption habits as the earth's gravest issue (Guang, 1995). Grunert (1993) revealed that the environmental issues stemming from personal consumption activities constituted 30% to 40% of the total environmental challenges. Na (2015) emphasized that personal consumption patterns play a crucial role in environmental degradation and the squandering of resources. Consequently, in the pursuit of sustainable growth, it's crucial to focus more on altering the ways of consumption and production (Yuan, 2011). Green consumption, emerging as an innovative and eco-friendly model of consumption, has slowly gained prominence in marketing research, marked by a balanced approach to consumption aimed at minimizing environmental harm, promoting environmental conservation, and safeguarding the ecosystem. The evolution of this concept is crucial for the environmental safeguarding and eco-friendly marketing strategies of businesses (Carlson et al., 1993).

Eco-friendly items, being recyclable and remanufactured, serve to reduce environmental contamination and mitigate crises stemming from environmental issues. Consequently, there's a growing awareness among consumers about the significance of eco-friendly consumption. A number of shoppers are of the opinion that COVID-19 perpetuates the notion that neglecting environmental concerns will lead to the return of pandemics and catastrophes, thereby encouraging engagement in eco-friendly practices (Lucarelli et al., 2020). The escalating global environmental emergencies, posing risks to human health and living conditions, are intensifying consumer concerns about environmental matters, leading to a heightened focus on eco-friendly products. The term 'green consumption behavior' denotes a consumer approach that considers personal requirements and ecological conservation during the buying, utilizing, and discarding of products, aiming to reduce the adverse effects of these consumption practices on the environment. The concept of green consumption intention refers to the personal inclination of consumers towards purchasing eco-friendly products and their own voluntary actions. Green consumption is a consumption mode that starts from the consumption link and builds a resource-saving and environment-friendly society, which

is conducive to solving the problem of green development from the source and forming a sustainable and ecological economic growth model (Jin & Lu, 2019). Compared with the traditional consumption mode, green consumption is a consumption mode that reduces environmental pollution and saves natural resources. Developing green consumption can reduce environmental pollution and resource waste caused by individual consumption to a certain extent.

The swift evolution of the Web 2.0 period has resulted in a rapid increase in social media usage, revolutionizing communication methods in both personal and professional spheres. Media has evolved into an essential instrument in societal growth, becoming an integral component of the human anatomy. Media wields significant influence, capable of altering public perceptions and actions unbeknownst to them, steering mainstream media towards a singular agenda, and sidelining any non-conforming noise. Social media encompasses various social networking sites and communication platforms, serving as hubs for creating content and engaging in interactions through online user relationships. On social media, individuals have the ability to exchange their perspectives, experiences, and understandings. Today's society extensively utilizes social media, which plays a significant role in the everyday lives of many. Social media fosters interpersonal connections. People can share their own ideas, share life photos, publish articles, record daily life and record social instant news on social media. Facebook, Twitter, TikTok, WeChat, Pinpin, QQ, Sina Blog and other social platforms have linked China with the world.

The spread of social networks has also enabled more and more people to have a further understanding of new products through the live broadcast platform, stimulate consumers' desire to buy, and let customers stay at home, and can place orders to buy products they like only through the online platform. Similarly, after receiving the goods, consumers can feedback the use of the products to suppliers in a timely manner, so that suppliers can know whether their products are liked by consumers in a short time, and improve the quality of products in a timely manner, thus providing good business opportunities for suppliers to occupy the market. Social media highlights various attributes than traditional media. For example, it highly enhances the integrity of messages. Social media also helps to broaden the scope of word of mouth (WOM) (Islam et al., 2020).

Current scholarly works suggest that social media and social networking platforms are pivotal in influencing consumer decisions. As an illustration, it was discovered that social media significantly and positively influences the continuity of purchases (Islam et al., 2021a). Likewise, studies have verified a positive link between social media usage and the intention to make online purchases by users (Sheikh et al., 2019). Furthermore, there is a notable correlation between social media marketing, social engagements, and ethical conduct (Laksamana, 2018). The role of social media has been pivotal in steering the social and cultural framework towards a more democratic trajectory (Hajli, 2014). As people use social media more and more, it triggers citizens to actively participate in social and environmental challenges, and improves people's social and environmental awareness in the social business environment. For example, people will measure the company's social and environmental conditions and promote improvement practices. Social media also provides people with an environmental warning platform (Haider, 2012). For example, blog is a social media tool that attracts users to talk about their environment-related life.

In the impact of social media marketing and use on consumers' purchase of green products, this paper believes that brand equity and brand image play an intermediary role. Social media marketing not only directly affects consumers' purchasing intent of green products, but also indirectly affects consumers' purchasing intent of green products through brand equity and brand image.

Brand equity represents a unique reaction to brand marketing, distinguished by the variance in consumer awareness of the brand. Consumers retain brand knowledge in their minds, while brand equity consists of their understanding of the brand and its image (Keller, 1993). Creating high brand equity is beneficial to businesses because it can positively affect the purchase intention. More importantly, high brand equity reduces the perceived risk and uncertainty of consumers in service failure (Chaudhuri and Holbrook, 2001). After a service failure, consumers usually think that businesses with high brand equity will take the initiative to consider the interests of consumers and do not need to monitor the service recovery actions of businesses (Hazée et al., 2017). In contrast, consumers have higher perceived risk and lower perceived quality for businesses with low brand equity, which increases their uncertainty of service recovery results and their

desire to control the behavior of businesses (Grewal et al., 2007). From the perspective of marketing, brand equity attaches great importance to the ability of consumers to differentiate brands and the extension and development of brands themselves. The essence of brand equity is that consumers will have different reactions to different product marketing activities when they have different levels of product knowledge, and this difference is the competitive advantage of enterprises. This difference can increase enterprise income and consumer loyalty, and then promote consumer purchase intention.

Aaker (1991) emphasized that a brand's image reflects how consumers perceive it, encompassing their thoughts, emotions, and anticipations about the brand. Biel (1992) categorizes the image of a brand into three segments: the image of the enterprise, the image of the product or service, and the image of the user; conversely, Aaker & Joachimsthaler (2000) segmented the brand image into four distinct categories: product, enterprise, personalized, and symbol dimensions. New media provides new ideas for brand communication, and the promotion methods and marketing methods of traditional brands have changed due to the emergence of new media (Pei et al., 2019). Keller believes that there is no difference between famous-brand products and general goods in essence. The difference comes from consumers' perception of famous-brand products (De Chernatony, 1999). Facing the trend that consumers tend to buy certified products, green products with brand advantages can more easily gain advantages in the fierce market competition. Creating a positive brand perception among consumers can enhance their positive sentiments towards businesses and encourage buying habits through emotional engagement (Romani et al., 2012).

1.2 Research Questions

There are three research questions of the current study:

Q1: Whether brand equity (BE) and brand image (BI) transmit the effects of social media marketing (SMM) to purchase intention of green product (PIOGP)?

Q2: Whether the relationship between SMM and PIOGP change by increasing values of product knowledge (PK)? And what is the optimal value of PK that should be recognized?

1.3 Research Objectives

    There are three research objectives of the current study:

    Obj 1: To make empirical and documented investigation of SMM, BE, BI, PIOGP and PK.

    Obj 2: To explore the indirect effect of SMM on PIOGP via BE and BI.

    Obj 3: To explore the moderation effect of PK in strengthening the influence of SMM on PIOGP.

1.4 Research Hypotheses

    This study proposes eight research hypotheses in total, which are shown as follows:

    H1: Social media marketing has an impact on consumers' purchasing intention of green products.

    H2: Brand equity plays a mediation effect between social media marketing and consumers' purchasing intention of green products.

    H3: Brand image play a mediation effect between social media marketing and consumers' purchasing intention of green products.

    H4: Product knowledge plays a moderation effect between social media marketing and consumers' purchasing intention of green products.

1.5 Conceptual Framework

    The conceptual framework of this study is displayed as followed. In this conceptual framework, social media marketing is the core independent variable, purchasing intention of green products is the dependent variable, brand equity and brand image are two mediation variables, and product knowledge is the moderation variable.
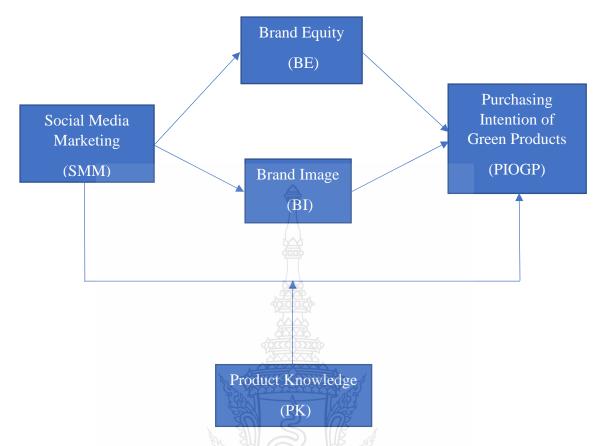
Figure 1.1 Conceptual framework

1.6 Statement of Problem

Young et al. (2010) demonstrates that while 30% of consumers opt for eco-friendly and resource-efficient products, a mere 3%-5% actually implement this approach in their purchases. Although social media is widely utilized in marketing, there remains a gap in comprehending its influence on eco-friendly products and services (Ahmed & Zahid, 2014). Despite numerous studies on eco-friendly products, there remains a scarcity of research concentrating on the inclination to buy such products in developing nations and among young buyers (Yadav & Pathak, 2016; Ghali-Zinoubi, 2020). The foundation of this study builds upon the investigations by Yadav and Pathak (2016), and Ghali-Zinoubi (2020), aiming to elucidate the buying tendencies towards eco-friendly products. It is anticipated that the research structure will yield more profound insights into the buying tendencies towards eco-friendly products.

Previous studies have focused less on the role of brand equity and brand image in exploring the driving mechanism of social media marketing on consumers' green consumption willingness. This article emphasizes the role of brand equity and brand image from the perspective of consumers. In addition, there have been few previous studies specifically studying China. This article focuses on social media users in China, and explores the impact mechanism of social media marketing, brand equity, and brand image on consumers' green consumption intention in the regional context of China.

In addition, in research on the impact of consumers' green purchase intention, little attention has been paid to consumers' knowledge of green products. This article emphasizes the impact of green product knowledge on green purchase intention, providing a new perspective for further exploring the formation path of consumers' green purchase intention.

1.7 Scope of the Research

This study emphasizes the area of social media marketing on purchasing intention of green products. This research uses quantitative research. By choosing a survey method with online questionnaire created and defining the scope of this study. The purposive sampling method is used for selecting the target respondents who represented a larger population. The samples include Chinese Internet users who have accounts in these Weibo, Wechat and QQ application.

At present, with the significant policy support and financial support provided to various new, traditional, and modern commercial consumption formats (such as e-commerce, modern commercial complexes, reform of traditional consumption structures, etc.), a new consumption format with modern complex consumption structure and e-commerce as the main driving force and content has been formed A consumption model supplemented by traditional consumption structure. Among them, the number of enterprises engaged in e-commerce has doubled compared to 2012, surpassing 2000. In 2013, their transaction volume reached 65.75 billion, an increase of 103.4% in contrast to the corresponding timeframe the previous year; The development of modern commercial complexes is also accelerating. Many large commercial enterprises have not only established cross regional and intelligent logistics distribution centers, but also

formed competitive development models that integrate various retail industries such as chain stores, warehouse malls, specialty stores, supermarkets, etc. At the end of 2013, wholesale and retail trading enterprises above the designated size in the province achieved sales of up to 8.074 million yuan, gradually developing into the main business format of the consumer goods market in the province; However, the traditional consumption structure reform is not ideal. In 2014, the retail sales of consumer goods above the designated size in the province increased by 13.6%, but there was a reduction in the growth rate by 1.3 percentage points relative to the corresponding timeframe in the previous year (Hu, 2022).

Although the province has achieved initial results in attracting people and promoting green consumption, with long-term confidence and goals, the role of China's final consumption in promoting economic growth has not exceeded 50% (with green consumption accounting for no more than 10% of the final consumption), far below the 70% level of developed countries (Hu, 2022). At the same time, the concept of green consumption has attracted people for a relatively short time, and there are few consumption formats that have been experienced and promoted. People's awareness of green and environmental protection in their consumption concepts is not strong, and the connection and collaboration in product supply chain, logistics, services, and other links are not smooth and harmonious. In Japan, the supply of green products is insufficient and the market share gap is large, the logistics transportation efficiency of products is not high, and there is a lack of cross regional logistics services, The sales and promotion of green products are not high, which has caused certain obstacles to the promotion of green consumption policies. People cannot accept and practice green consumption from the bottom of their hearts, from the inside out, and thus cannot fully play the role of green consumption, resulting in a low proportion of final consumption in economic growth and failing to meet the advanced level and international standards of the same period.

1.8 Contribution of the Study

Academic Contribution

Drawing from the realm of social media marketing, this research broadens the traditional concept of planned behavior, encompassing aspects of social media marketing,

brand equity, and brand image, offering a more comprehensive understanding of the key elements influencing green purchasing behavior of consumer.

Practical Contribution

The research advocates for the government to motivate consumers towards eco-friendly consumption, arguing that establishing a green consumption market falls short in addressing real-world issues, thereby fostering the sustainable growth of nature, humanity, and society. China has a large population. With China's consumption undergoing a phase of enhancement and change, the strain on both resources and the environment intensifies. However, the management of green market and relevant laws and regulations are not standardized, and there are often fake and shoddy products in green products, which seriously hurt the enthusiasm and trust of Chinese consumers on green products. Therefore, the discussion on the influence of green purchasing behavior is of great significance for the government to advocate sustainable development.

This study guides enterprises to actively seize the green market share in the face of the potential green market and the complex situation of the green market in The Chinese environment. As reforms and liberalization intensify, China's economic growth is swift, and its consumer sector holds significant promise. However, China's green market started late and is still in its initial stage. Green products on the market have few types, few brands, unstable quality and performance, and high prices. The external elements of China's burgeoning market for green consumption have significantly spurred conversations and advancements in the psychology of green consumption among consumers within China. Consequently, within China's framework, examining the eco-friendly buying patterns of consumers holds practical importance.

CHAPTER 2
REVIEW OF THE LITERATURE

2.1 Definition of Terms

2.1.1 Social Media Marketing

Mayfield initially introduced the concept of social media, highlighting its role as a digital medium for individuals to articulate and disseminate their viewpoints, experiences, and beliefs. As Web 2.0 technology ascended, later academics integrated it with Web 2.0 technology to reshape the landscape of social media. Kaplan & Haenlein (2010) characterized social media as a web-based application medium, rooted in Web 2.0 technology and ideology, facilitating the generation and sharing of content created by users. Various academics have incorporated different forms of social media platforms into their explanations. Hong et al. (2013) Hold the view that social media serves as a medium for users to freely engage in creation, sharing, discussion, and assessment. Numerous social media platforms exist, such as Facebook, Twitter, Wikipedia, Weibo, WeChat, blogs, and various online communities. Furthermore, certain academics, including Hawk et al. (2019), have outlined the distinct roles and methods of user engagement in social media is of the opinion that social media encompasses social networking sites and mobile messaging apps, utilized by individuals to interact with loved ones, exchange updates, photographs, and videos regarding their everyday experiences. Despite the lack of uniform definitions for social media in current scholarly research, each study has characterized social media through various lenses including technology, functionality, and structure. From a technical standpoint, social media operates as an application platform rooted in Web 2.0 technology, enabling users to generate unique content and engage in sharing, discussing, and commenting on the platform. Regarding their structure, international platforms like Facebook, Twitter, local Weibo, WeChat, among others, are present. To sum up, the research indicates that social media, rooted in Web 2.0 technology, serves as a digital platform enabling users to interact with others and share their personal views, thoughts, and perspectives.

Marketing through social media involves leveraging social media platforms to promote products, services, brands, or subjects, leveraging the engagement of audiences

on social networks. Tsitsi describes social media marketing as a platform enabling marketers to engage, work together, interact, and apply the knowledge of marketing professionals. Social media marketing, as described by As'ad & Alhadid (2014), is a promotional tactic employed by individuals through online networks. In his publication "Social Media Marketing - Paradigm Change of International Marketing," Chary highlighted that social media marketing is the act of gaining attention or access to websites via social networks. Projects in social media marketing usually aim to produce captivating material and motivate readers to disseminate it across their social media platforms. Gunelius (2011) suggested that social media marketing serves as either a direct or indirect marketing strategy to foster awareness, acknowledgment, recollection, and engagement among brands, companies, products, individuals, or other groups, and to partake in social interactions through digital mediums like blogs, microblogs, social networks, social bookmarks, and content distribution. The essence of social media marketing lies in motivating people to utilize online social platforms for promotion via their websites, products, or services, and to engage in communication through broader communities, which tend to receive more marketing than conventional advertising methods (Weinberg, 2009:3-4). Marketing on social media represents an online advertising strategy that leverages the cultural milieu of various social networks, digital realms, websites for social news, and sites for sharing social opinions to fulfill communication objectives (Tuten, 2008). Drury (Rizal & Lubis, 2014) notes the increasing use of social media in marketing, public relations, and in departments or offices associated with consumers or stakeholders. Within the realm of business, social media serves as a conduit for rapid and lucrative product marketing, as opposed to direct market sales. Integrating social media with marketing enhances the efficacy of marketing through technological and informational advancements. Marketing via social media allows people and businesses to advertise their online presence, products, or services, and engage with broader communities through social media platforms, a feat unachievable with conventional advertising methods.

Marketing on social media fosters the creation of more intimate and vibrant social connections compared to conventional marketing tactics. At the heart of social media marketing lies the aim to produce captivating material and inspire reader

engagement and sharing within the social networking sphere. Furthermore, social media marketing represents a promotional tactic that leverages social media platforms to advertise products (such as links to web pages of online business websites) or services, particularly other products. The essence of social media marketing lies in leveraging and evolving the realm of social media as a tool or platform to create specific markets for digital businesses.

Social media's interactive features enable activities that are participatory, cooperative, and facilitate the sharing of knowledge. Consequently, social media is regarded as a key medium for disseminating brand information (Knoll, 2016). Compared to conventional media like print, TV, and radio, it boasts superior capabilities for community communication (Bowen, 2015). Viewed through the lens of marketing, social media represents a marketplace where sellers and buyers live alongside various establishments and engage in diverse interactions. Businesses have the ability to seamlessly merge their products with social media, evolving consumers from mere consumers to dynamic product communicators, and persistently disseminate and promote them on these platforms, thus building a dedicated customer community and boosting brand recognition. Social media platforms, leveraging the capabilities of social media, facilitate various user activities, encompassing seven key areas: revealing identities, engaging in conversations, sharing content, maintaining a presence (provided users are aware of the availability of other users), managing relationships, and community building (the extent to which users can establish a community) (Kietzmann et al., 2011). Hewett et al. (2016) Discussions were held on the trio of primary data streams enabled through social media. Initially, social media facilitates the transmission of information from businesses to consumers through brand updates and ads on social platforms. Additionally, social media enhances the transfer of information from consumers to businesses through comments, replies, emotional expressions, and content created by users (Gensler et al., 2013). Ultimately, social media fosters consumer engagement. Businesses must develop novel organizational competencies, like engaging users and analyzing data, to capitalize on the data-abundant realm of social media and generate value.

2.1.2 Purchasing Intention of Green Products
Green Products

Many scholars define the connotation of green products from different perspectives. Smith et al. (1996) argue that green products refer to products whose raw materials and their production, use, or disposal processes have minimal impact on the natural environment, but at the same time have the ability to meet other design needs such as performance, aesthetics, and cost. Lin & Huang (2012) contend that green products are characterized by their eco-friendly qualities or links, including conserving energy, protecting the environment, being harmless, and promoting health. Illustratively, eco-friendly cleaning agents, repurposed paper items, ozone-compatible sprays, and green organic edibles (Schlegelmilch et al., 1996). Therefore, green products often have some unique characteristics in terms of resource consumption, such as the use of recycled materials or materials that do not cause harm to the environment, the use of no packaging or the use of minimal packaging, considering social impacts, not causing harm to human health, and being able to meet their needs. Therefore, the trend of green products is developing into a subculture. Previously, green products were considered simple and economical organic commodities, but today they have become a symbol of prestige and luxury. The inclination of consumers compels firms to create and implement eco-friendly methods for manufacturing products and services that function as organizations focused on social and environmental issues.

Zhi (2018) believes that green products refer to tangible green products and intangible green services that have certain utility and functions, can meet consumers' green consumption needs, and are a unified whole. Bo (2014) argues green products include the selection of raw material components, production process, and actual consumption process of the product, comprehensively measuring the energy consumption of the product and its impact on the environment, based on the impact of a product on the environment throughout its entire lifecycle. Meng (2015) believes that if consumers with green purchasing intentions have a positive and positive green perception of the product's consumption efficiency, it indicates that the product is a green product. Jian (2019) proposes that if a product has been certified by relevant authoritative institutions and has corresponding ecological labels, green certifications, and other green labels, it is considered a green product.

Bo (2014) reviewed the concept and essence of green consumption from the perspective of consumer characteristics and other factors. He believes that compared to ordinary products, a product with a lower degree of environmental impact can be called a green product. Bao & Wen (2021) classified green life based on consumer values, and then summarized the following types: innovative, healthy diet, and self-expression. Jian et al. (2014) explored through theoretical analysis which types of green products are more suitable for emotional or rational appeal advertising, and green products can be divided into the following two types: altruistic and egoistic (Holbrook et al., 1982). Although the types of green products are relatively diverse, they have certain commonalities, which are beneficial to people's physical health and environmental protection.

Scholars' definition of green products not only takes into account the use value of green products, but also highlights the green value of products. Obviously, the essential difference between green products and ordinary products lies in their environmentally friendly and sustainable green value. Therefore, based on previous research by scholars, this article defines green products as products that are beneficial to the environment and save resources. Common items in everyday life typically encompass eco-friendly food, furniture, energy-conserving home appliances, modern energy vehicles, and biodegradable plastics, among others.

Purchasing Intention of Green Products

As the idea of eco-friendly consumption gains popularity, academics have systematically investigated how likely consumers are to buy environmentally friendly items. Scholars mainly define green product purchase intention based on the following dimensions in their research process: effort, inclination, and attitude. The connotation of purchasing intention is derived from the intention, referring to the subjective possibility of consumers taking purchasing behavior towards a specific product or service. Scholars believe that purchasing intention reflects consumers' attitudes towards a certain product or brand, and can reflect their consumption psychology (Johnstone & Todd, 2012). Darden & Perreault (1976) and Hawks & Ackerman (1990) believe that purchasing intention is a prelude to consumer purchasing behavior and a necessary stage for consumers to make purchasing decisions.

Based on a psychological perspective, Ajzen (1991) point out that the so-called will actually refers to an individual's psychological expression, which ultimately affects their behavior. Dodds et al. (1991) pointed out that from the perspective of consumers, if they have a strong psychological identity and a positive attitude towards green products, then their willingness to purchase green products will increase. From a behavioral perspective, the so-called purchase intention, from a micro perspective, is the possibility that decisions affect behavior. Eagly & Chaiken (1993) highlighted that the term 'willingness to purchase green products' broadly denotes the consumer's readiness to buy items once they comprehend the product's environmental attributes. Within the realm of eco-friendly consumption, the intent of consumers to buy significantly influences their acquisition of green items (Elkington & Hailes, 1989). Fishbein & Ajzen (1975) theorize that the inclination to buy eco-friendly items is a reflection of consumers' personal choices and their readiness to exert effort in acquiring such products going forward.

Schneider et al. (2001) suggested that when the conventional patterns of consumer consumption are disrupted and their inclination towards eco-friendly items intensifies, it indicates a consumer's readiness to buy green products. Lee Weisstein et al. (2014) is of the opinion that the intent behind green purchasing is the consumer's preference for items that pose the minimal environmental risk. Qin (2018) holds the view that the concept of purchasing intention pertains to the personal buying patterns of consumers. A higher demand for a specific product by customers leads to a higher likelihood of them making a purchase.

This article is based on the definition of behavioral willingness by foreign scholar Ajzen (2011), and it characterizes the intent to purchase green products as the personal inclination of consumers to buy these products daily, along with the extent of their efforts towards achieving this goal.

2.1.3 Brand Equity

From the perspective of brand external image, it is believed that a brand is all the external image that a product presents to consumers, consisting of a collection of product pricing, development history, external packaging, product functions, word-of-mouth, and even advertising slogans; From the perspective of brand function, a brand is

a series of combinations that distinguish different products, including product names, packaging, special markings, colors, etc. (Jia, 2021). However, the above two definitions position the brand at the semantic level of the trademark and do not truly distinguish the brand from the trademark. Some scholars believe that a brand is not only a trademark, but also the sum of product value and additional value beyond the product. From the above summary of the definition of brand, we can see that the definition of brand is evolving from a single external identity level to the intrinsic value level. Brand is the sum of various external and internal factors that consumers identify products and businesses make commitments to them. Its function is to bring intangible value to consumers and businesses beyond the product itself (Chernev, 2020).

The definition of brand equity varies due to different research perspectives. From a comprehensive research perspective, there are three main perspectives: finance, market, and consumer (Tai, 2002). Focusing on the cash flow and revenue brought by brands to enterprises is a financial perspective, while studying the market share and performance brought by brands to enterprises is a market perspective. Enterprise revenue or market share, both of which are defined as brand assets with the enterprise as the main body (Jia, 2021). The consumer perspective is to jump out of the enterprise and stand from the consumer's perspective, believing that the bottom logic of brand equity is based on consumers' choice and recognition of the brand, which generates brand equity.

(1) Financial Perspective

Farquhar suggested that brand equity denotes the extra worth or advantages a brand's product offers to a business, surpassing the worth of its usage compared to non-brand goods. This theoretical definition focuses on monetizing and valuing brand assets, suggesting that a brand's robust assets can lead to additional returns. Defining a financial perspective fulfills corporate requirements to manage brands as capital and offers indicators of brand financial performance. However, due to the lack of clear understanding of the influencing factors and internal formation mechanisms of brand assets, management is of little significance to brand operators. In addition, this brand asset definition based on a financial perspective focuses too much on the short-term benefits of the company, while neglecting the long-term development that the brand should have.

(2) Market Perspective

Based on the market perspective, brand equity believes that a strong brand is closely related to its own strong brand power, and links the appreciation of brand equity with the strategy of brand growth. The size of brand equity is reflected in the strength of brand growth and expansion ability in market competition. Although the definition from this perspective is no longer limited to short-term returns and places more emphasis on the long-term development of the brand, there is still no clear understanding of how brand assets are established (Cobb-Walgren et al., 1995).

(3) Consumer Perspective

Most academics interpret brand equity through the lens of consumers, acknowledging its close connection with consumer behavior. When a brand remains unrecognized by consumers and holds no significance or value for them, it consequently holds no value or meaning for suppliers, producers, and sellers (Cobb-Walgren et al., 1995). Viewing brand equity through a consumer lens uncovers key motivators for its financial worth, crucial for directing corporate brand management and operations.

2.1.4 Brand Image

Brand image is an important part of brand marketing. Gardner & Levy (1999) introduced brand image into academic research fields related to marketing. He pointed out that brand image had a relatively large impact on consumers' purchase decisions, which immediately became the focus of attention of marketing personnel (especially brand management) and has always been one of the important fields of market research. As an important component of a brand, brand image mainly relies on consumers' personal perception of external stimuli, and then combines their own imagination to make judgments based on the overall perception of related products or services. This also reflects the comprehensive response of a series of brand components in the minds of consumers (Ming & Hong, 2003). The brand image has multiple characteristics, such as complexity, situational nature, etc. Therefore, the brand image will change according to the time and location of the brand, as well as the audience and usage scenarios used by the brand.

Kotler & Gertner (2002) pointed out that brand image is a necessary condition for building a strong brand, and in the long run, image is a relatively consistent perception. Brand image is not easy to form and once formed, it is difficult to change. Le Tan & Dai Trang (2019) proposed that brand image is shaped by the past information and experience of a brand, and is a reflection of the overall insight of the brand. Yang (2021) holds the view that a brand's image encompasses a thorough understanding and linkage of consumers to brand-related aspects, involving both physical and non-physical imagery. The content that directly affects consumer experience belongs to tangible, the content that affects consumer trust, and the content that enhances spiritual perception belongs to intangible. Xuan et al. (2004) believe that brand image is a complex of product function and product meaning, which is an orderly and organized system composed of several factors related to the brand. The brand image between different products has both commonalities and individual characteristics.

Brand image is a multidimensional concept that refers to the audience's comprehensive perception of brand related content. This includes both the perception of tangible expressions such as brand name, logo, and product, as well as the perception of intangible feelings such as internal emotions and value of the brand. Brand image is a subjective impression based on objective things and is inseparable from the brand audience.

2.1.5 Product Knowledge

Initially, Bruce delineated the pertinent ideas and interpretations of product knowledge, highlighting that this so-called knowledge pertains to the extent of consumer understanding of the pertinent terms, brand characteristics, and usage details of a specific product category. According to Ratchford & Srinivasan (1993), the concept of product knowledge is the pre-consumption formation of a brand or product's image in the minds of consumers during their product search activities. Anderson (1976) believes that a product is the objective information that consumers have about the product, that is, descriptive knowledge of some product situations, as well as a degree of application and abstract understanding of product knowledge. Yu et al. (2007) pointed out that product knowledge is some specific information about products. He highlighted that it encompasses two elements: the pertinent attribute data of the product in the consumer's

perception and the pertinent supplementary information that drives their purchasing choices. Coincidentally, in their research, Stern (2000) and Wei (2012) also summarized product knowledge into two aspects: one is the cognitive information about the product itself, and the other is the relevant ability to make consumer choices. Bao et al. (2019) defined relevant concepts in his research as: the relevant product information that first appears in consumers' minds when making consumption decisions, and can provide a basis for the final consumption decision. It includes relevant knowledge, characteristics, attributes that affect consumers' use, price, and brand effect of the product.

Dacin & Mitchell (1986) suggested categorizing product knowledge into distinct types: specific knowledge, indirect knowledge, and emotional attitudes of customers in the context of the automotive consumer market. Beatty & Smith (19870) define product knowledge as the consumer's understanding and perception of a product, encompassing previous experiences associated with it. Srinivasan & Ratchford (1991) defines product knowledge from a micro perspective as the knowledge that consumers store in their minds after searching for relevant product information, covering information such as product types, product features, basic attributes, product related terminology, pricing, and brand development history. Peter et al. (1999) proposed that product knowledge not only includes consumers' understanding of product attributes, but also the perception of satisfaction brought by its additional functions. Mitchell & Dacin (1996) defined product knowledge from a macro perspective as the relevant knowledge and experience that consumers apply in purchasing decisions to solve specific consumption problems.

Product knowledge, as an important construct in the field of consumer behavior, significantly affects the collection and processing of consumer product information, and ultimately affects their purchasing decisions (Tao et al., 2010). Product knowledge comprises a collection of product-related data amassed by consumers over an extended duration, with their decision-making largely dependent on the product-related information or experiences gleaned from their memory.

2.2 Previous Relevant Research

  2.2.1 Previous Research on Social Media Marketing

    The emergence of social media poses a novel challenge for researchers in brand and consumer studies, offering a fresh approach to the relationship between consumer brands (Laroche et al., 2012). Businesses leverage social media to not just attract new clientele but also to preserve and keep current customers (VanMeter et al., 2018). Maximizing the impact of social media marketing expenses is vital, necessitating businesses and brands to intensify their emphasis on the success of social media marketing in drawing in customers.

    Earlier studies have explored various facets of social media marketing, encompassing content created by users, brand-related material, user interaction, word-of-mouth online, and digital brand communities (Pan et al., 2019). In-depth studies indicate a rising popularity of social media among viewers, attributed to its interactive nature and capacity to foster the growth of consumer networks. Social media surpasses conventional media in fostering close connections with consumers, as noted by Hollerbach et al. (2018). Fostering consumer involvement on social media platforms has emerged as a key tactic for effective communication and altering behavior. Over the last ten years, there has been a growing dependence of social marketers on social media platforms, employing digital instruments to foster interaction with their intended audiences. Earlier studies in the field of social media marketing reveal that engaging users on social platforms can lead to increased user involvement, ultimately yielding advantages for both audiences and organizations (Sashi, 2012). While expenditure on social media advertising is on the rise, certain firms are not considering social media a significant addition to their marketing and communication strategies. It's possible that these firms are unaware of the most impactful social media marketing content on their websites, and the way this data corresponds with their comprehensive approach to integrated marketing communication. For optimal use of social media data, it's crucial for managers to understand the various types and types of social media marketing strategies, and identify which are more successful in brand development, impacting consumer actions, and boosting sales. While earlier research indicates a beneficial effect of social media marketing on consumer buying patterns (Goh et al., 2013), the efficacy of various social media marketing

strategies has been scarcely categorized and assessed. Evidently, it's vital for managers to apply this understanding to efficiently oversee social media marketing strategies.

Current studies have yet to fully explore the impact of social media marketing on user involvement. Despite the importance of social marketing as a field, numerous academics highlight the ongoing research gap in mastering effective communication via social media. A number of academics argue that comprehending the effectiveness of social media and its role in engaging specific audiences poses a challenge for social marketers (Dewnarain et al., 2021). Currently, limited research exists on the effects of effective social media marketing, with current studies concentrating on examining how social media marketing influences user engagement on social media and the influence of brands. As an instance, Wang et al. (2019) Utilizing Bangladeshi consumers as the study subjects, the investigation focused on the five aspects of social media marketing's impact on brand loyalty, preference, attachment, and the influence of five key brand association and commitment indicators. Mishra (2019) focused on the efficiency of brand social media marketing and how personal online social interaction patterns influence user involvement in brand-centric social media material.

Vronis et al. (2021) Demonstrates Instagram as the leading and most significant medium for research in social media marketing among current studies, representing 32% of all social media studies. YouTube ranks as the second most researched platform, representing 19%, with blogs trailing at 13%. Facebook, Sina Weibo, Twitter, and WeChat have garnered minimal focus, constituting the residual share. Within this group, studies conducted on Sina Weibo constitute a mere 3%, while those on WeChat are even smaller, amounting to just 1% (Vrontis et al., 2021). Across the spectrum of social media marketing studies, a mere 4% derive their research from Chinese social media networks. Despite Instagram's strategic role in influencer marketing, further studies are required to explore other social media channels, given that consumer patterns and brand behaviors can differ based on each platform's specific nature and features. iMedia Consulting's data reveals that in 2020, China's mobile sector's household income surpassed 900 million, marking a 7.1% rise from 2019. As per 2021 data, Weibo's active user count reached 511 million by September 2020, averaging 224 million daily users. Approximately 80% of Weibo users engage with posts 90s and 00s (iiMedia, 2022).

An investigation into how information is utilized, searched, and disseminated on social media from a consumer study viewpoint revealed that social media news boosts the usage of specific products: Social media influencers seek and disseminate more information: The extent of information sharing and participation fluctuates based on the demographic and behavioral traits of users on social media: The marketing tactics for practical products on social media differ from those for pleasure-seeking products: The leading smartphone apps are those enabling photo uploads and customization: Post popularity The popularity influences their sharing, and so on. (Torre and colleagues, 2014). Research into brand perceptions revealed that social media content can enhance consumer perceptions of brands, boost word-of-mouth, and elevate customer value: Positioning brand articles prominently on fan pages can boost their popularity. Vivid and engaging content on social media platforms has the potential to boost the frequency of fan likes. The proportion of favorable remarks in brand-related posts correlates with the frequency of their liking. Individuals exhibiting varied degrees of typical reactions show diverse responses to identical marketing material. It appears that Twitter and Facebook enhance consumer perceptions of the brand, with the most effective method to gauge a brand post's popularity being by tracking the time and follower count (Leung et al., 2015). Investigations into consumer interactions revealed that forecasting individual effects via efficient social media communication is more dependable than relying on a list of friends.

2.2.2 Previous Research on Purchasing Intention of Green Products

At present, scholars' research on green purchase intention mainly focuses on the following three aspects: firstly, studying the influencing factors of green purchase intention, secondly, exploring the driving mechanism of green purchase intention, and thirdly, the relationship between green purchase intention and subsequent consumption behavior.

Regarding the determinants, they predominantly encompass elements related to consumers, policies, publicity, and products. Factors influencing consumers encompass their cultural beliefs, understanding, and perspectives on consumption. Regarding cultural values, studies primarily focus on traditional Chinese cultural systems like Confucian and Taoist values (Meng, 2015), while consumer knowledge research predominantly draws from both subjective and objective sources. Subjective knowledge encompasses

experiences and ideas related to consumption, whereas objective knowledge denotes the gathering and understanding of particular knowledge and information, such as environmental and product knowledge. (Liobikien et al., 2016); Concerning attitudes towards consumption, it primarily stems from the theory of planned behavior and the concept of transforming "attitude willingness." Policy factors mainly include economic stimulus and relevant regulations, such as the government providing subsidies, no appointment required, and no travel restrictions to enhance consumers' willingness to purchase new energy vehicles. In terms of publicity factors, the main research is to enhance consumers' green purchase intention by strengthening green advertising and adopting green marketing and other relevant means. In terms of product factors, relevant research is mainly conducted around value attributes such as product quality and price, as well as product brand influence. In terms of external intervention, the government can intervene in consumers' green consumption behavior by issuing relevant incentive policies to improve infrastructure. Zhang et al. (2019) is of the opinion that sensible governmental strategies can enhance the propensity of consumers to buy eco-friendly products. For example, assuming that government departments introduce relevant policies to provide certain subsidies, it will effectively increase consumers' willingness to purchase green products. But if incentives are blindly implemented, it will also bring certain financial pressure to the government. Consumers are likely to terminate their purchases of this green product after subsidies cease. It indicates that government incentives are only driven by external rewards, rather than internal motivations. Some policies, such as exchanging old appliances for new ones and classifying waste, have more long-term enforcement and regulatory power for consumers. Huang et al. (2014) highlighted a direct link between the intensity of discounts and the consumer's inclination to buy eco-friendly products, and also emphasized that the primary method of spreading green information is via advertising. Yang et al. (2015) highlighted that the inclination of consumers to buy eco-friendly products is shaped by two elements: the requirements of advertising and the variety of products available (Follows & Jobber, 2000). Chen et al. (2018) is of the opinion that the inclination of consumers to buy eco-friendly products is shaped by their surrounding individuals. The greener information they receive from their partners, the more they are able to make green purchasing choices. In terms of social

environment. Glick et al. (1988) hold the view that the societal influence exerted by peers holds significant importance. Recognizing it among colleagues can boost environmental consciousness and boost the propensity to buy eco-friendly items. Granovetter (1973) suggested a positive link between both descriptive and social norms in social norms and the consumer's inclination to buy eco-friendly products. Rapoport (1975), through various studies, has highlighted that factor such as self-determination motivation, subjective norms, value orientation, perceived behavioral control, and environmental attitudes positively influence consumer decisions to buy green products.

In studying the impact mechanism, numerous early-stage academics delved into understanding how consumers are willing to consume green, grounded in the theory of planned behavior. Yadav & Pathak (2016) investigated the underlying factors influencing the intent to purchase green products, drawing on the Indian market for green products and the theory of planned behavior model as the study's comprehensive structure. Research indicates that consciousness and understanding of the environment influence consumer attitudes towards consumption, personal standards, and mental regulation, subsequently motivating them to form an intention to buy eco-friendly products. Lately, academics have unveiled a tiered framework for assessing perceived value in green consumption studies, investigating how consumer perceptions of green value influence the motivation behind their green buying decisions. Tedy (2018), grounded in the concept of perceived value, views new energy vehicles as a representative model for eco-friendly products. Studies reveal that the perceived practical worth, emotional significance, and conditional worth are the initial elements that encourage consumers to buy eco-friendly products.

Regarding the link between the intent to buy green products and their consumption patterns, the application of green purchase intention as a key measure for elucidating and forecasting eco-friendly consumption habits has been acknowledged and validated by numerous academics (Csutora, 2012). Green purchase intention is a key basis for predicting future green consumption behavior. Practically, a temporal discrepancy might exist between the intention to buy green and the actual consumption of green goods. Only consumers with green purchase intention will not hesitate to engage in green consumption when facing the consumption choice between ordinary products and green products in their future actual consumption purchases (Tedy, 2018).

2.2.3 Previous Research on Brand Equity

With the rapid development of marketing, the academic community has also continuously deepened its exploration and research on brands. Tracing its journey from the foundational theory of brand image to the theories of brand equity and subsequently to the theory of brand relationships, the study of brand loyalty has consistently been central. Regarding the theory of brand equity, Aaker (2009) and Keller (1993), respectively proposed a brand equity model based on the consumer perspective, taking brand loyalty as an important dimension in the internal composition of brand equity and the closest part to forming brand equity.

(1) Aaker Model

Aaker (2009) posits that the essence of brand equity lies in five key aspects: awareness of the brand, its association, perceived quality, loyalty to the brand, and various other brand characteristics. This model innovatively proposed the core content of brand equity and was used for reference by later scholars, but the "Five Star Model" did not conduct relevant research on the causes of brand loyalty and the formation process of brand equity.

(2) Keller Model

Keller (1993) proposed a brand equity knowledge model based on Aaker. In his view, brand equity is the "knowledge" formed within consumers and the different reactions they make to marketing activities carried out by enterprises. Enterprises change their brand image by changing brand packaging, logos, etc., and then use brand associations to influence the "knowledge" in consumers' minds, ultimately forming brand loyalty and bringing sustained profits to the enterprise.

(3) Brand Equity Evaluation System

Chinese scholar Xiu (2000) translated it as brand equity, emphasizing the value accumulated by enterprises' continuous efforts in marketing and the potential benefits it will bring to the enterprise in the future. He believes that the added value brought by brands mainly comes from three aspects. Firstly, intangible assets formed by enterprises in brand promotion and marketing can bring long-term potential benefits to the enterprise; Secondly, through repeated and frequent marketing activities, enterprises have an impact on consumer psychology, which plays an important role in future consumer purchasing

decisions; The third reason is that consumers' preferences for launching new products by the company are extended by their affection and loyalty towards the brand, which can bring stable and long-term benefits to the company. Therefore, Xiu (2000) divides brand equity into three dimensions from these three perspectives, namely financial equity, customer equity, and extended equity. On this basis, the study also proposed a corresponding brand equity evaluation system.

(4) Theoretical Model of Product Market Output

Hai et al. (2006) proposed a brand asset model from a consumer perspective, consisting of four dimensions: company capability association, brand awareness, value perception, and brand resonance. Through analysis, it was found that the above four dimensions are not parallel relationships, but rather a hierarchical model with three levels. The first layer is brand awareness and company capability association, the second layer is value perception, and the third layer is brand resonance, Similar to Keller's (1993) brand equity pyramid model, brand resonance is at the highest level. In addition, this study analyzed the relationship between brand equity and product market output through empirical analysis. Product market output includes three dimensions, namely brand extension and price flexibility. The research inspiration obtained is that the formation of a company's brand equity should first consolidate its formed "knowledge" in the minds of consumers, which is consistent with the focus of Keller's (1993) brand equity knowledge model, this study analyzes the composition and results of "knowledge" based on Keller's research, and therefore has important guiding significance.

2.2.4 Previous Research on Brand Image

Brand image is the sum of consumers' inner feelings about brand products and services. So, consumers are the recipients and evaluators of brand information, while enterprises are the operators and speakers of the brand. Effective communication between the two becomes the key to brand management, and brand image is formed and developed in communication. Can & Hong (2013) pointed out that brand communication is a process in which the owner of a brand continuously communicates with the target audience through various communication methods. Effective brand communication can ultimately achieve the goal of increasing brand assets. Ting et al. (2014) proposed that brand communication is a process of exchanging information with target audiences through

various communication strategies and tools. Image orientation theory, a key aspect of brand communication, implies that its primary goal is to create a distinct brand image in consumer perception. The creation of a consumer's brand image stems from brand communication, the act of disseminating information and molding the image. In summary, brand image dissemination refers to the process in which a brand, as a communicator, communicates brand information with the audience through various means of communication such as advertising, and forms a brand image in the audience's mind, ultimately achieving the appreciation of brand assets.

From the perspective of research content, Shi & Zhi (2002) explored the shaping of strong brand image from the perspective of communication and proposed key points for brand image communication. Firstly, focus on the correlation between brand information and consumers. Starting from interests, we need to increase consumer acceptance while maintaining consistency in the dissemination of information between different channels, using one voice to speak out. Secondly, communication should have a unique association, such as Nike's "checkmark", which uses symbols, animations, events, etc. to give consumers memory points. Once again, create value-added parts through dissemination. In addition to spreading the basic functional value, it also allows the brand to gain recognition in the minds of consumers, and can even be used to gain recognition from others. Jian (2010) mentioned in his book "Brand Image Identification and Communication" that brand image surveys are an important basis for proposing brand image communication strategies, mainly including: brand reality, brand awareness, brand awareness, brand satisfaction, and brand association. Xiao (2013) suggested that the spread of a brand's image should originate from two elements: the product's present state and its public perception of the brand, considering the city as the brand. In the process of communication, not only should we pay attention to the dissemination of traditional and new media, but we should also attach importance to the means of communication of "people" and build a comprehensive communication image. Xiao & Qian (2015) used the American Professional Basketball League (NBA) as the research object to conduct brand image communication analysis from three aspects: communication subject, communication audience, and communication content. They also proposed optimization suggestions for the brand image communication of the Chinese Professional Basketball

League (CBA). Liang (2019) used empirical analysis to construct a model for evaluating the image of sports brands. The article regards communication as an important part of evaluating brand image and proposes suggestions for optimizing communication mix and actively expressing consumers' inner demands.

From the perspective of brand image measurement, Xiu & Jie (2002) believe that brand image measurement is an important aspect of brand marketing for enterprises. It is beneficial for a company to correctly evaluate its previous marketing effectiveness and identify problems by comparing with competitive products of other companies, providing a basis for future brand strategies to shape and upgrade its brand image. Xiang (2019) used brand image as a theoretical basis for consumers' cognitive association with a brand, dividing brand image into two dimensions: functional and non-functional. He et al. (2007) treats service brand image as a series of meaningful associations that consumers make about service brands, which is the overall impression of service brands. Therefore, brand image is divided into three dimensions: symbolic, functional, and emotional attributes. Nan & Chang (2010) focused their research mainly on symbolic brand image, and proposed using four dimensions to measure symbolic brand image based on the research, mainly including individual, collective, social, and relationship. According to Gao & Lei (2011), brand image is best understood as the brand's collective memory formed through prolonged consumer engagement with the brand. Utilizing Crumlish & Malone's research techniques, brand image assessment primarily splits into three aspects: functional image, experiential image, and symbolic image.

2.2.5 Previous Research on Product Knowledge

Previous research on product knowledge mainly focused on dividing its dimensions. Alba & Hutchinson (1987) divided product knowledge into two dimensions based on their level of understanding: familiarity and professional knowledge. Familiarity refers to the customer's level of familiarity with the relevant product, while professional knowledge refers to the ability to identify a specific product, including five dimensions, including cognitive effort, knowledge structure, analysis, explanation, and memory. From the perspective of cognitive psychology, Brucks (1985) divided the structure of product knowledge into subjective knowledge and objective knowledge. The definition states that product knowledge, subjective knowledge is considered as the degree to which consumers

perceive products subjectively. To some extent, it reflects customers' subjective perception of the product, while objective knowledge refers to the actual product cognition that exists in consumers' memory, which refers to specific knowledge related to the product, including product attributes, relevant technical terms, evaluation criteria for attributes, usage scenarios, and other content. Malhotra et al. (2006) believe that product knowledge includes knowledge cognition, product attribute knowledge, and pricing knowledge, and it should be pointed out that pricing knowledge is an understanding of the absolute and relative prices of brand products.

Wei (2012) based on the relevant viewpoints of previous scholars, mainly objective and subjective knowledge viewpoints, integrated them and proposed that the product knowledge structure mainly includes subjective knowledge, specific knowledge, and nonspecific knowledge. Specific knowledge denotes to the objective attributes of the product itself, while nonspecific knowledge refers to the subjective attributes such as user experience generated by consumers due to individual differences. Xiao (2012) measured product knowledge from three perspectives based on the relevant characteristics of remanufactured products, namely product quality, cost price, and environmental protection. Bao et al. (2019) divided product knowledge into product purchase information, basic attributes, characteristics, cost pricing, and brand development. Chen & Deng (2016) divided product knowledge into three dimensions, including familiarity with the product, attribute information, and trust in certification marks. In his research, Han et al. (2019) defined product knowledge as the information perception of airline customers on the potential features, attributes and technologies of electric aircraft products.

Brucks (1985) believes that product knowledge includes two parts: objective knowledge and subjective knowledge. Objective knowledge refers to the product knowledge preserved in the recollections of the consumers, which is the specific knowledge about the product that consumers truly grasp, including available attributes, product types, standard attributes used to evaluate attributes, and so on. Subjective knowledge refers to how much product knowledge consumers believe they know, reflecting their level of confidence in their own product knowledge. Dacin & Andrew (1986) studied consumers in the automotive industry and provided a structure of product

knowledge that includes specific knowledge directly related to the product, such as special features, internal features, performance, type, style, brand, and quality; Nonspecific knowledge that is not directly related to the product, such as the experience of others, personal experience, and other variables related to specific fields; Consumer emotions, such as general statements, emotions, evaluative statements, personal thoughts, etc.

Based on the above viewpoints, it can be clarified that there are two important components of product knowledge: one is objective knowledge, which includes specific information related to the product; The other is subjective knowledge, the abstract ability to perform selection tasks. The former part mainly refers to the information related to the product that consumers have, or information that can be directly used for product selection decisions, such as special features, internal features, performance, type, style, brand, and quality. The latter part mainly represents the procedural ability of consumers in the selection process, such as how to obtain information, how to apply information, when to apply what information, and so on. The product knowledge in this article mainly adopts the first part, which is not within the scope of this study.

2.3 Hypotheses Development
2.3.1 The Influence of Social Media Marketing on Consumers' Purchasing Intention of Green Products

Marketers utilize social media as a significant tool to connect with consumers within their social circles and forge deeper personal bonds with them (Kelly et al., 2010). The advent of social media has transformed the creation, dissemination, and consumption of brand content, shifting the influence of brand image formation from marketers to the online interactions and content of consumers (Tsai & Men, 2013).

In the era of Web 2.0, social media empowers consumers with great autonomy, while consumers also place greater emphasis on proactive search and sharing. Within this framework, Japan's Diantong Advertising Company introduced the AISAS model for consumer behavior as a novel alternative to the conventional AIDMA model, offering a more comprehensive explanation of the evolving patterns in consumer behavior during the social media age. Shoppers focus more on the two S's, Search and Share, supplanting

the conventional AIDMA's Desire and Memory. The concept of AISAS has progressively gained acceptance in both academic circles and practical settings (Biocca et al., 2001). Within the AISAS framework, the level of initiative and involvement among consumers is more pronounced. Consumers utilize various social media platforms for extensive communication, searches, and comparisons before finalizing a purchase. Post-purchase, shoppers often disseminate their shopping journey via social media, thereby enriching the current social media content and persistently impacting subsequent customers. The information disseminated through word-of-mouth on social media platforms differs from that found on shopping websites. The trustworthiness of word-of-mouth content on social media platforms is enhanced by its higher level of spontaneity and reduced disruption from merchants. The AISAS model of consumer behavior outlines five distinct phases in consumer shopping patterns.

During the initial phase, A (Attention) denotes the process where consumers are informed by brands, merchants, or other users on social media, thus drawing focus to products and services. At the second phase, I (Interest) denotes that consumer motivation stems from internal indicators like the product's cost-efficiency, aesthetic appeal, and innovative design, influenced by their encounter with pertinent product and service details, or external elements like marketing data, entertainment value, and content appeal of the associated product. Stage S (Search), the third phase, denotes the consumer's aspiration to gain a more profound comprehension of the product once their interest in the product or service is piqued. Shoppers will engage with diverse social media platforms for consistent and comprehensive gathering. Stage four, known as the A (Action) action stage, denotes the phase in which consumers engage in significant buying decisions post-acquisition of adequate information. Users have the ability to navigate to particular buying pages via links for making purchases, or they can directly execute purchases on social media platforms that facilitate them. During the fifth phase, S (Share) denotes the spread of consumers' real shopping experiences while utilizing goods or services post-purchase. The impact of word-of-mouth information extends to more prospective and bought customers, enhancing the marketing prowess and brand sway of brand sellers through the dynamics of consumer interactions on social media. The influence of social media is pivotal in all facets of consumer purchasing patterns (Biocca et al., 2001; Sun & Wang, 2020; Pop et al., 2020).

Lei conducted a preliminary study using a situation simulation experiment and comprehensive interviews, integrating it with a literature review to identify key influencing factors such as consumer engagement (openness, participation, dialogue), social media sociality (community, connectivity), dependence on social media, and its utility. She empirically verified that social media's utility, dependency, and consumer engagement positively impact consumer buying decisions via the intermediary role of online trust and perceived value. Mayfield (2008) & Nekmahmud et al. (2022) examined how social media influences spontaneous purchasing behaviors, encompassing engagement, transparency, dialogue, social interaction, and connection. She verified that six key traits markedly influence the perceived worth of consumers, and via the intermediary role of perceived value, markedly impact the consumers' spontaneous purchasing decisions. Kim & Ko (2012) focused their research on Weibo, holding the view that social media enhances search efficiency, engagement, and social interaction. The utility, participation, and sociability of searches significantly influence the intention to purchase. By integrating prior studies and investigative factor analysis techniques, Meng & Cheng (2017) identified key aspects of social media such as communication and interaction, data gathering, privacy and secrecy, involvement and involvement, congruence and consistency, and how user genuineness influences buying decisions. By developing a model grounded in technology acceptance theory, it was discovered that these six key social media traits positively affect buying intentions via the intermediary role of perceived utility and ease of use. Based on the above analysis, this article proposes the following hypothesis:

H1: Social media marketing has an impact on consumers' purchasing intention of green products.

2.3.2 The Mediation Effect of Brand Equity

With the advent of advanced technology and communication in the digital age, business entities predominantly opt for marketing via social media, which has now emerged as the primary method for disseminating information. Kristiana et al. (2021) and Haudi et al. (2022) Their study indicated that the portrayal of social media marketing positively impacts brand confidence. Businesses employ social media channels for communication, interaction, and customer engagement, offering value and experiences,

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thus enhancing their behavioral reactions to brands (Ibrahim et al., 2021; Khadim et al., 2018; Kwon et al., 2020). The way consumers view marketing efforts conducted online can enhance their standing. As stated by Laroche et al. (2012) Social media marketing positively impacts brand equity.

The evolution of the brand equity idea led to substantial alterations in the brand's conceptual framework. Within the context of social media, marketing strategies boost brand equity as perceived by customers (Bruhn et al., 2012). Mangold and Faulds (2009) state that in the modern paradigm of brand communication, actions in social media marketing play a role in the promotional strategy. Bruhn et al. (2012) reveal the substantial influence of both conventional and social media communication on brand equity. Traditional media exert a more significant effect on brand recognition, whereas social media interactions have a profound impact on the brand's image. Following this dialogue, the research anticipates a beneficial effect of social media promotion of eco-friendly products on brand equity.

Discussions have been ongoing about the advantages of brand equity for the company, similar to debates over the components of brand equity and its development through various marketing strategies (Christodoulides & De Chernatony, 2010). Although there's a debate over their significance and quantification, the consensus among many academics is that enhanced brand equity leads to a rise in brand favorability, a greater readiness to spend extra, and a stronger inclination to buy among customers (Ahmad et al., 2006; Keller, 1993). Kim and Ko (2012) indicate a positive correlation between the brand equity generated by social media marketing in social media environments and subsequent buying behaviors or reactions. This study therefore expects the brand equity has a positive impact on consumers' purchasing intention of green products. This article further speculates that Brand equity plays a mediation effect between social media marketing and consumers' purchasing intention of green products. Based on the above analysis, this article proposes the following hypotheses:

H2: Brand equity plays a mediation effect between social media marketing and consumers' purchasing intention of green products.

2.3.3 The Mediation Effect of Brand Image

Social networks, as a promotional instrument, present substantial chances to forge connections between brands and consumers in the realm of marketing (Vukasovic, 2013). Lately, numerous companies have recognized social media as a highly effective medium for communication, enabling consumers to forge unique brand identities and enhance interactions between consumers and brands (So et al., 2017). Hartzel et al. (2011) It has been observed that engaging marketing tactics utilizing social media platforms like Facebook and Twitter can enhance the brand's reputation and foster a significant connection between the brand and its consumers. The widespread appeal of the brand on social media platforms enables extensive discussion and recognition among numerous users (Kumar et al., 2007). The research by Tsimonis & Dimitriadis (2014) indicates that a significant result of a company's social media marketing efforts is its brand image. Singla & Durga (2015) indicates that social media plays a crucial role in shaping and enhancing the brand image. Research by Seo & Park (2018) & Bilgin (2018) indicates a beneficial impact of social media marketing in the aviation sector on enhancing brand recognition and image. Upadana & Pramudana (2020), Ardiansyah & Sarwoko (2020), Kodrat (2021) report that social media marketing significantly enhances the brand image. The discovery of a brand image by consumers is achieved via potent marketing methods such as social media marketing, hence this research indicates a substantial and beneficial impact of social media marketing on the brand image. Consequently, the article posits that social media marketing has a beneficial impact on the brand image.

The term 'product brand image' typically refers to the 'viewpoints of a brand as mirrored in the brand's associations in the recollections of consumers' (Keller, 1993; Febriyantoro, 2020). The appeal of brand affiliations fosters pertinent mindsets that are applicable to the product. Consequently, a more positive brand image correlates with a more favorable view of the branded product and its characteristics. Additionally, a positive brand image positively influences buying decisions (Alwan & Alshurideh, 2022; Moslehpour, 2021), leading to a higher propensity among consumers to purchase items with renowned brands online (Lee & Tan, 2003; Savitri et al., 2022; Sanny et al., 2020; Jasin, 2022; Zhang et al., 2019; Büyükdağ, 2021). In the case of product types often needing physical assessment, like eco-friendly items, certain essential details needed for

a buying choice are not accessible on the internet. As a result, brand image could act as a crucial stand-in for essential product attribute details that aren't accessible online. Consequently, these hypotheses have been formulated.

H3: Brand image play a mediation effect between social media marketing and consumers' purchasing intention of green products.

2.3.4 The Moderation Effect of Product Knowledge

Product knowledge refers to the knowledge and experience that consumers have related to the product (Mitchell & Dacin, 1996). Product knowledge affects consumers' evaluation and purchasing behavior of products in the process of information search, processing, and decision-making (Cordell, 1997). Consumer knowledge can enhance the quality of decision-making (Swaminathan, 2003). Previous studies have shown that consumer product knowledge can affect consumers' ability and methods of information collection and processing (Alba & Hutchinson, 1987). Consumers with high product knowledge rely more on internal knowledge stored in their memory, thus conducting more internal searches and tending to process specific product attribute information. Therefore, they tend to treat information itself objectively and rationally (Quester & Lin Lim, 2003); Consumers with low product knowledge are often influenced by external factors when processing information, such as accepting more advertising information about purchases (Jian et al., 2011) and being willing to handle easily understandable edge information (Alba & Hutchinson, 1987), such as product packaging, making information processing more emotional and subjective (Quester & Lin Lim, 2003).

The main difference between high product knowledge level individuals and low product knowledge level individuals lies in their differences in memory ability, cognitive ability, and analytical reasoning ability. The extent of product knowledge greatly influences different phases of consumer decision-making and the ultimate intent to purchase (Mooman et al., 2004). Consumers often make purchasing decisions by paying attention to and comparing product attribute information when purchasing goods (Dacin & Mitchell, 1986). When consumers have the knowledge of product attributes required for purchasing decisions, they can use various relevant information stored in memory to evaluate products and consumer behavior (Aurier & Ngobo, 1999). They have sufficient reasons to believe that their decisions are effective and not susceptible to external

information, resulting in a faster and more confident decision-making process (Min & Hong, 2016). Therefore, in situations where consumers have a high level of knowledge, they can make quick decisions about purchasing green products based on their stored product information. Social media making is not easy to interfere with and affect consumers, and therefore does not generate a sense of deprivation of freedom. With a small psychological resistance, their willingness to purchase green products is higher. For consumers with low product knowledge, the lack of information requires them to spend more time and energy seeking clues and making inferences in order to form decisions (Reimer et al., 2005). Faced with the social media marketing of green products, consumers will face a dual lack of information and time at the same time, with a stronger sense of non-freedom, resulting in a higher psychological resistance, resulting in lower social media marketing liking and willingness to purchase green products. Therefore, based on the above analysis, this article proposes the following hypothesis:

H4: Product knowledge plays a moderation effect between social media marketing and consumers' purchasing intention of green products.

Table 2.1 List of references of definition of terms

Authors name and year	Keywords	Summary	Relevant to this dissertation
Mayfield (2008), Haenlein (2010), Hong et al. (2013), Hawk et al. (2019), As'ad & Alhadid (2014), Gunelius (2011) et al.	Social Media Marketing	Social media marketing is a process that enables individuals and companies to promote their websites, products, or services online and communicate with larger communities through social channels, which cannot be achieved through traditional advertising channels.	Explain what is "Social Media Marketing".
Darden & Perreault (1976), Hawks & Ackerman (1990), Ajzen (1991), Dodds et al. (1991), Eagly & Chaiken (1993) et al.	Purchasing Intention of Green Products	Purchase intention of green products is the subjective tendency of consumers to make green product purchases in their daily lives, as well as the efforts they are willing to make to this end.	Explain what is "Purchasing Intention of Green Products".

Table 2.1 List of references of definition of terms (Cont.)

Authors name and year	Keywords	Summary	Relevant to this dissertation
Jia (2021), Chernev (2020), Tai (2002), Farquhar (1989), Cobb-Walgren et al. (1995) et al.	Brand Equity	The bottom logic of brand equity is based on consumers' choice and recognition of the brand, which generates brand equity.	Explain what is "Brand Equity".
Gardner & Levy (1999), Ming & Hong (2003), Kotler & Gertner (2002), Le Tan & Dai Trang (2019), Yang (2021), Xuan et al. (2004)	Brand Image	Brand image is a multidimensional concept that refers to the audience's comprehensive perception of brand related content.	Explain what is "Brand Image".
Bruce (1985), Ratchford & Srinivasan (1993), Anderson (1976), Yu et al. (2007), Stern (2000), Wei (2012) et al.	Product Knowledge	Product knowledge is a series of information related to products that consumers have accumulated over a long period of time, and the decision-making process of consumers mainly relies on the product information or experience extracted from their memory.	Explain what is "Product Knowledge".

Table 2.1 is a literature review summary of the definitions of five variables in this chapter. This article will define the five variables according to the expressions in this table, and then conduct relevant analysis.

Table 2.2 List of references supporting hypotheses

Authors name and year	Argument	Supporting the hypothesis
Kelly et al. (2010), Tsai & Men (2013), Biocca et al. (2001), Lei (2009), Mayfield (2008), Kim & Ko (2012), Meng & Cheng (2017), Sun & Wang (2020), Nekmahmud et al. (2022),	Social media marketing has a significant positive impact on consumers' purchasing intention of green products.	H1
Bruhn et al. (2012), Mangold & Faulds (2009), Pop et al. (2020), Haudi et al. (2022), Kristiana et al. (2021), Ibrahim et al. (2021), Khadim et al. (2018), Kwon et al. (2020), Laroche et al. (2012)	Social media marketing has a significant positive impact on brand equity.	H2
Christodoulides & De Chernatony (2010), Ahmad et al. (2006), Keller (1993), Kim & Ko (2012), Bruhn et al. (2012), Haudi et al. (2022), Kristiana et al. (2021), Ibrahim et al. (2021), Khadim et al. (2018), Mangold and Faulds (2009)	Brand equity has a significant positive impact on consumers' purchasing intention of green products. Brand equity plays a mediation effect between social media marketing and consumers' purchasing intention of green products.	
Vukasovic (2013), So et al. (2017), Hartzel et al. (2011), Kumar et al. (2007), Tsimonis & Dimitriadis (2014), Singla & Durga (2015), Seo & Park (2018), Bilgin (2018), Kodrat (2021), Upadana & Pramudana (2020), Ardiansyah & Sarwoko (2020)	Social media marketing has a significant positive impact on brand image.	H3
Keller (1993), Lee & Tan (2003), Febriyantoro (2020), Alwan & Alshurideh (2022), Moslehpour (2021), Savitri et al. (2022), Sanny et al. (2020), Jasin (2022), Zhang et al. (2019), Büyükdağ (2021)	Brand image has a significant positive impact on consumers' purchasing intention of green products. Brand image play a mediation effect between social media marketing and consumers' purchasing intention of green products.	

Table 2.2 List of references supporting hypotheses (Cont.)

Authors name and year	Argument	Supporting the hypothesis
Mitchell & Dacin (1996), Cordell (1997), Swaminathan (2003), Alba & Hutchinson (1987), Quester & Lin Lim (2003), Jian et al. (2011), Alba & Hutchinson (1987), Mooman et al. (2004), Dacin & Mitchell (1986), Aurier & Ngobo (1999), Min & Hong (2016), Reimer et al. (2005)	Product knowledge plays a negative moderation effect between social media marketing and consumers' purchasing intention of green products	H4

Table 2.2 is a summary of the literature supporting the hypotheses proposed in this study. These previous studies have laid the theoretical foundation for establishing models and proposing hypotheses in this paper.

CAPTER 3
RESEARCH METHODOLOGY

3.1 Quantitative Research Method

Kothari (2004) characterizes research as a methodical and scientific quest for relevant data on a particular subject. The process of research encompasses the development of knowledge, conducting experiments to ascertain the causality of phenomena, and laying the groundwork for subsequent investigations. Leedy & Ormrod (2005) characterize the research methodology as the comprehensive actions taken by a researcher to initiate a research project (p. 14). Consequently, a quantitative research approach focuses on the quantification and analysis of variables to achieve outcomes. This process entails the use and examination of numerical data through distinct statistical methods to address queries regarding who, to what extent, what, where, when, how many, and in what ways.

There are two research questions of the current study:

Q1: Whether brand equity (BE) and brand image (BI) transmit the effects of social media marketing (SMM) to purchase intention of green product (PIOGP)?

Q2: Whether the relationship between SMM and PIOGP change by increasing values of product knowledge (PK)? And what is the optimal value of PK that should be recognized?

Researchers have the ability to quantitatively examine these queries, given that the necessary data for collection is already accessible in numerical format. Consequently, this paper utilizes a quantitative research approach. Quantitative research ultimately aims to extrapolate the "truth" identified in the samples to the broader population.

Research in the survey focuses on aspects like sampling, designing questionnaires, administering them, and analyzing the data. Research surveys employ scientific sampling techniques and questionnaire structuring to accurately assess population traits. This article aims to study the influence of social media marketing on consumers' green purchasing behavior in China, using survey research to collect first-hand data through questionnaires for analysis.

3.2 Population and Sampling

      3.2.1 Target Population

          Within the realm of statistics, a population refers to a whole group that necessitates the acquisition of certain information. Within the realm of research, the term 'population' refers to the entire array of people, occurrences, or items that demonstrate specific behaviors or exhibit traits relevant to the researcher (Elfil & Negida, 2017).

          The target population of this study is Chinese Internet users who have accounts in these Weibo, WeChat and QQ applications et al. Any segment of the completely delineated population constitutes a sample. Referred to as a sample, this particular subgroup's selection from the broader population is known as the sampling method (Shorten & Moorley, 2014). The optimal approach in research studies is to examine the issue across the entire population. However, in practical terms, analyzing the whole population is invariably unfeasible. A sample represents a smaller segment of the overall population, chosen to reflect the broader population (Dawson & Trapp, 2001). Typically, research is conducted on a subset of subjects instead of entire populations.

      3.2.2 Unit of Analysis

          Statistically, the analysis unit is identified as the entity or subject for which information is examined and conclusions drawn (Sedgwick, 2014). In the current study, the unit of analysis are individuals, specifically Chinese Internet users who have accounts in these Weibo, WeChat and QQ applications et al. and live in China.

      3.2.3 Sample Size

          Reflecting on the suggested N:p ratio (N= the smallest required sample size, p= the quantity of measurement items), Cattell & Cattell (1978) opined that this ratio ought to fall between 3 and 6. Gorsuch (1983) advocated for a baseline ratio of 5. Everitt (1975) suggested a minimum N:p ratio of 20. In this study, 20 times the ratio was selected. The survey questionnaire designed for this study includes a total of 24 measurement items, so the minimum sample size is 480, and this research plan to have 500 questionnaires.

      3.2.4 Sampling Method

          It's essential for the sampling technique to be as stringent as feasible to guarantee the least possible inaccuracies and partiality, and to amplify the highest level of representativeness (Tyrer & Heyman, 2016). Selecting sampling techniques typically

hinges on the practicality of time and resources. Essentially, two primary sampling techniques exist: non-probability random sampling and probability random sampling. Non-probability sampling, a method of sampling, refrains from providing a foundation for any assessment of the likelihood of universal elements being part of the study sample. Methods of non-probability sampling employ a strategy where the selection of the sample is guided by the researcher's personal assessment rather than random selection. Known alternatively as 'random sampling', probability sampling allows for an equal probability of each item from the entire universe being included in the sample, as noted by Etikan & Bala (2017). Methods of probability sampling include elements of random selection, guaranteeing an equal chance of selection for every case in the population. Questions in quantitative research are suitable for both probabilistic and probabilistic sampling method.

Common types of non-probability sampling methods include quota sampling, purposive sampling, self-selection sampling, and snowball sampling. Common types of probability sampling methods include simple random sampling.

Due to the fact that the overall size of this article is large and identifiable, the probability sampling method is adopted in this article. Specifically, due to the similarity in overall characteristics and lack of categorization, this article adopts a simple random sampling method. Simple random sampling is a straightforward and equitable method, allowing for individual selection (Berndt, 2020). Simple random sampling is deemed the most impartial sampling technique, thereby emerging as the preferred method under critical multiplism processes. This approach is minimally prejudiced in producing population parameter estimates due to the inherent characteristics of the random selection process, where random samples probably include components mirroring the population's overall variations. Through random sampling, it's possible to extend the causal links formed by random allocation from the sample to the broader target demographic (Blankertz, 1998).

3.3 Data Collection Method

This study adopts the survey research method. Surveys are widely used instruments to collect research data. Survey research, a prevalent approach in social sciences, allows for the gathering of data on various aspects related to the conduct, ideas, and emotions of individuals or groups. Survey research aims to characterize a population, pinpoint a group's traits, outline the research's key attributes and characteristics, elucidate a phenomenon, or clarify the interrelation of variables.

This study will collect first-hand data online through the Questionnaire Star Platform (*https://www.wjx.cn/login.aspx*) in the form of a questionnaire. Utilizing online survey instruments proves to be a straightforward and economical approach for various survey/questionnaire research endeavors, provided that the selection of methodologies is grounded in prudent choices, not just ease and convenience. Furthermore, online surveys can be designed with advanced interactive elements to guarantee the presentation of only those questions relevant to the respondent, derived from their responses to earlier questions.

3.4 Instrumentation

From the perspective of the thinking process of research, transforming a certain idea or idea into a research model and proposing research hypotheses mainly involves the conceptualization process of things, and then operationalizing the research variables to convert them into observable variables (Bolton & Drew, 1991). This study includes five Latent variables: social media marketing, brand equity, brand image, purchasing intention of green products and product knowledge. Therefore, this paper develops a scale for five Latent and observable variables respectively. This study refers to previous scholars' measurement research on related variables and compiles a measurement scale for the variables in this study.

Social Media Marketing

This article adopted the scale developed by Yadav & Rahman (2018) for the measurement of social media marketing. This scale contains a total of 4 measurement items (see Table 3.1). All the statements were measured by five-point Likert-type Scale (1 = Strongly Agree, 5 = Strongly Disagree).

Table 3.1 Measurement scale of social media marketing

No.	Item	Source
S1	I like to use social media to increase my knowledge about the brands performance.	
S2	I am satisfied with the social media marketing of green product brands.	Ahmed & Zahid (2014)
S3	The social media marketing of green product brands is very attractive.	
S4	The level of feedback generated on social media sites (of green product brands) by other users meets my expectations.	

Brand Equity

This article draws on the scale developed by Yoo & Donthu (2001) for the measurement of brand equity. This scale contains a total of 6 measurement items (see Table 3.2). This article uses the Likert 5-level scale to rate the options on this scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Table 3.2 Measurement scale of brand equity

No.	Item	Source
S5	It makes sense to buy green product brands instead of any other product brands.	
S6	Even if other product brands have the same features as green product brands apart from green features, I would prefer to buy green product brands.	Yoo & Donthu (2001)
S7	If there are other non-green product brands as good as green product brands, I prefer to buy green product brands.	
S8	If other product brands are not different from green product brands in any way except from green features, it seems smarter to purchase green product brands.	

Brand Image

This article draws on the scale developed by Kim et al. (2018) for the measurement of brand IMAGE. This scale contains a total of 6 measurement items (see Table 3.3). This article uses the Likert 5-level scale to rate the options on this scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Table 3.3 Measurement scale of brand image

No.	Item	Source
S9	The green product brands are distinguishable.	
S10	The green product brands have personality.	Kim et al.
S11	The green product brands are unique.	(2018)
S12	The green product brands are unlike any other product brands.	
S13	The green product brands are intriguing.	

Purchasing Intention of Green Products

This article draws inspiration from the scale developed by Shin & Hancer (2016) for the measurement of Purchasing Intention of Green Products. This scale contains a total of 3 measurement items (see Table 3.4). This article uses the Likert 5-level scale to rate the options on this scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Table 3.4 Measurement scale of purchasing intention of green products

No.	Item	Source
S14	I expect to purchase green products within 1 year.	
S15	I want to purchase green products within 1 year.	Shin & Hancer
S16	I intend to purchase green products within 1 year.	(2016)

Product Knowledge

This article draws on the scale developed by Park & Moon (2003) for measuring Product Knowledge. This scale contains a total of 3 measurement items (see Table 3.5). This article uses the Likert 5-level scale to rate the options of the scale. Options 1 to 5 of the scale represent different degrees, as detailed in the survey questionnaire in Appendix B.

Table 3.5 Measurement scale of product knowledge

No.	Item	Source
S17	Compared to other consumers, how familiar do you think you are with green products?	
S18	Do you know precisely what attributes of a green product decide the function of the green product?	Park & Moon
S19	Do you think you can make a satisfactory purchase of a green product based on only your own knowledge, without another person's help?	(2003)

3.5 Analysis of the Quantitative Data

3.5.1 Data Validation Testing

Before conducting empirical analysis, this article first tests the validity of the collected questionnaire data, including reliability analysis and validity analysis.

Reliability Analysis

This study includes five variable scales: social media marketing, brand equity, brand image, purchasing intention of green products and product knowledge. This article will analyze reliability of these five scales separately.

The reliability test mainly tests the consistency of the scale (Broekhuizen & Alsem, 2002). It is generally believed that the scale developed requires consistency between projects, and Cronbach's alpha coefficient is commonly used. Assessing the coefficient value also requires verifying the congruence between the scale and the variables. An increased Cronbach's alpha coefficient value correlates with greater internal reliability of the scale. Earlier research has indicated that the Cronbach's alpha coefficient exceeds 0.7, signifying the scale's consistency is satisfactory. If the reliability coefficient is within the range of 0.5-0.7, it is not recommended to use this measurement scale and the questionnaire needs to be modified; If the reliability coefficient is less than 0.5, the scale needs to be rewritten (McDonald & Brown, 2005).

Validity Analysis

This study includes five variable scales: social media marketing, brand equity, brand image, purchasing intention of green products and product knowledge. This article will conduct exploratory factor analysis and confirmatory factor analysis on these five scales to test their structural validity, discriminant validity, and convergent validity.

Validity denotes the extent to which a measurement instrument or technique can precisely assess the precision and genuineness of the measurement subject (data). The process of validity testing assesses the accuracy of a scale. The primary methods employed in this study are exploratory and confirmatory factor analyses to assess the questionnaire's accuracy. Confirmatory factor analysis aims to assess the alignment between the data gathered by the Latent and observable variables measurement scale and the theoretical analysis. Key conditions include a factor load exceeding 0.5, AVE surpassing 0.5, and CR exceeding 0.7, under which the measurement scale demonstrates robust discrimination and convergence validity (Kothari, 2004).

3.5.2 Hypothesis Testing Methods

This study will use structural equation model and path analysis to test the research hypotheses H1-H3.

Structural Equation Model

The Structural Equation Model (SEM) serves as a statistical technique for examining variable interrelations based on the covariance matrix of variables. SEM integrates multiple regression, path analysis, and factor analysis as a statistical technique. It is applicable to theoretical models such as Latent and observable variables analysis, variable error analysis, intermediary variable analysis and multi-path analysis. Structural equations primarily aim to scrutinize real-world data to verify the legitimacy of theoretical frameworks and presumptions put forward by academics, and to examine if the real-world scenario aligns with these theoretical premises. Two fundamental models comprise the structural equation model: the measurement model and the structural model. Within this group, the measurement model stands out as a Relational model, integrating both potential and measurement variables. Measurement variables, also known as observational variables, can be directly measured through questionnaires. Potential variables are abstract concepts that cannot be directly measured through questionnaires.

They are usually estimated by two or more measurement variables, known as the principle of multiple indicators. Whether this estimation is effective or not requires validation. The SEM econometric model employs confirmatory factor analysis (CFA) to evaluate how effectively these measurement variables elucidate possible variables, that is, to verify whether the causal relationship or membership between the observed variable and its potential variable matches the observed data. This belongs to the assumption of the inherent model fitness of the model, and the methods include reliability and validity tests, as well as estimating the significance level of parameters, which can also be collectively referred to as factor analysis.

The primary components of the structural equation analysis technique encompass model fitting test, model correction, and model path analysis. The main function of model fit testing is to verify whether the data supports the theoretical model. If a reasonable theoretical model is established, then empirical data will support the model, and the fitting indicators will meet the requirements of statistics, allowing for further analysis of the model. Marsh et al. (2004) believe that only fitting indices with the following characteristics are ideal: firstly, the size of the sample size does not affect the numerical value of the fitting index; Secondly, to adjust the fitting index, it can only be determined by the number of parameters, and models with a large number will be penalized; Third, too many or too few parameters of the model will lead to the fitting indicators of the model cannot meet the requirements, resulting in distortion of the results.

Goodness-of-fit of SEM

Goodness- of- fit refers to the degree of consistency between the theoretical model and the actual data. Goodness of fit indicators are used to evaluate whether the hypothesized path analysis model map and the surveyed data are compatible with each other. High fitness indicates that the hypothesized model map is more consistent with the actual data situation. Based on Danks et al. (2020) viewpoint, this article conducts a fit test on the structural equation model. The following fit indicators are used to measure the fit of the model. The various fit indices and adaptation standards are shown in Table 3-6, and are explained as follows.

Table 3.6 Fitting indicators

Indicators	$\chi2/df$	NNFI	CFI	NFI	GFI	AGFI	RMSEA
Threshold	<5	>0.90	>0.90	>0.90	>0.90	>0.90	<0.08

Path Analysis

The primary role of path analysis in structural equation analysis is to confirm the interconnections among variables. Prior to delving into the interconnections among variables, a theoretical examination of their interrelations is essential, specifying the independent variable, the intermediary variable, and the dependent variable. It is imperative for researchers to elucidate the cause-and-effect links among the variables within the model. Academics commonly hold the view that the primary basis for the standardized path coefficient lies in the t-test, which serves to confirm its significance. The prevailing view is that a t-value exceeding 1.96 indicates the path coefficient's significance, and it's widely accepted that this coefficient should surpass 0.1. The path coefficient primarily represents the direct correlation between variables that are latent and those that are observable. The distinct role of indirect impact analysis in structural equations lies in its primary ability to confirm the impact of independent variables on dependent variables via one or several intermediary variables. This approach proves efficient in confirming the intermediary impact.

Moderating Effect Analysis

This article uses multiple regression to test the moderating effect of product knowledge (i.e. research hypothesis H4).

The traditional empirical approach of multiple regression analysis primarily examines the effects of multiple independent variables on a dependent variable. The primary function of multiple regression tests is to assess how a single independent variable affects the dependent variable, considering the significance, both positive and negative aspects, and the magnitude of the regression coefficient. When the regression coefficient's t-test value exceeds 1.96, it signifies its significance, with the independent variable markedly affecting the dependent variable. A higher absolute value of the standardized regression coefficient amplifies the independent variable's impact on the dependent variable.

3.6 Pilot Study

Frequently, minor research is conducted to aid in the development of a more extensive and thorough investigation. Preliminary or leading-edge research offers a prime chance to evaluate the practicality of extensive, comprehensive studies. Preliminary investigations serve as the most effective method for evaluating the practicability of extensive, costly, comprehensive studies, and are virtually indispensable precursors. Initiating a pilot study before the primary one can increase the chances of its success and possibly prevent the failure of the main studies. Generally, a pilot study ought to be sufficiently extensive to yield valuable insights into the elements being evaluated for practicality.

This preliminary study, a minor trial, serves as a preliminary test before proceeding to the planned major trial. This facilitates initial hypothesis testing and might propose alterations, omit certain sections, or formulate new hypotheses for more accurate testing. Pilot study mainly uses small sample testing to modify and adjust the initial questionnaire proposed in the study, in order to make the questionnaire content more responsive to the research model. The small sample test mainly tests the reliability of the initial questionnaire obtained through sorting, and evaluates the rationality and standardization of the questionnaire by analyzing Cronbach's alpha coefficient in the result data. The purpose of small sample testing is to eliminate those questions that cannot be measured from the original questionnaire by asking questions about the reliability of the measurement questionnaire, in order to obtain a more authentic, accurate, and practical formal questionnaire suitable for this study.

The research population of this study is Chinese Internet users who have accounts in these Weibo, WeChat and QQ applications et al. and live in China. Before conducting a large-scale questionnaire survey, this article will randomly select 50 samples for preliminary research.

3.7 Ethical Consideration

Scriven & Smith-Ferrier (2003) succinctly address issues related to the privacy, confidentiality, and anonymity of participants, how survey invites are viewed as spam or virus-laden, and the extent of data security, all of which may influence the quality of data and the rate of responses; additionally, steps like encryption are necessary to safeguard data.

Simsek & Veiga (2001) point out that enhancing both the frequency of responses and the caliber of data (like answers to delicate queries) requires researchers to build rapport with the participants, clarify the study's objectives, the selection process of respondents, the utilization of data, and its accessibility, all of which the authors advocate for in the survey's opening.

Evans & Mathur (2005) emphasize the importance of having "transparent, observable, and user-friendly privacy guidelines" for online surveys, suggesting that security issues could be mitigated by directing respondents to "visit protected websites instead of sending surveys via email as attachments". Eysenbach & Wyatt (2002) offer functionalities for respondents, surveys, and researchers that are appropriate or inappropriate for online surveys, referencing the respondents' intent to steer clear of spam, optimal methods for securing informed consent, and the formulation of a privacy policy mandating the disclosure of cookie usage and archival data storage (encompassing quotes from respondents) as crucial for ethical online survey studies.

In light of the aforementioned ethical concerns, during the execution of a questionnaire survey, this paper will rigorously maintain the confidentiality of the respondents' data, reserving its use solely for graduation thesis objectives, excluding any commercial activities or illicit profit-making via information sales. Furthermore, prior to initiating the questionnaire survey, the research will offer an in-depth description of its objectives, the inquiries, and the professional jargon used in the questionnaire, and obtain the participants' approval before commencing the survey.

CHAPTER 4
RESEARCH RESULT

4.1 Introduction

        This chapter presents the results of data analysis. This chapter consists of 10 parts and the layout of this chapter is as follows:

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                        │    Introduction      │
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                        ┌──────────────────────┐
                        │  Data Preparation    │
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  ┌───────────────────────────┐        ┌──────────────────────────┐
  │  Data Coding and Entry    │        │     Response Rate        │
  └───────────────────────────┘        └──────────────────────────┘

                        ┌──────────────────────┐
                        │ Sample Characteristics│
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                        │ Descriptive Statistics Analysis│
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                        │ Correlations Analysis│
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                        │ Collinearity Statistics Test│
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            ┌──────────────────────────────────────────┐
            │ Mediation and Moderation Effect Analysis  │
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                        │   Chapter Summary    │
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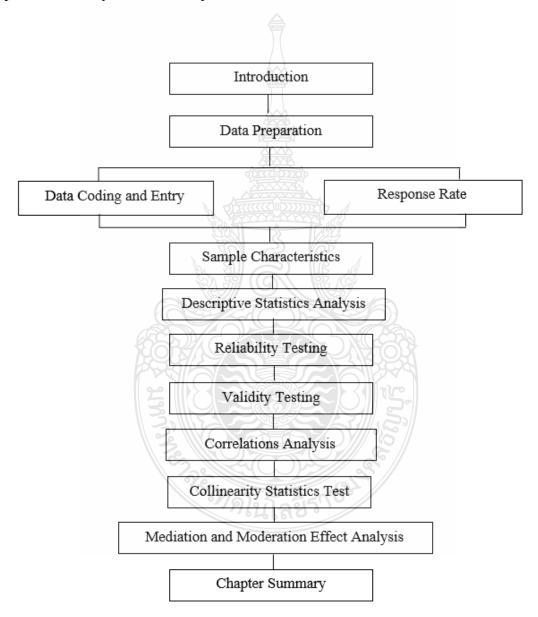
Figure 4.1 Layout of this chapter

4.2 Data Preparation

4.2.1 Data Coding and Entry

Table 4.1 displays abbreviations of variables in the conceptual framework (see Figure 1.1).

Table 4.1 Variable abbreviation

Variable Type	Variable Name	Abbreviation
Independent variable	Social Media Marketing	SMM
Mediation variables	Brand Equity	BE
	Brand Image	BI
Dependent variable	Purchasing Intention of Green Products	PIOGP
Moderation variable	Product Knowledge	PK

4.2.2 Response Rate

The response rate represents the count of instances that consented to participate in the research (Taherdoost, 2016). The mentioned instances originate from the initial sample. Truthfully, the majority of researchers fail to attain a complete response rate. In this study, a total of 530 questionnaires were distributed during the survey. After excluding invalid questionnaires, a total of 500 valid questionnaires were collected, with a valid questionnaire response rate of 94.34%.

4.3 Sample Characteristics

The statistical results of the samples collected in this article are shown in Table 4.2. According to Table 4-2, there are 247 males, accounting for 49.4% of the total, and 253 females, accounting for 50.6% of the total.

In terms of age, there is a distribution across all age groups, with 77 samples aged between 18-30 years old, accounting for 15.4%; There are 171 samples aged between 31-40 years old, accounting for 34.2%; The sample size between 41-60 years old is 251, accounting for 50.2%; Only one sample is over 60 years old, accounting for 0.2%.

In terms of education level, the education level of 63 samples is Lower than Bachelor degree, accounting for 12.6%; 151 samples have a Bachelor degree, accounting for 30.2%; The education level of 227 samples is Master's degree, accounting for 45.4%; The education level of 59 samples is Higher than Master's degree, accounting for 11.8%.

In terms of occupation, 62 samples are students, accounting for 12.4%; The occupation of 215 samples is government civil servants, accounting for 43.0%; 136 samples were enterprise employees, accounting for 27.2%.

In terms of monthly household income, 108 samples of households have a monthly income of less than 10000 Yuan, accounting for 21.6%; The monthly income of households in 176 samples ranges from 10000-30000 Yuan, accounting for 35.2%; The monthly income of households in 135 samples ranges from 30001-50000 Yuan, accounting for 27.0%; 81 households in the sample have a monthly income exceeding 50000 Yuan, accounting for 16.2%.

Table 4.2 Characteristics of the sample

Characteristics		Frequency	Percentage (%)
Gender	Male	247	49.4
	Female	253	50.6
Age	18-30 years old	77	15.4
	31-40 years old	171	34.2
	41-60 years old	251	50.2
	More than 60 years old	1	0.2
Education Level	Lower than Bachelor degree	63	12.6
	Bachelor degree	151	30.2
	Master's degree	227	45.4
	Higher than Master's degree	59	11.8
Occupation	Student	62	12.4
	Government civil servants	215	43.0
	Enterprise employees	136	27.2
	Others	87	17.4

Table 4.2 Characteristics of the sample (Cont.)

Characteristics		Frequency	Percentage (%)
	Less than 10,000 Yuan	108	21.6
Monthly Household Income	10,000 – 30,000 Yuan	176	35.2
	30,001 – 50,000 Yuan	135	27.0
	More than 50,000 Yuan	81	16.2

4.4 Descriptive Statistics Analysis

Table 4.3 presents the descriptive statistical analysis results for each measurement item of the variable. From Table 4.3, it can be seen that all means of the 5 variables are greater than 3 but less than 4, indicating that the green purchasing intention of Chinese Internet users needs to be improved; The social media marketing of green products and brand building of green products both need improvement.

For SMM variable, the overall mean of the variable is 3.620. The SMM variable contains four measurement items, among which the mean of measurement item S1 is the highest, at 3.67; The mean of measurement items S3 and S4 is the smallest, both of which are 3.60.

For the BE variable, the overall mean of the variable is 3.624. The BE variable contains 4 measurement items, among which the mean of measurement item S5 is the highest, at 3.68; The mean of measurement item S8 is the smallest, at 3.54.

For BI variables, the overall mean of the variable is 3.488. The BI variable contains 5 measurement items, among which measurement item S11 has the highest mean of 3.54; The mean of measurement item S9 is the smallest, at 3.42.

For the PIOGP variable, the overall mean of the variable is 3.518. The PIOGP variable contains three measurement items, among which measurement item S14 has the highest mean of 3.53; The mean of measurement item S16 is the smallest, at 3.50.

For PK variable, the overall mean of the variable is 3.010. The PK variable contains three measurement items, among which measurement item S19 has the highest mean of 3.03; The mean of measurement item S17 is the smallest, at 2.99.

Table 4.3 Descriptive statistics analysis results

Variable	Item	Item Mean	Std. Deviation	Variable Mean
SMM	S1	3.67	1.129	
	S2	3.61	1.198	3.620
	S3	3.60	1.140	
	S4	3.60	1.169	
BE	S5	3.68	1.184	
	S6	3.66	1.158	3.624
	S7	3.61	1.165	
	S8	3.54	1.215	
BI	S9	3.42	1.155	
	S10	3.49	1.130	
	S11	3.54	1.111	3.488
	S12	3.46	1.150	
	S13	3.53	1.136	
PIOGP	S14	3.53	1.014	
	S15	3.52	1.025	3.518
	S16	3.50	1.057	
PK	S17	2.99	1.139	
	S18	3.01	1.108	3.010
	S19	3.03	1.151	

4.5 Reliability Testing

This research utilizes Cronbach's alpha coefficient (exceeding 0.7) to gauge the scale's reliability. The results of the reliability tests in this study are displayed in Table 4.4 below. It can be seen from Table 4.4 that the SMM scale contains 4 items, and its Cronbach's alpha is 0.869 (>0.7), indicating that the SMM scale has good reliability. Similarly, the other four scales also have good reliability and meet the requirements of questionnaire analysis. The questionnaire consists of a total of 19 measurement items, with a Cronbach's alpha of 0.861 (>0.7), indicating once again that the questionnaire in this study has good reliability.

Table 4.4 Reliability test results of pilot study

Scale	Number of Items	Cronbach's Alpha
SMM (Social Media Marketing)	4	0.869
BE (Brand Equity)	4	0.881
BI (Brand Image)	5	0.889
PIOGP (Purchasing Intention of Green Products)	3	0.888
PK (Product Knowledge)	3	0.853
Total	**19**	**0.861**

4.6 Validity Testing

4.6.1 Confirmatory Factor Analysis of the Five Variables

This article uses confirmatory factor analysis (CFA) to verify whether the convergent validity and discriminant validity of the questionnaire scale meet the standards. Table 4.5 and Figure 4.2 show the results of confirmatory factor analysis. From Table 4.5, it can be seen that the model fit indicators of the confirmatory factor analysis measurement model have all reached an acceptable level. From Figure 4.2, it can be seen that the factor loading values of all measurement items for the 5 variables exceed 0.70, indicating that the model is acceptable.

Table 4.5 Model fit indicators of CFA measurement model

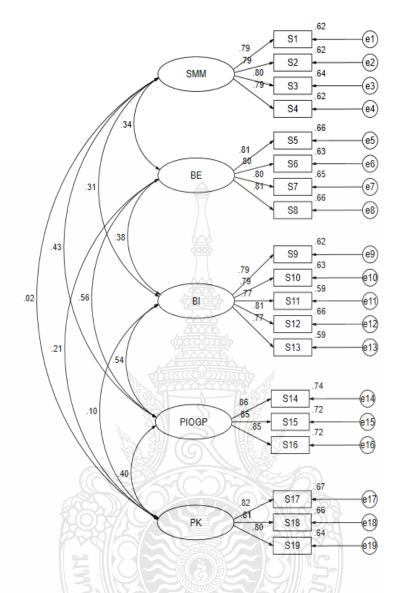| Model Fit Indicators	Threshold	Estimate
$\chi^2/$ DF	[1,5]	1.064
NFI	>0.9	0.972
IFI	>0.9	0.998
TLI	>0.9	0.998
CFI	>0.9	0.998
GFI	>0.9	0.969
RMSEA	<0.08	0.011

Figure 4.2 Confirmatory factor analysis measurement model

4.6.2 Convergent Validity Analysis

Table 4.6 presents the convergent validity test results of this study. From Table 4.6, it can be seen that the standardized factor loadings, CR, and AVE of each variable measurement item in this article meet the requirements. Therefore, the five variable scales used in this article has good convergent validity.

Table 4.6 Convergent validity analysis

Latent variable	Observation variable	Standardized factor loading	S.E.	C.R.	P	CR	AVE
SMM	S1	0.788					
	S2	0.788	0.060	17.719	0.000	0.870	0.625
	S3	0.799	0.056	18.372	0.000		
	S4	0.787	0.058	17.775	0.000		
	S5	0.814					
	S6	0.795	0.050	19.212	0.000	0.881	0.649
BE	S7	0.803	0.050	19.337	0.000		
	S8	0.811	0.052	19.794	0.000		
	S9	0.785					
	S10	0.791	0.052	18.802	0.000		
BI	S11	0.771	0.053	17.842	0.000	0.897	0.637
	S12	0.813	0.054	19.093	0.000		
	S13	0.767	0.055	17.583	0.000		
	S14	0.863					
PIOGP	S15	0.846	0.043	22.806	0.000	0.889	0.727
	S16	0.848	0.044	23.100	0.000		
	S17	0.821					
PK	S18	0.814	0.052	18.399	0.000	0.853	0.660
	S19	0.802	0.055	17.976	0.000		

4.6.3 Discriminant Validity Analysis

Fornell & Larcker (1981) suggested assessing discriminant validity through a comparison of AVE's square roots against the correlation coefficients of each construct. In Table 4.7, the diagonal figures represent the square root of AVE, whereas the non-diagonal figures denote the correlation coefficients of the construction plane. All of the former exceeds the latter in magnitude, signifying strong discriminant validity (Fornell & Larcker, 1981).

Table 4.7 Discriminant validity analysis

	SMM	BE	BI	PIOGP	PK
SMM	**0.791**				
BE	0.299	**0.806**			
BI	0.271	0.338	**0.786**		
PIOGP	0.375	0.492	0.477	**0.852**	
PK	0.020	0.185	0.091	0.346	**0.812**

4.7 Correlations Analysis

Table 4.8 show the correlation analysis results between the five variables. From Table 4.8, it can be concluded that there is a significant positive correlation between SMM and PIOGP ($r=0.375$, $p<0.01$); There is a significant positive correlation between SMM and BE ($r=0.299$, $p<0.01$); There is a significant positive correlation between BE and PIOGP ($r=0.492$, $p<0.01$); There is a significant positive correlation between SMM and BI ($r=0.271$, $p<0.01$); There is a significant positive correlation between BI and PIOGP ($r=0.477$, $p<0.01$).

Table 4.8 also reveals that the absolute correlation coefficients among the aforementioned five variables remain below 0.80, suggesting an absence of significant multicollinearity issues among them.

Table 4.8 Correlations analysis

	SMM	BE	BI	PIOGP	PK
SMM	1				
BE	0.299[**]	1			
BI	0.271[**]	0.338[**]	1		
PIOGP	0.375[**]	0.492[**]	0.477[**]	1	
PK	0.020	0.185[**]	0.091[**]	0.346[**]	1

Note: [**]. Correlation is significant at the 0.01 level (2-tailed).

4.8 Collinearity Statistics Test

The primary detection of multicollinearity is achievable through tolerance and its inverse, known as the variance inflation factor (VIF). A VIF value surpassing 10 is frequently interpreted as a sign of multicollinearity (Senaviratna & Cooray, 2019). Based on the results of the multicollinearity test, the VIF values of items are below 10 as illustrated in Table 4.9. Based on this, the results signified that there were not multicollinearity problems in the data of this current study.

Table 4.9 Collinearity statistics (VIF)

Item	VIF
SMM1	2.752
SMM2	3.115
SMM3	2.925
SMM4	2.631
BE1	2.316
BE2	2.227
BE3	2.253
BE4	2.385
BI1	2.231
BI2	2.266
BI3	2.135
BI4	2.395
BI5	2.157
PK1	3.559
PK2	3.639
PK3	3.369
SMM x PK	8.051

4.9 Structural Equation Model

    4.9.1 Model Fit Indicators of the SEM

        In order to verify hypotheses H1-H7, this article constructs a structural equation model (SEM) and analyzes the impact relationships among the four variables of SMM, BE, BI, and PIOGP.

        Table 4.10 shows model fit indicators of the SEM. From Table 4.10, it can be seen that the model fit indicators of the SEM have all reached an acceptable level.

Table 4.10 Model fit indicators of the SEM

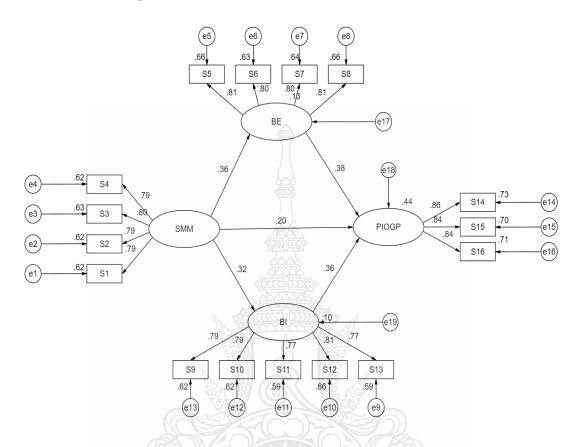| Model Fit Indicators	Threshold	Estimate
$\chi^2/$ DF	[1,5]	1.471
NFI	>0.9	0.968
IFI	>0.9	0.990
TLI	>0.9	0.987
CFI	>0.9	0.990
GFI	>0.9	0.965
RMSEA	<0.08	0.031

4.9.2 Path Analysis of the SEM

SEM Diagram

Figure 4.3 Structural equation model

Direct Effect Analysis

From Table 4.11, it can be seen that SMM has a significant positive impact on PIOGP (r=0.199, p<0.01), therefore, hypothesis H1 is supported.

Table 4.11 Direct effect analysis

Direct effects	Standardized Estimate	S.E.	C.R.	P	Unstandardized Estimate	Hypothesis
PIOGP ← SMM	0.199	0.045	4.209	0.000	0.191	H1

Indirect Effect Analysis

It can be seen from table 4.12 that the standardized estimate of the indirect effect of SMM on PIOGP through BE was 0.119, with 95% confidence interval of [0.079, 0.161], excluding 0, indicating that SMM has a significant indirect effect on PIOGP, through BE. So, BE plays a mediating role between SMM and PIOGP. Therefore, the hypothesis H2 is supported.

It can be seen from table 4.12 that the standardized estimate of the indirect effect of SMM on PIOGP through BI was 0.104, with 95% confidence interval of [0.065, 0.150], excluding 0, indicating that SMM has a significant indirect effect on PIOGP, through BI. So, BI plays a mediating role between SMM and PIOGP. Therefore, the hypothesis H3 is supported.

Table 4.12 Indirect effect analysis

Indirect Effect Analysis	Standardized Estimate	SE	Lower	Upper	Hypothesis
PIOGP ← BE ← SMM	0.119	0.021	0.079	0.161	H2
PIOGP ← BI ← SMM	0.104	0.022	0.065	0.150	H3

4.10 Moderation Effect Analysis

Wen et al. (2005) pointed out that when both the independent variable and the moderating variable are continuous variables, moderation analysis mainly includes two steps: first, calculate the regression of the dependent variable Y with the independent variable X and the moderating variable M, and obtain the measurement coefficient $R^2 1$; The regression of the dependent variable Y on the independent variable X, the moderating variable M, and the product of the independent variable and the moderating variable XM yields the measurement coefficient $R^2 2$. If $R^2 2$ is significantly higher than $R^2 1$, it indicates a significant moderating effect.

This article first standardizes SMM and PK (Wen et al., 2008), using standardized independent variables and moderating variables to generate interaction terms, and adopts a hierarchical regression analysis method. Firstly, incorporate SMM and PK into the first layer, and secondly, incorporate the interaction terms between SMM

and PK into the second layer. By comparing the differences before and after, we aim to explore the regulatory role of PK in the impact of SMM on PIOGP.

According to Table 4-13, in Model 1, SMM （β= 0.343 (p<0.01) can positively predict PIOGP; PK （β= 0.316 (p<0.01) can also positively predict PIOGP. In Model 2, SMM （β= 0.343 (p<0.01) can positively predict PIOGP; PK （β= 0.340 (p<0.01) can also positively predict PIOGP; Interaction terms between SMM and PK （β= 0.073 (p<0.05) can also positively predict PIOGP.

In addition, it can be seen from Table 4-13 that in model 1, the explanatory rate of independent variable SMM and moderation variable PK to dependent variable is 25.5%. After the interaction item (SMM * PK) is added to model 2, the change of R square is 0.007, which indicates that the prediction ability of the model has increased by 0.7%, and the significance probability of F change is p=0.027, which confirms that the moderating effect of PK is significant. Therefore, hypothesis H4 holds.

Table 4.13 Moderation effect analysis

Variable	Model 1		Model 2	
	β	t	β	t
(Constant)	3.518**	97.501	3.517**	97.827
SMM	0.343**	9.500	0.343**	9.545
PK	0.316**	8.747	0.340**	9.047
SMM * PK			0.073*	2.218
F	85.095**		58.818**	
R Square Change	0.255		0.007	
Sig. F Change	0.000		0.027	

Note: ** P<0.01, * P<0.05, two-tailed test.

Dependent Variable: PIOGP

4.11 Chapter Summary

    This chapter first analyzes the demographic characteristics of the sample, and then tests the quality of the data, including reliability and validity tests. The results show that the data quality is good. This article uses AMOS software to construct a structural equation model and tests the hypothesis that SMM has a direct effect on PIOGP; And to test the indirect effects of SMM on PIOGP through BE and BI. Finally, this article uses the PROCESS plugin of SPSS software to test the moderation effect of PK between SMM and PIOGP. The summary of hypothesis testing results in this article is as follows:

Table 4.14 Summary of hypothesis-testing

Hypothesis	Results
H1: Social media marketing has an impact on consumers' purchasing intention of green products.	Support
H2: Brand equity plays a mediation effect between social media marketing and consumers' purchasing intention of green products.	Support
H3: Brand image play a mediation effect between social media marketing and consumers' purchasing intention of green products.	Support
H4: Product knowledge plays a moderation effect between social media marketing and consumers' purchasing intention of green products.	Support

CHAPTER 5
CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

To successfully address the issue of environmental pollution and improve the living environment and quality of life of urban residents, China is increasingly paying attention to environmental and development issues. The nation has tactically implemented strategies on a broader scale, with businesses and consumers collaborating to advocate for eco-friendly consumption practices on a smaller scale. Businesses are vigorously engaged in the creation of innovative eco-friendly products and the execution of eco-friendly marketing strategies; shoppers are reshaping their consumer perceptions, aiming to foster a consumption approach that conserves resources and safeguards the environment. With the government and diverse societal segments actively promoting and publicizing, there's a steady rise in consumer consciousness about eco-friendly spending, and this notion of green consumption is increasingly ingrained in the public's psyche. An increasing number of consumers are seeking and acknowledging eco-friendly products for their exceptional efficiency in saving energy, safeguarding the environment, and various other facets. Yet, in today's reality, the market share of green products remains modest, influenced by elements like pricing and a lack of consumer knowledge, leading to a lack of motivation among consumers to partake in eco-friendly consumption. Consequently, the current academic discourse is centered on the effective direction of consumers, the advancement of eco-friendly public living, and the investigation into the underlying processes of consumer green consumption.

This study systematically analyzed the impact of social media marketing on consumers' purchasing intention of green products, and introduced brand equity and brand image as mediating variables, as well as product knowledge as moderating variable to construct the research framework of this study. There is a total of three research objectives in this article:

Objective 1: To make empirical and documented investigation of SMM, BE, BI, PIOGP and PK.

Objective 2: To explore the indirect effect of SMM on PIOGP via BE and BI.

Objective 3: To explore the moderation effect of PK in strengthening the influence of SMM on PIOGP.

This article adopts quantitative analysis methods to test the research hypotheses proposed in this article. This article collected 500 first-hand data in the form of a survey questionnaire, and processed and analyzed the data using AMOS and SPSS statistical software. The empirical analysis in this article confirms that all hypotheses are supported.

5.2 Discussion

(1) Social Media Marketing has a Positive Impact on Consumers' Purchasing Intention of Green Products

The research conclusion of this article confirms that social media marketing can guide consumers to implement positive environmentally friendly behaviors. Viewed through the lens of marketing, social media represents a marketplace where sellers and buyers live alongside various establishments and engage in diverse interactions. Businesses have the ability to seamlessly merge their products with social media, converting consumers from mere recipients to dynamic distributors, and persistently disseminating and sharing on these platforms, thus building a dedicated customer community and boosting brand recognition.

Compared with traditional media, social media has a wider range of information sources, stronger heterogeneity of information, and a more significant role in guiding public opinion. Through prominent reporting on social media, consumers can see more environmental problems caused by unhealthy consumption, and thus value the significance of green consumption. Meanwhile, these "prominent" news reports invisibly promote the formation of environmental and social norms, which is conducive to guiding social members to actively practice pro environmental behavior (Lin & Hsu, 2015). Beyond gathering pertinent data on social media platforms, users have the opportunity to share their views, thoughts, and experiences (Trivedi et al., 2018), pursue guidance and information, and engage with others regarding the brand (Lu & Miller, 2019). During the interaction process, consumers on one hand re disseminate information about green products; On the other hand, one will compare their own behavior with the behavior of others. Previous studies have shown that social comparison can change individual

behavior, especially in specific contexts (Allcott, 2011). In the context of green consumption, social media can more concentrate on showcasing the "symbolic" attributes of green consumption itself, which can effectively enhance consumers' initiative in green consumption. According to a survey by Östman (2014), there is a direct correlation between social media marketing and the degree of consumer environmental behavior.

(2) Brand Equity Plays a Mediating Role between Social Media Marketing and Consumers' Purchasing Intention of Green Products

The empirical research results of this article indicate that brand equity plays a mediating role between social media marketing and consumers' purchasing intention of green products.

Aaker (1991) defines Brand Equity as a collection of assets and liabilities associated with a brand, including its name and symbol, that either enhance or diminish the value a product or service offers to its consumers, as evidenced by Brand Awareness, Brand Loyalty, Brand Association, and Perceived Quality. Consumers favor brands active on social media platforms as they offer ample content for users to utilize as a medium for services and information (Leggat, 2010). The use of social media boosts the capacity to process information, bolsters trust in buying choices, and elevates contentment, all thanks to the value of a brand name (Bulearca & Bulearca, 2010). Lee (2014) suggests that within the realm of social media, 'Exposure' plays a pivotal role in advancing Customer Engagement, Fan Loyalty, and Influence, thereby boosting brand equity. Enhancing visibility stands as a fundamental advantage of social media, enabling the firm to boost its brand recognition via Word-of-Mouth (Hutter et al., 2013).

In the realm of corporate marketing, brand equity plays a crucial role. The concept of brand equity was perceived as the mental awareness and recognition of a brand by consumers. Research by Tasci (2021) revealed that brand equity at the consumer level enhances the probability of consumers selecting the brand and their intent to purchase. In a like manner, Jaiswal and Kant (2018) discovered that individuals with greater awareness of the environment tend to show more loyalty to eco-friendly brands, leading to a higher likelihood of repurchasing. As stated by Ho et al. (2019) green brand equity has a positive impact on the intentions of consumers. Additionally, it was demonstrated that green brand equity plays a mediating role in the link between social media marketing strategies and

the likelihood of consumers repurchasing, as indicated by Chen et al. (2020) demonstrated. Therefore, brand equity was predicted to adjust the relationship between social media marketing and consumers' purchasing intention of green products as an intermediate variable.

(3) Brand Image Plays a Mediating Role between Social Media Marketing and Consumers' Purchasing Intention of Green Products

The empirical research results of this article indicate that brand image plays a mediating role between social media marketing and consumers' purchasing intention of green products.

The realm of social media extends beyond just Facebook and similar sites; it encompasses various other mediums such as social networking sites, blogs, wikis, digital social environments, and a mix of websites that amalgamate web links, user feedback and evaluations, suggestions and recommendations, wish lists, forums, and communities (Hajli, 2015). Social media platforms enable marketers to engage, work together, and distribute content among their clientele (Yu & Yuan, 2019). Consequently, numerous businesses and government entities have been motivated to employ social media for promotional and marketing purposes, recognizing the critical role of effective social media marketing in enhancing value, establishing relationships, targeting customers, and enhancing brand reputation (Ismail, 2017). Furthermore, the formation of brand image hinges on either direct or indirect engagements with the brand (Sahin et al., 2011), where engaging and impactful social media marketing strategies can solidify the consumer's brand memory, enhance their understanding, and thus foster positive emotions. Furthermore, brands that proactively interact with customers through social media platforms have the potential to attract their interest and fondness. Therefore, successful marketing strategies on social media are key in shaping the brand image of consumers.

The overall brand image can be shaped by the consumer's experience with the product, shopping, and consumption, thereby affecting their satisfaction with the brand and their intention to purchase (Brakus et al., 2009). Research conducted by Dwivedi (2015) reveals that when consumers form emotional bonds with brand image, their chances of buying products increase. We hypothesize that customers who develop a favorable brand image due to successful social media promotion of eco-friendly products

tend to be more inclined to buy such products. Brand image mediates the relationship between social media marketing and consumers' purchasing intention of green products.

(4) Product Knowledge Plays a Moderating Role between Social Media Marketing and Consumers' Purchasing Intention of Green Products

The moderating role of product knowledge in the relationship between social media marketing and consumers' purchasing intention of green products was proposed and validated in this dissertation. Product knowledge mirrors the awareness and comprehension of consumers regarding environmental matters and eco-friendly consumption habits (Alamsyah et al., 2021). Earlier research indicated that individuals with greater product knowledge tend to react favorably to social media advertising and show a more robust inclination to buy again (Papadas et al., 2017). Furthermore, product knowledge boosts the perceived trustworthiness and success of social media marketing strategies (Kang et al., 2013). Furthermore, Rahbar and Wahid (2011) observed that consumers possessing extensive product knowledge tend to show greater allegiance to eco-friendly brands and are more inclined to buy environmentally friendly products again. According to Akturan (2018), individuals with greater product knowledge tend to value a brand's environmental initiatives more highly, which in turn enhances their commitment to environmental sustainability. Earlier research indicated that high product knowledge among consumers enhances their likelihood of valuing innovative eco-friendly brands, thereby boosting their propensity to repurchase environmentally friendly products (Gleim et al., 2013). Therefore, product knowledge moderates the relationship between product knowledge and consumers' purchasing intention of green products. By understanding the influence of product knowledge, companies can develop effective green marketing strategies to target environmentally conscious consumers and promote sustainable consumption practices.

5.3 Implications

Theoretical Implications

The theoretical implications of this study lie in the fact that the academic community has not yet studied the relationship between the five variables of social media marketing, brand equity, brand image, product knowledge, and consumers' purchasing

intention of green products. Most of the research has focused on the relationship between the two or three variables, and there is little research on the relationship between the five variables, especially quantitative research. This study quantifies the relationship between the five variables mentioned above, which has certain theoretical implications.

Managerial Implications

(1) Play the Role of Social Media in Promoting Green Consumption Behavior

Due to the positive impact of the informational and expressive use of social media on consumer green consumption behavior, for enterprises, on the one hand, they can release relevant information about green products, especially information on the environmental attributes of green products, through social media, enhancing consumers' rapid identification and trust in green products; On the other hand, enterprises can create conditions for consumers to interact or express themselves online by building brand communities and other forms. For the government, on the one hand, it can deepen residents' perception of the severity of current environmental problems through forms such as short videos; On the other hand, we should play a typical demonstration and leading role, use social media to popularize relevant knowledge of green consumption, guide the establishment of a social trend advocating green environmental protection, and stimulate the enthusiasm of the whole society for green consumption.

(2) Actively Building High-quality Green Brands and Developing Marketing Strategies Based on Different Consumer Groups

Businesses should focus on improving their brand image, particularly in the area of developing eco-friendly products. It's essential for them to engage proactively in certifying green brands both locally and internationally, establish top-tier green brands, and enhance their profile; furthermore, companies can formulate tailored marketing and promotional tactics for various consumer segments by examining their requirements and product tastes. Addressing consumer requirements across various categories and tiers is crucial when offering a range of eco-friendly products. Businesses ought to fully exploit the capabilities and features of social media within the Web3.0 framework, monitoring the variety of products that appeal to consumers across genders using technologies like big data and cloud computing. For green products that men are more concerned about, companies should fully leverage the advantages of social media information

dissemination, provide more specific functional information, and stimulate male consumers to evaluate and affirm their own green consumption behavior ability; For women, companies should pay attention to the establishment and operation of virtual communities, create a positive and warm communication atmosphere for consumers, focus on enhancing their consumption experience, and promote their purchasing behavior by increasing individual expectations for the results of green consumption behavior.

(3) Analyze Consumers' Green Consumption Psychology and Carry out Corresponding Marketing Innovation

Nowadays, market competition is becoming increasingly fierce, and various marketing strategies are emerging. For green product companies to secure a competitive edge in the marketplace, it's crucial to examine consumer psychological traits through the lens of green's perceived worth, understand the true consumer demand for eco-friendly products, and secure competitive edges by employing tailored and distinct green marketing tactics; Enterprises should conduct market research on the current consumer groups of green products based on the characteristics of their own products, divide possible consumer groups, identify different demand points for green products among different consumer groups, and carry out corresponding green marketing innovations to ensure that consumers perceive the maximum green transfer value.

(4) The Government Needs to Support Green Production Enterprises, Reduce Green Consumption Costs and Risks

It's imperative for the government to back pertinent eco-friendly manufacturing companies, cut down on production expenses, thus decreasing the cost of products, encouraging eco-friendly consumption, and fostering green living habits among consumers. Conversely, it's imperative for the government to persist in enhancing pertinent laws and regulations, overseeing different companies in the green consumption sector, to diminish risks associated with consumer green consumption and bolster their trust in the green market. It's imperative for the government to foster and steer the growth of the eco-friendly product sector through the creation of specific policies and rules, assist businesses in enhancing their product's eco-friendly image, and bolster consumer trust in sustainable consumption. Particularly, initiatives can be undertaken in these domains: initially, to create suitable funding avenues for eco-friendly product companies, offer

related tax benefits, motivate and direct these enterprises towards product research and tech advancements, and enhance the practical value of products. Next, increase the entry criteria for the eco-friendly product sector, rigorously adhere to global green certification norms to rigorously oversee and evaluate the production methods of green product companies, guarantee their overall product efficiency, and concurrently, rigorously target green products and their businesses through deceptive certification and misleading market advertising, thereby boosting consumer trust in eco-friendly consumption.

(5) Starting from Education, Providing Sufficient Sources of Knowledge Dissemination and Effective Channels for Enriching Consumer Knowledge of Green Products

The accumulation and acquisition of knowledge on green products are closely related to the education system received by consumers themselves. Therefore, the government should first start with education, research the support of professional magazines and journals on environmental issues, and provide sufficient sources and appropriate channels for the accumulation and acquisition of consumer knowledge on green products. Concurrently, the government has the capability to employ diverse promotional media platforms to spread awareness about the environment, encompassing knowledge of natural settings, environmental issues, and actions, thereby boosting consumer environmental consciousness. Integrating standard courses in environmental and sustainable development education into conventional educational frameworks, along with bolstering backing for specialized journals and journals focused on environmental matters, ensures ample resources for spreading knowledge and suitable pathways for consumers to gather and learn about green consumption. Concurrently, the government has the capability to employ diverse promotional media platforms to spread awareness about the environment, encompassing aspects of natural and environmental issues, as well as knowledge of environmental actions, thereby boosting the environmental consciousness of consumers.

5.4 Research Limitations and Future Research

There are several shortcomings in this article:

Firstly, this article reveals the driving mechanism of green purchase intention from the perspective of social media marketing. However, the driving mechanism of green purchase intention is also influenced by other factors, which need to be further explored in future research.

Secondly, this study's sample selection was quite limited, comprising merely 500 legitimate questionnaires. Owing to limitations in time and energy, the allocation of sample regions is irregular and not particularly applicable. Going forward, researchers have the opportunity to broaden the scope of sample selection and validation in their studies.

This study did not differentiate certain personal characteristics of consumers, such as whether they are practical consumers or hedonistic consumers? The impact of consumer personality (Big Five personality traits) on research needs further research in the future.

List of Bibliography

Aaker, D (1991), *Managing Brand Equity - Capitalizing on the Value of a Brand Name*.1st Edition. New York, The Free Press.

Aaker, D. (1991). Brand equity. *La gestione del valore della marca, 347*, 356.

Aaker, D. A. (2009). *Managing brand equity*. simon and schuster.

Aaker, D. A., & Joachimsthaler, E. (2000). The brand relationship spectrum: The key to the brand architecture challenge. *California management review, 42*(4), 8-23.

Ahmad, N. S., Musa, R., & Harun, M. H. M. (2016). The impact of social media content marketing (SMCM) towards brand health. *Procedia Economics and Finance, 37*, 331-336.

Ahmed, M. A., & Zahid, Z. (2014). Role of social media marketing to enhance CRM and brand equity in terms of purchase intention. *Asian Journal of management research, 4*(3), 533-549.

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes, 50*(2), 179-211.

Ajzen, I. (2011). The theory of planned behaviour: Reactions and reflections. *Psychology & health, 26*(9), 1113-1127.

Akturan, U. (2018). How does greenwashing affect green branding equity and purchase intention? An empirical research. *Marketing Intelligence & Planning, 36*(7), 809-824.

Alamsyah, D., Othman, N., Bakri, M., Udjaja, Y., & Aryanto, R. (2021). Green awareness through environmental knowledge and perceived quality. *Management Science Letters, 11*(1), 271-280.

Alba, J. W., & Hutchinson, J. W. (1987). Dimensions of consumer expertise. *Journal of consumer research, 13*(4), 411-454.

Allcott, H. (2011). Social norms and energy conservation. *Journal of public Economics, 95*(9-10), 1082-1095.

Alwan, M., & Alshurideh, M. (2022). The effect of digital marketing on purchase intention: Moderating effect of brand equity. *International Journal of Data and Network Science, 6*(3), 837-848.

Anderson, J. R. (1976). *Language, memory, and thought*. Psychology Press.

Ardiansyah, F., & Sarwoko, E. (2020). How social media marketing influences
      consumers purchase decision: A mediation analysis of brand
      awareness. *JEMA: Jurnal Ilmiah Bidang Akuntansi Dan Manajemen*, *17*(2),
      156-168.

As' ad, H. A. R., & Alhadid, A. Y. (2014). The impact of social media marketing on
      brand equity: An empirical study on mobile service providers in
      Jordan. *Review of Integrative Business and Economics Research*, *3*(1), 315.

Aurier, P., & Ngobo, P. V. (1999). Assessment of consumer knowledge and its
      consequences: a multi-component approach. *Cahiers de Recherche du
      CREGO, 4*, 43-56.

Bao, C.J., & Wen, C.J. (2021). A Study on the Influence Mechanism of Consumers'
      Green Purchase Intention - Based on the Perspective of Social Interaction.
      *Journal of Fujian A&F University (Philosophy and Social Sciences
      Edition), 24*(03), 42-50.

Bao, W.L., Xin, Y., & Yong, L.L. (2009). Research on the Impact of Consumer Product
      Knowledge on Brand Loyalty. *Productivity Research, 9*, 23-30.

Beatty, S. E., & Smith, S. M. (1987). External search effort: An investigation across
      several product categories. *Journal of consumer research*, *14*(1), 83-95.

Berndt, A. E. (2020). Sampling methods. *Journal of Human Lactation*, *36*(2), 224-226.

Biel, A. L. (1992). How brand image drives brand equity. *Journal of advertising
      research*, *32*(6), 6-12.

Bilgin, Y. (2018). The effect of social media marketing activities on brand awareness,
      brand image and brand loyalty. *Business & management studies: an
      international journal*, *6*(1), 128-148.

Biocca, F., Harms, C., & Gregg, J. (2001, May). *The networked minds measure of
      social presence: Pilot test of the factor structure and concurrent validity*.
      In 4th annual international workshop on presence, Philadelphia, PA (pp. 1-9).

Blankertz, L. (1998). The value and practicality of deliberate sampling for
      heterogeneity: A critical multiplist perspective. *The American Journal of
      Evaluation*, *19*(3), 307-324.

Bo, W. (2014). Review of Green Consumption Research. *Economic Management*, **36** (11), 178-189.

Bolton, R. N., & Drew, J. H. (1991). A multistage model of customers' assessments of service quality and value. *Journal of consumer research*, *17*(4), 375-384.

Bowen, J. (2015). Trends affecting social media: implications for practitioners and researchers. *Worldwide Hospitality and Tourism Themes*.

Brakus, J.J.J., Schmitt, B.H. & Zarantonello, L. (2009). Brand experience: what is it? How is it measured? Does it affect loyalty? *Journal of Marketing*, **73**(3), 52-68.

Broekhuizen, T. L. J., & Alsem, K. J. (2002). Success factors for mass customization: a conceptual model. *Journal of Market-Focused Management*, **5**, 309-330.

Brucks, M. (1985). The effects of product class knowledge on information search behavior. *Journal of consumer research*, **12**(1), 1-16.

Bruhn, M., Schoenmueller, V., & Schäfer, D. B. (2012). Are social media replacing traditional media in terms of brand equity creation?. *Management research review*, **35**(9), 770-790.

Bulearca, M., & Bulearca, S. (2010). Twitter: a viable marketing tool for SMEs?. *Global business and management research*, **2**(4), 296.

Büyükdağ, N. (2021). The effect of brand awareness, brand image, satisfaction, brand loyalty and WOM on purchase intention: An empirical research on social media. *Business & Management Studies: An International Journal*, **9**(4), 1380-1398.

Can, J., & Hong, Z.X. (2013). B2C online store image, consumer perception, and purchasing behavior. *Research on Financial Issues, 10,* 116-122.

Carlson, L., Grove, S. J., & Kangun, N. (1993). A content analysis of environmental advertising claims: A matrix method approach. *Journal of advertising*, **22**(3), 27-39.

Cattell, R. B., & Cattell, R. B. (1978). Fixing the number of factors: The most practicable psychometric procedures. *The scientific use of factor analysis in behavioral and life sciences*, 72-91.

Chen, C. C., Chen, C. W., & Tung, Y. C. (2018). Exploring the consumer behavior of intention to purchase green products in belt and road countries: An empirical analysis. *Sustainability*, *10*(3), 854.

Chen, K., & Deng, T. (2016). Research on the green purchase intentions from the perspective of product knowledge. *Sustainability*, *8*(9), 943.

Chen, Y. S., Chang, T. W., Li, H. X., & Chen, Y. R. (2020). The influence of green brand affect on green purchase intentions: The mediation effects of green brand associations and green brand attitude. *International Journal of Environmental Research and Public Health*, *17*(11), 4089.

Chernev, A. (2020). *The marketing plan handbook*. Cerebellum Press.

Christodoulides, G., & De Chernatony, L. (2010). Consumer-based brand equity conceptualisation and measurement: a literature review. *International journal of market research*, *52*(1), 43-66.

Cobb-Walgren, C. J., Ruble, C. A., & Donthu, N. (1995). Brand equity, brand preference, and purchase intent. *Journal of advertising*, *24*(3), 25-40.

Cordell, V. V. (1997). Consumer knowledge measures as predictors in product evaluation. *Psychology & Marketing*, *14*(3), 241-260.

Crumlish, C., & Malone, E. (2009). *Designing social interfaces: Principles, patterns, and practices for improving the user experience*. " O'Reilly Media, Inc.".

Csutora, M. (2012). One more awareness gap? The behaviour–impact gap problem. *Journal of consumer policy*, *35*(1), 145-163.

Dacin, P. A., & Mitchell, A. A. (1986). The measurement of declarative knowledge. *ACR North American Advances*.

Danks, N. P., Sharma, P. N., & Sarstedt, M. (2020). Model selection uncertainty and multimodel inference in partial least squares structural equation modeling (PLS-SEM). *Journal of Business Research*, *113*, 13-24.

Darden, W. R., & Perreault Jr, W. D. (1976). Identifying interurban shoppers: Multiproduct purchase patterns and segmentation profiles. *Journal of Marketing Research*, *13*(1), 51-60.

Dawson, B., & Trapp, R. G. (2001). Probability&related topics for making inferences about data. Basic&Clinical Biostatistics. *Lange medical Books/McGraw-Hill Medical Publishing Division*, *6*9, 72.

De Chernatony, L. (1999). Brand management through narrowing the gap between brand identity and brand reputation. *Journal of marketing management*, *15*(1-3), 157-179.

Dewnarain, S., Ramkissoon, H., & Mavondo, F. (2021). Social customer relationship management: a customer perspective. *Journal of Hospitality Marketing & Management*, *30*(6), 673-698.

Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of marketing research*, *28*(3), 307-319.

Dwivedi, A. (2015). A higher-order model of consumer brand engagement and its impact on loyalty intentions. *Journal of Retailing and Consumer Services, 24*, 100-109.

Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Harcourt brace Jovanovich college publishers.

Elfil, M., & Negida, A. (2017). Sampling methods in clinical research; an educational review. *Emergency*, *5*(1).

Evans, J. R., & Mathur, A. (2005). The value of online surveys. *Internet research*, *15*(2), 195-219.

Everitt, B. S. (1975). Multivariate analysis: The need for data, and other problems. *The British Journal of Psychiatry*, *126*(3), 237-240.

Eysenbach, G., & Wyatt, J. (2002). Using the Internet for surveys and health research. *Journal of medical Internet research*, *4*(2), e862.

Farquhar, P. H. (1989). Managing brand equity. *Marketing research*, *1*(3).

Febriyantoro, M. T. (2020). Exploring YouTube Marketing Communication: Brand awareness, brand image and purchase intention in the millennial generation. *Cogent Business & Management*, *7*(1), 1787733.

Follows, S. B., & Jobber, D. (2000). Environmentally responsible purchase behaviour: a test of a consumer model. *European journal of Marketing*, *34*(5/6), 723-746.

Gao, L.F., & Lei, N. (2011). Empirical Study on the Impact of Fitness Club Brand Image on Customer Loyalty. *Journal of Beijing Sport University, 34*(10), 4.

Gardner, B. B., & Levy, S. J. (1999). The product and the brand. *Sidney J. Levy und Dennis W. Rook (Hg.): Brands, consumers, symbols, & research. Sidney J. Levy on marketing. Thousand Oaks, Calif: Sage Publications*, 131-141.

Gensler, S., Völckner, F., Liu-Thompkins, Y., & Wiertz, C. (2013). Managing brands in the social media environment. *Journal of interactive marketing, 27*(4), 242-256.

Ghali-Zinoubi, Z. (2020). Determinants of consumer purchase intention and behavior toward green product: The moderating role of price sensitivity. *Archives of Business Research, 8*(1), 261-273.

Gleim, M. R., Smith, J. S., Andrews, D., & Cronin Jr, J. J. (2013). Against the green: A multi-method examination of the barriers to green consumption. *Journal of retailing, 89*(1), 44-61.

Glick, P., Demorest, J. A., & Hotze, C. A. (1988). Keeping your distance: group membership, personal space, and requests for small favors 1. *Journal of Applied Social Psychology, 18*(4), 315-330.

Goh, K. Y., Heng, C. S., & Lin, Z. (2013). Social media brand community and consumer behavior: Quantifying the relative impact of user-and marketer-generated content. *Information systems research, 24*(1), 88-107.

Gorsuch, R. L. (1983). Three methods for analyzing limited time-series (N of 1) data. *Behavioral Assessment*.

Granovetter, M. S. (1973). The strength of weak ties. *American journal of sociology, 78*(6), 1360-1380.

Grewal, D., Iyer, G. R., Gotlieb, J., & Levy, M. (2007). Developing a deeper understanding of post-purchase perceived risk and behavioral intentions in a service setting. *Journal of the Academy of Marketing Science, 35*, 250-258.

Grunert, S. C. (1993). Everybody seems concerned about the environment: But is this concern reflected in (Danish) consumers' food choice?. *ACR European Advances*.

Guang, X. (1995). Joint implementation of the United Nations Framework Convention on Climate Change. *Environmental Science Research*, **8**(3), 58-59.

Gunelius, S. (2010). *30-minute social media marketing: Step-by-step techniques to spread the word about your business: Social media marketing in 30 minutes a day*. McGraw Hill Professional.

Hai, W.Z., Chun, Y.L., & Ping, Z. (2006). The relationship between consumer patterns of brand assets and product market output patterns. *Managing the World, 1*, 106-119.

Haider, J. (2012). Interrupting practices that want to matter: The making, shaping and reproduction of environmental information online. *Journal of Documentation*, *68*(5), 639-658.

Hajli, M. N. (2014). The role of social support on relationship quality and social commerce. *Technological Forecasting and Social Change*, *87*, 17-27.

Hajli, N. (2015). Social commerce constructs and consumer's intention to buy. *International Journal of Information Management*, **35**(2), 183-191.

Han, H., Yu, J., & Kim, W. (2019). An electric airplane: Assessing the effect of travelers' perceived risk, attitude, and new product knowledge. *Journal of air transport management*, *78*, 33-42.

Hartzel, K. S., Mahanes, C. J., Maurer, G. J., Sheldon, J., Trunick, C., & Wilson, S. J. (2011). Corporate posts and tweets: brand control in web 2.0. *Journal of Information & Knowledge Management*, *10*(1), 51-58.

Haudi, H., Handayani, W., Musnaini, M., Suyoto, Y., Prasetio, T., Pitaloka, E., ... & Cahyon, Y. (2022). The effect of social media marketing on brand trust, brand equity and brand loyalty. *International Journal of Data and Network Science*, *6*(3), 961-972.

Hawk, S. T., van den Eijnden, R. J., van Lissa, C. J., & ter Bogt, T. F. (2019). Narcissistic adolescents' attention-seeking following social rejection: Links with social media disclosure, problematic social media use, and smartphone stress. *Computers in Human Behavior*, *92*, 65-75.

Hawks, L. K., & Ackerman, N. M. (1990). Family life cycle differences for shopping styles, information use, and decision-making. *Lifestyles*, *11*, 199-219.

Hazée, S., Van Vaerenbergh, Y., & Armirotto, V. (2017). Co-creating service recovery after service failure: The role of brand equity. *Journal of Business Research*, *74*, 101-109.

He, W.C., Zhen, Z., & Mao, T.L. (2007). Research on the Impact of Service Brand Image on Consumer Postpurchase Behavior. *Journal of Hangzhou University of Electronic Science and Technology: Social Science Edition, 4*, 6.

Hewett, K., Rand, W., Rust, R. T., & Van Heerde, H. J. (2016). Brand buzz in the echoverse. *Journal of Marketing*, *80*(3), 1-24.

Ho, T. N., Wu, W. Y., Nguyen, P. T., & Chen, H. C. (2019). The moderating effects for the relationships between green customer value, green brand equity and behavioral intention. *Academy of Strategic Management Journal*, *18*(4), 1-21.

Holbrook, M. B., & Hirschman, E. C. (1982). The experiential aspects of consumption: Consumer fantasies, feelings, and fun. *Journal of consumer research*, *9*(2), 132-140.

Hollerbach, P., Johansson, A., Ventus, D., Jern, P., Neumann, C. S., Westberg, L., ... & Mokros, A. (2018). Main and interaction effects of childhood trauma and the MAOA uVNTR polymorphism on psychopathy. *Psychoneuroendocrinology, 95*, 106-112.

Hong, S.Z., Qian, Z.J., & Qin, Y.J. (2013). Analysis of the Evolutionary Theme of Social Media Research Abroad. *Information Science, 31*(1), 99-105.

Hu, X. (2022). The Development Status, Problems and Solutions of Green Consumption in Jiangxi Province. *Knowledge Library, 17,* 250-251.

Huang, Y. C., Yang, M., & Wang, Y. C. (2014). Effects of green brand on green purchase intention. *Marketing Intelligence & Planning*, *32*(3), 250-268.

Hutter, K., Hautz, J., Dennhardt, S., & Füller, J. (2013). The impact of user interactions in social media on brand awareness and purchase intention: the case of MINI on Facebook. *Journal of product & brand management*, *22*(5/6), 342-351.

Ibrahim, B., Aljarah, A., & Sawaftah, D. (2021). Linking social media marketing activities to revisit intention through brand trust and brand loyalty on the coffee shop facebook pages: Exploring sequential mediation mechanism. *Sustainability*, *13*(4), 2277.

iiMedia. (2022). Research Report on China's Mobile Social Industry from 2020 to 2021.

Islam, T., Li, J., Ali, A., Xiaobei, L., Sheikh, Z., & Zafar, A. U. (2020). Mapping online App hate: determinants and consequences. *Telematics and Informatics*, *51*, 101401.

Ismail, A.R. (2017). The influence of perceived social media marketing activities on brand loyalty. *Asia Pacific Journal of Marketing & Logistics*, *29*(1), 129-144.

Jaiswal, D., & Kant, R. (2018). Green purchasing behaviour: A conceptual framework and empirical investigation of Indian consumers. *Journal of Retailing and Consumer Services*, *41*, 60-69.

Jasin, M. (2022). The Role of Social Media Marketing and Electronic Word of Mouth on Brand Image and Purchase Intention of SMEs Product. *Journal of Information Systems and Management (JISMA)*, *1*(4), 54-62.

Jia, H.X. (2021). *Strategic brand management - Creating, Evaluating and Managing Brand Assets*. 5th Edition. China Renmin University Press.

Jian, L.X. (2019). Analysis of Factors Influencing Green Purchasing and Its Implications. *Journal of Changsha University of Technology, 21*(4), 71-74.

Jian, L.X., Hong, L.S., & Ming, S.J. (2014). Theoretical Analysis and Empirical Testing of the Matching Effect between Green Products and Advertising Demands. *Financial Theory and Practice, 35*(1), 127-131.

Jian, W.L., Qi, D., & Ji, G.B. (2011). Product engagement, consumer conformity, and brand commitment: The mediating role of brand sensitivity - Taking the sedan consumer market as an example. *Management Review*, *23*(9).

Jian, Z.Q. (2010). *Brand Image Identification and Communication*. Fujian: Xiamen University Press.

Jin, J.H. & Lu, M.L. (2019). Review and prospect of China's environmental governance in 70 years: perspective of ecological civilization. *Journal of Chongqing University of Technology (Social Science)*, **12**, 27-36.

Johnstone, M. L., & Todd, S. (2012). Servicescapes: the role that place plays in stay-at-home mothers' lives. *Journal of Consumer Behaviour*, *11*(6), 443-453.

Kang, J., Liu, C., & Kim, S. H. (2013). Environmentally sustainable textile and apparel consumption: the role of consumer knowledge, perceived consumer effectiveness and perceived personal relevance. *International Journal of consumer studies*, *37*(4), 442-452.

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business horizons*, *53*(1), 59-68.

Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of marketing*, *57*(1), 1-22.

Kelly, L., Kerr, G., & Drennan, J. (2010). Avoidance of advertising in social networking sites: The teenage perspective. *Journal of interactive advertising*, *10*(2), 16-27.

Khadim, R. A., Hanan, M. A., Arshad, A., Saleem, N., & Khadim, N. A. (2018). Revisiting antecedents of brand loyalty: Impact of perceived social media communication with brand trust and brand equity as mediators. *Academy of Strategic Management Journal*, *17*(1), 1-13.

Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business horizons*, *54*(3), 241-251.

Kim, A. J., & Ko, E. (2010). Impacts of luxury fashion brand's social media marketing on customer relationship and purchase intention. *Journal of Global fashion marketing*, *1*(3), 164-171.

Kim, A. J., & Ko, E. (2012). Do social media marketing activities enhance customer equity? An empirical study of luxury fashion brand. *Journal of Business research*, *65*(10), 1480-1486.

Kim, S. S., Choe, J. Y. J., & Petrick, J. F. (2018). The effect of celebrity on brand awareness, perceived quality, brand image, brand loyalty, and destination attachment to a literary festival. *Journal of destination marketing & management*, *9*, 320-329.

Knoll, J. (2016). Advertising in social media: a review of empirical evidence. *International journal of Advertising*, *35*(2), 266-300.

Kotler, P., & Gertner, D. (2002). Country as brand, product, and beyond: A place marketing and brand management perspective. *Journal of brand management*, *9*, 249-261.

Kristiana, Y., Pramono, R., & Brian, R. (2021). Adaptation strategy of tourism industry stakeholders during the COVID-19 pandemic: A case study in Indonesia. *The Journal of Asian Finance, Economics and Business*, *8*(4), 213-223.

Kulviwat, S., Bruner II, G. C., & Al-Shuridah, O. (2009). The role of social influence on adoption of high tech innovations: The moderating effect of public/private consumption. *Journal of Business research*, *62*(7), 706-712.

Kumar, V., Petersen, J. A., & Leone, R. P. (2007). How valuable is word of mouth?. *Harvard business review*, *85*(10), 139.

Kwon, K. T., Ko, J. H., Shin, H., Sung, M., & Kim, J. Y. (2020). Drive-through screening center for COVID-19: a safe and efficient screening system against massive community outbreak. *Journal of Korean medical science*, *35*(11), e123. https://doi.org/10.3346/jkms.2020.35.e123.

Laksamana, P. (2018). Impact of social media marketing on purchase intention and brand loyalty: Evidence from Indonesia's banking industry. *International Review of Management and Marketing*, *8*(1), 13-18.

Laroche, M., Habibi, M. R., Richard, M. O., & Sankaranarayanan, R. (2012). The effects of social media based brand communities on brand community markers, value creation practices, brand trust and brand loyalty. *Computers in human behavior*, *28*(5), 1755-1767.

Laroche, M., Habibi, M. R., Richard, M. O., & Sankaranarayanan, R. (2012). The effects of social media based brand communities on brand community markers, value creation practices, brand trust and brand loyalty. *Computers in human behavior*, *28*(5), 1755-1767.

Le Tan, T., & Dai Trang, D. T. (2019). Factors Affecting Brand Image: The Case of Pepsodent in Da Nang, Vietnam. *IUP Journal of Brand Management*, *16*(2), 7-25.

Lee Weisstein, F., Asgari, M., & Siew, S. W. (2014). Price presentation effects on green purchase intentions. *Journal of Product & Brand Management*, *23*(3), 230-239.

Lee, K. S., & Tan, S. J. (2003). E-retailing versus physical retailing: A theoretical model and empirical test of consumer choice. *Journal of Business Research*, *56*(11), 877-885.

Leedy, P. D., & Ormrod, J. E. (2005). *Practical research* (Vol. 108). Saddle River, NJ, USA: Pearson Custom.

Leggatt, H. (2010). Rebuild Brand Loyalty with Social Media. *Biz Report*.

Lei, Q. (2009). *Research on the Impact of Social Media on Consumer Purchase Intention*. Nanchang: Jiangxi University of Finance and Economics.

Leung, X. Y., Bai, B., & Stahura, K. A. (2015). The marketing effectiveness of social media in the hotel industry: A comparison of Facebook and Twitter. *Journal of Hospitality & Tourism Research*, *39*(2), 147-169.

Liang, J. (2019). Model Construction and Empirical Study on the Analysis and Evaluation of Sports Goods Brand Image. *Journal of Chengdu Institute of Physical Education*, *45*(4), 40-46.

Lin, H. Y., & Hsu, M. H. (2015). Using social cognitive theory to investigate green consumer behavior. *Business Strategy and the Environment*, *24*(5), 326-343.

Lin, P. C., & Huang, Y. H. (2012). The influence factors on choice behavior regarding green products based on the theory of consumption values. *Journal of Cleaner production*, *22*(1), 11-18.

Liobikien, G., Mandravickait, J., & Bernatonien, J. (2016). Theory of planned behavior approach to understand the green purchasing behavior in the EU: A cross cultural study. *Ecological Economics, 125,* 38-46.

Lu, Q. S., & Miller, R. (2019). How social media communications combine with customer loyalty management to boost green retail sales. *Journal of Interactive Marketing, 46*(1), 87-100.

Lucarelli, C., Mazzoli, C., & Severini, S. (2020). Applying the theory of planned behavior to examine pro-environmental behavior: the moderating effect of COVID-19 beliefs. *Sustainability, 12*(24), 10556.

Malhotra, N., Hall, J., Shaw, M., & Oppenheim, P. (2006). *Marketing research: An applied orientation*. Deakin University.

Marsh, H. W., Dowson, M., Pietsch, J., & Walker, R. (2004). Why multicollinearity matters: a reexamination of relations between self-efficacy, self-concept, and achievement. *Journal of Educational Psychology, 96*(3), 518.

McDonald, M., & Brown, L. (2005). Strategic marketing planning. *The marketing book, 86*.

Meng, L.Y., & Cheng, W.H. (2017). Exploring the Factors Influencing Purchase Intention Based on the Characteristics of Social Media. *China Circulation Economy, 31*(8), 75-83.

Meng, Z.X. (2015). Analysis of Taoist Value Factors in Green Purchase Behavior - Conceptual Definition, Measurement, Modeling, and Marketing Strategy Suggestions. *Economic Management, 4*, 36-43.

Min, G., & Hong, S.J. (2016). The Impact of Product Knowledge on Consumer Attribute Similarity Choice: The Regulation of Perceived Risk. *Consumer Economy, 32*.

Ming, J.H., & Hong, C.X. (2003). Comparative Study on Brand Image Models. *Journal of Peking University (Philosophy and Social Sciences Edition), 2*, 107-114.

Mishra, A. S. (2019). Antecedents of consumers' engagement with brand-related content on social media. *Marketing Intelligence & Planning, 37*(4), 386-400.

Mitchell, A. A., & Dacin, P. A. (1996). The assessment of alternative measures of consumer expertise. *Journal of consumer research, 23*(3), 219-239.

Moorman, C., Diehl, K., Brinberg, D., & Kidwell, B. (2004). Subjective knowledge, search locations, and consumer choice. *Journal of Consumer Research*, *31*(3), 673-680.

Moslehpour, M., Ismail, T., Purba, B., & Wong, W. K. (2021). What makes GO-JEK go in Indonesia? The influences of social media marketing activities on purchase intention. *Journal of Theoretical and Applied Electronic Commerce Research*, *17*(1), 89-103.

Na, H. (2015). Research on influencing factors and policy intervention path of green consumption behavior. *Doctoral thesis, Beijing University of Technology*.

Nan, C., & Chang, W.Z. (2010). The Dimension and Measurement of Symbolic Brand Image. *Business Economics and Management*, *1*(10), 52-60.

Nekmahmud, M., Naz, F., Ramkissoon, H., & Fekete-Farkas, M. (2022). Transforming consumers' intention to purchase green products: Role of social media. *Technological Forecasting and Social Change*, *185*, 122067.

Östman, J. (2014). The influence of media use on environmental engagement: A political socialization approach. *Environmental Communication*, *8*(1), 92-109.

Pan, Y., Torres, I. M., & Zúñiga, M. A. (2019). Social media communications and marketing strategy: A taxonomical review of potential explanatory approaches. *Journal of Internet Commerce*, *18*(1), 73-90.

Papadas, K. K., Avlonitis, G. J., & Carrigan, M. (2017). Green marketing orientation: Conceptualization, scale development and validation. *Journal of Business Research*, *80*, 236-246.

Park, C. W., & Moon, B. J. (2003). The relationship between product involvement and product knowledge: Moderating roles of product type and product knowledge type. *Psychology & Marketing*, *20*(11), 977-997.

Pei, D.Q., Han, D.Z., & Xiang, R.F. (2019). Research on the brand communication strategy of knitted clothing in the new media era. *Knitting Industry, 9*, 67-71.

Pop, R. A., Săplăcan, Z., & Alt, M. A. (2020). Social media goes green—The impact of social media on green cosmetics purchase motivation and intention. *Information*, *11*(9), 447.

Qin, Z. (2018). Research on Consumer Green Purchasing Behavior. *Price Theory and Practice*, (06): 118-121.

Quester, P., & Lin Lim, A. (2003). Product involvement/brand loyalty: is there a link?. *Journal of product & brand management*, *12*(1), 22-38.

Rahbar, E., & Wahid, N. A. (2011). Investigation of green marketing tools' effect on consumers' purchase behavior. *Business strategy series*, *12*(2), 73-83.

Rapoport, A. (1975). Toward a redefinition of density. *Environment and Behavior, 7*(2), 133-158.

Ratchford, B. T., & Srinivasan, N. (1993). An empirical investigation of returns to search. *Marketing science*, *12*(1), 73-87.

Reimer, B., D'Ambrosio, L. A., Gilbert, J., Coughlin, J. F., Biederman, J., Surman, C., ... & Aleardi, M. (2005). Behavior differences in drivers with attention deficit hyperactivity disorder: The driving behavior questionnaire. *Accident Analysis & Prevention*, *37*(6), 996-1004.

Rizal, V. Z., & Lubis, E. E. (2014). Social Media Marketing Twitter Dan Brand Image Restoran Burger. *Jurnal Ilmu Komunikasi (JKMS)*, *3*(1), 103-118.

Sahin, A., Zehir, C. and Kitapçi, H. (2011). The effects of brand experiences, trust and satisfaction on building brand loyalty; an empirical research on global brands. *Procedia - Social and Behavioral Sciences, 24*, 1288-1301.

Sanny, L., Arina, A., Maulidya, R., & Pertiwi, R. (2020). Purchase intention on Indonesia male's skin care by social media marketing effect towards brand image and brand trust. *Management Science Letters, 10*(10), 2139-2146.

Sashi, C. M. (2012). Customer engagement, buyer-seller relationships, and social media. *Management decision*, *50*(2), 253-272.

Savitri, C., Hurriyati, R., Wibowo, L., & Hendrayati, H. (2022). The role of social media marketing and brand image on smartphone purchase intention. *International Journal of Data and Network Science*, *6*(1), 185-192.

Schlegelmilch, B. B., Bohlen, G. M., & Diamantopoulos, A. (1996). The link between green purchasing decisions and measures of environmental consciousness. *European journal of marketing*, *30*(5), 35-55.

Schneider, T. R., Salovey, P., Apanovitch, A. M., Pizarro, J., McCarthy, D., Zullo, J., & Rothman, A. J. (2001). The effects of message framing and ethnic targeting on mammography use among low-income women. *Health Psychology*, *20*(4), 256.

Scriven, A., & Smith-Ferrier, S. (2003). The application of online surveys for workplace health research. *The journal of the Royal Society for the Promotion of Health*, *123*(2), 95-101.

Sedgwick, P. (2014). Unit of observation versus unit of analysis. *Bmj*, *348*.

Seo, E. J., & Park, J. W. (2018). A study on the effects of social media marketing activities on brand equity and customer response in the airline industry. *Journal of Air Transport Management*, *66*, 36-41.

Sheikh, Z., Yezheng, L., Islam, T., Hameed, Z., & Khan, I. U. (2019). Impact of social commerce constructs and social support on social commerce intentions. *Information Technology & People*.

Shi, L.X., & Zhi, Z.M. (2002). Shaping a Strong Brand Image. *Business Economics and Management, 7*, 17-20.

Shin, Y. H., & Hancer, M. (2016). The role of attitude, subjective norm, perceived behavioral control, and moral norm in the intention to purchase local food products. *Journal of foodservice business research*, *19*(4), 338-351.

Shorten, A., & Moorley, C. (2014). Selecting the sample. *Evidence-based nursing*, *17*(2), 32-33.

Simsek, Z., & Veiga, J. F. (2001). A primer on internet organizational surveys. *Organizational research methods*, *4*(3), 218-235.

Singla, M. L., & Durga, A. (2015). How social media gives you competitive advantage. *Indian Journal of Science and technology*, *8*, 90.

Smith, M. T., Roy, R., & Potter, S. (1996). *The commercial impacts of green product development*. Open University, Design Innovation Group.

So, K. K. F., Wu, L., Xiong, L., & King, C. (2018). Brand management in the era of social media: Social visibility of consumption and customer brand identification. *Journal of Travel Research*, *57*(6), 727-742.

Srinivasan, N., & Ratchford, B. T. (1991). An empirical test of a model of external search for automobiles. *Journal of Consumer research*, *18*(2), 233-242.

Stern, P. C. (2000). New environmental theories: toward a coherent theory of environmentally significant behavior. *Journal of social issues*, *56*(3), 407-424.

Sun, Y., & Wang, S. (2020). Understanding consumers' intentions to purchase green products in the social media marketing context. *Asia pacific journal of marketing and logistics*, *32*(4), 860-878.

Swaminathan, V. (2003). The impact of recommendation agents on consumer evaluation and choice: the moderating role of category risk, product complexity, and consumer knowledge. *Journal of Consumer Psychology, 13*(1-2), 93-101.

Taherdoost, H. (2016). Sampling methods in research methodology; how to choose a sampling technique for research. *How to Choose a Sampling Technique for Research, 5*(2), 18-27.

Tai, L.H. (2002). Models and Methods for Brand Asset Evaluation. *Journal of Sun Yat sen University (Social Sciences Edition), 3*, 88-96.

Tanner, C., & Wölfing Kast, S. (2003). Promoting sustainable consumption: Determinants of green purchases by Swiss consumers. *Psychology & marketing, 20*(10), 883-902.

Tao, W., Hao, H., & Fan, C. (2010). Consumer creativity in new product development - the impact of product innovation tasks and consumer knowledge on consumer product creativity. *Managing the World, 2*, 80-92.

Tasci, A. D. (2021). A critical review and reconstruction of perceptual brand equity. *International Journal of Contemporary Hospitality Management*, *33*(1), 166-198.

Tedy, T. (2018). *CONSUMER PERSONALITY AND GREEN BUYING INTENTION: THE MEDIATE ROLE OF CONSUMER ETHICAL BELIEF,* (Doctoral dissertation, UAJY).

Tian, Z.S. (2017). Research on the influence mechanism of consumer values on green consumption willingness under the background of Chinese culture. ***Doctoral Dissertation of Jilin University***.

Ting, Z., De, N.H., & Jin, Z.M. (2014). Research and Analysis on the Image of Foreign Online Stores. ***Jiangsu Business Review, 7***, 3-7.

Torre, G. L., Miccoli, S., & Ricciardi, W. (2014). The Italian alliance for vaccination strategies: Facebook as a learning tool for preventive medicine and public health. ***Human Vaccines & Immunotherapeutics***, ***10***(10), 2910-2914.

Trivedi, R. H., Patel, J. D., & Acharya, N. (2018). Causality analysis of media influence on environmental attitude, intention and behaviors leading to green purchasing. ***Journal of cleaner production***, ***196***, 11-22.

Tsai, W. H. S., & Men, L. R. (2013). Motivations and antecedents of consumer engagement with brand pages on social networking sites. ***Journal of Interactive Advertising***, ***13***(2), 76-87.

Tsimonis, G., & Dimitriadis, S. (2014). Brand strategies in social media. ***Marketing Intelligence & Planning***, ***32***(3), 328-344.

Tuten, T. L. (2008). ***Advertising 2.0: social media marketing in a web 2.0 world: social media marketing in a web 2.0 world***. ABC-CLIO.

Tyrer, S., & Heyman, B. (2016). Sampling in epidemiological research: issues, hazards and pitfalls. ***BJPsych bulletin***, ***40***(2), 57-60.

Upadana, M. W. K., & Pramudana, K. A. S. (2020). Brand Awareness Memediasi Pengaruh Social Media Marketing Terhadap Keputusan Pembelian. ***E-Jurnal Manajemen***, ***9***(5), 1921-1941.

VanMeter, R., Syrdal, H. A., Powell-Mantel, S., Grisaffe, D. B., & Nesson, E. T. (2018). Don't just "Like" me, promote me: How attachment and attitude influence brand related behaviors on social media. ***Journal of Interactive Marketing***, ***43***(1), 83-97.

Vrontis, D., Makrides, A., Christofi, M., & Thrassou, A. (2021). Social media influencer marketing: A systematic review, integrative framework and future research agenda. ***International Journal of Consumer Studies***, ***45***(4), 617-644.

Vukasovic, T. (2013). Building successful brand by using social networking media. *Journal of Media and Communication Studies*, *5*(6), 56.

Wang, Y., Chowdhury Ahmed, S., Deng, S., & Wang, H. (2019). Success of social media marketing efforts in retaining sustainable online consumers: An empirical analysis on the online fashion retail market. *Sustainability*, *11*(13), 3596.

Wei, L.P. (2012). Loyal Customers' Resistance to Competitive Marketing Persuasion: The Regulating Effect of Information Involvement and Product Knowledge. *Economic Journal, 1)*: 93-97.

Wen, Z.L., Hou, J.T., & Herbert, W.M. (2008). Standardized Estimation of Moderating Effect in Structural Equation Model. *Journal of Psychology*, *6*, 729-736.

Wen, Z.L., Hou, J.T., & Zhang, L. (2005). Comparison and Application of Moderating and Mediating Effects. *Journal of Psychology, 2*, 268-274.

Xiang, C.Y. (2019). Research on the Development Status and Countermeasures of Chinese Tea Brands. *Strait Technology and Industry, 6*, 51-53.

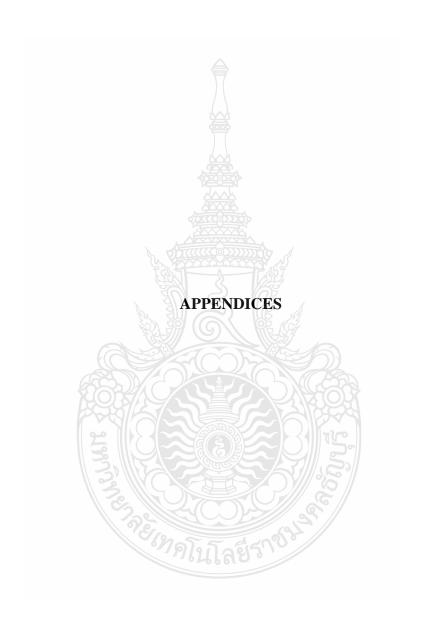Xiao, S.Y. (2012). *Research on the Impact of Product Knowledge on the Purchase Intention of Chinese Remanufactured Products*. Beijing: Beijing Jiaotong University.

Xiao, W.F. (2013). A Preliminary Discussion on the Brand Image Communication Strategy of Xi'an International Metropolis. *News Knowledge, 3*, 31-33.

Xiao, Z.N., & Qian, L.W. (2015). Research on NBA Brand Image Communication and Its Implications for CBA. *Sports Time and Space, 1*, 90-90.

Xiu, F.C. (2000). Analysis of Brand Equity and Its Evaluation System. *Nankai Management Review, 1*, 9-15.

Xuan, J., Jian, L.H., & Yi, C.W. (2004). The Intrinsic Structure of Brand Image System. *Journal of Psychology, 36*, 359-364.

Yadav, R., & Pathak, G. S. (2016). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *Journal of Cleaner Production*, *135*, 732-739.
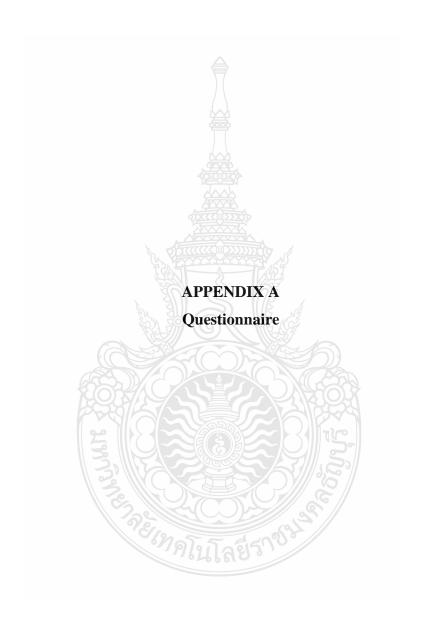
Yang, D., Lu, Y., Zhu, W., & Su, C. (2015). Going green: How different advertising appeals impact green consumption behavior. *Journal of Business Research*, *68*(12), 2663-2675.

Yang, W.Y. (2021). Building the Connotation Space of Clothing Brand Image. *Textile Report, 40*(3), 21-22.

Yoo, B., & Donthu, N. (2001). Developing and validating a multidimensional consumer-based brand equity scale. *Journal of business research*, *52*(1), 1-14.

Young, W., Hwang, K., McDonald, S., & Oates, C. J. (2010). Sustainable consumption: green consumer behaviour when purchasing products. *Sustainable development*, *18*(1), 20-31.

Yu, J.F., Da, D.H., & Hai, Z.S. (2007). Research on the Impact of Consumer Product Knowledge on Its Activation Domain. *Prediction, 1,* 12-20.

Yu, X. and Yuan, C. (2019). How consumers' brand experience in social media can improve brand perception and customer equity. *Asia Pacific Journal of Marketing & Logistics, 31*(5), 1233-1251.

Yuan, J.M. (2011). Empirical Study on the Relationship between Chinese Consumers' Green Consumption Attitude and Green Consumption Behavior. *Master's Thesis, Shandong University*.

Yusoff, M. S. B. (2012). The Dundee ready educational environment measure: a confirmatory factor analysis in a sample of Malaysian medical students. *Int J Humanit Soc Sci*, *2*(16), 313-321.

Zhang, B., Ritchie, B., Mair, J., & Driml, S. (2019). Can message framings influence air passengers' perceived credibility of aviation voluntary carbon offsetting messages?. *Journal of Sustainable Tourism*, *27*(9), 1416-1437.

Zhang, H., Zhang, Y., Ryzhkova, A., Tan, C. D., & Li, F. (2019, December). Social Media Marketing Activities and Customers' Purchase Intention: The Mediating Effect of Brand Image. *In 2019 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)* (pp. 369-373). IEEE.

Zhi, Y.J. (2018). Research on the Lifestyle Characteristics of Green Consumers. *Nankai Management Review, 7*(3), 4-10.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, *18*(1), 39-50.

APPENDICES

APPENDIX A

Questionnaire

The Influence of Social Media Marketing on Consumers' Green Purchasing Behavior

The questionnaire is part of the requirements of Doctor of Philosophy in Business Administration. Please, select the most suitable answers according to your perspectives. The information retrieved is kept confident and is used for the research purpose only. The responses will be only viewed by the researcher.

The essential difference between green products and ordinary products lies in their environmentally friendly and sustainable green value. Therefore, this article defines green products as products that are beneficial to the environment and save resources. In daily life, common types of green products mainly include green food, green furniture, energy-saving household appliances, new energy vehicles, biodegradable plastics, etc.

Part I: Demographic Information

1. Your dender:
   ☐ Male   ☐ Female

2. Your age:
   ☐ 18-30 years old   ☐ 31-40 years old
   ☐ 41-60 years old   ☐ More than 60 years old

3. Your education level:
   ☐ Lower than Bachelor degree   ☐ Bachelor degree
   ☐ Master's degree   ☐ Higher than Master's degree

4. Your occupation:
   ☐ Student   ☐ Government civil servants
   ☐ Enterprise employees   ☐ Others

5. Your monthly household income:
   ☐ Less than 10,000 Yuan   ☐ 10,000 – 30,000 Yuan
   ☐ 30,001 – 50,000 Yuan   ☐ More than 50,000 Yuan

Part II: Please indicate your answer with each of these statements.

1: Strongly disagree

2: Disagree

3: Unclear

4: Agree

5: Strongly agree

Scale	N	Item	1	2	3	4	5
Social media marketing	S1	I like to use social media to increase my knowledge about the brands performance.					
	S2	I am satisfied with the social media marketing of green product brands.					
	S3	The social media marketing of green product brands is very attractive.					
	S4	The level of feedback generated on social media sites (of green product brands) by other users meets my expectations.					
Brand equity	S5	It makes sense to buy green product brands instead of any other product brands.					
	S6	Even if other product brands have the same features as green product brands apart from green features, I would prefer to buy green product brands.					
	S7	If there are other non-green product brands as good as green product brands, I prefer to buy green product brands.					
	S8	If other product brands are not different from green product brands in any way except from green features, it seems smarter to purchase green product brands.					

	S9	The green product brands are distinguishable.					
	S10	The green product brands have personality.					
Brand image	S11	The green product brands are unique.					
	S12	The green product brands are unlike any other product brands.					
	S13	The green product brands are intriguing.					
Purchasing Intention of Green Products	S14	I expect to purchase green products within 1 year.					
	S15	I want to purchase green products within 1 year.					
	S16	I intend to purchase green products within 1 year.					

Product knowledge:

S17. Compared to other consumers, how familiar do you think you are with green products?

Not at all familiar   1   2   3   4   5   Very familiar

S18. Do you know precisely what attributes of a green product decide the function of the green product?

Entirely don't know   1   2   3   4   5   Know very precisely

S19. Do you think you can make a satisfactory purchase of a green product based on only your own knowledge, without another person's help?

Absolutely not   1   2   3   4   5   Absolutely yes

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