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The impact of green supply chain management on sustainable performance of Beijing elderly service enterprises: The mediating role of green innovation

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Abstract
Purpose: This study explores the sustainable development issues of the elderly care industry by exploring the mediating role of green innovation in the impact of green supply chain management on the sustainable performance of Beijing elderly service enterprises. It provides a reference for corporate management practices and government industrial policies.
Design/methodology/approach: This research employed quantitative survey and purposive sample techniques to get quantitative data. Then, SPSS and Smart-PLS were used to analyze the received data to argue the hypothetical study.
Findings: Green supply chain management positively affects green innovation and sustainable performance, respectively. Green innovation positively affects sustainable performance and partially mediates the relationship between green supply chain management and sustainable performance. Institutional pressure has no positive impact on moderating the relationship between green supply chain management and green innovation.
Research limitations/implications: This study is limited by locations outside Beijing, industries beyond service enterprises, firms larger than SMEs, and a lack of ongoing tracking. Thus, this study has limitations related to the elderly industry.
Practical implications: This study's empirical analysis provides government and similar enterprises with practical references. This study also addresses contingency theory gaps in green supply chain management and green innovation in the elderly industry's sustainable performance.
Originality/value: The sustainability of the elderly industry is of paramount importance. This study employs a novel conceptual framework to examine the impact of green supply chain management and green innovation on sustainable performance. The findings of this study hold practical significance in relation to the sustainable development of the elderly industry.

Keywords: Green supply chain management, Green innovation, Sustainable performance

Introduction

There is rising worry about the exhaustion of natural resources and its environmental effects due to rapid industrialization (Wen et al., 2023). The current global economy is in an era of rapid development and change, and resource and environmental challenges are common to all mankind. The Declaration on the Human Environment adopted by the United Nations (UN) Conference on the Human Environment in 1972, protecting the environment and green

development, has become the consensus of all countries worldwide. In September 2015, the United Nations put forward the 17 goals of sustainable development (UN SDGs), which aim to move from 2015 to 2030 to completely solve development problems in the three dimensions of economy, society, and environment in an integrated way and shift to the path of sustainable development (UN, 2015). As the world's second-largest economy (Forbes, 2023), China is facing severe environmental problems while developing, and environmental issues need to be upgraded urgently. The Yale University & Columbia University Environmental Performance Index (EPI) reveals that China's score in 2022 will be 28.4, ranked 160th out of 180 countries and regions. Environmental factors are becoming increasingly important, and the Chinese government has developed various policies and measures, and institutional pressures (IP) to influence and address these issues (Zhu & Sarkis, 2007). In 2015, the Chinese government began implementing the strategic goal of "Made in China 2025", which incorporates sustainable development. Chinese companies have made sustainable performance one of their primary goals. Many enterprises focus on achieving sustainable performance by implementing green supply chain management (GSCM) practices and green innovation (GI) (Jayaraman et al., 2023; Wen et al., 2023).

The biggest market for the elderly industry is China, and the sustainable development of Chinese enterprises in the elderly industry is a significant issue facing the country today (Wei, 2023). China has entered an aging society with a large elderly population. National Bureau Statistics of China (NBS) 2023 showed that the elderly over 60 years old accounted for 19.8% of the total population in 2022, an increase of 1% from the same period of the previous year; National Health and Sanitation Commission of China (NHSC) predicted that by 2035 China's elderly over 60 years old would exceed 400 million people, accounting for more than 30 percent of the total population. The People's Government of Beijing Municipality (Beijing Government) 2023 shows that 21.3% of Beijing's population will be 60 years old or older in 2022, higher than the national average of 1.5% for the same period. Population aging is not only a change in the number and structure of the population but also a significant change in the shape of society as a whole, with fundamental changes in national demand (Wang, 2023). China has such a large elderly population, implying a huge market for elderly demand, and in recent years, enterprises in the elderly industry have been experiencing rapid growth (Wei, 2023; Wang, 2023). Beijing is the seat of government and culture in China, and the country's capital and the elderly industry are strongly represented (Qiao, 2019). According to the division criteria distributed by the Ministry of Industry and Information Technology of the People's Republic of China (2017), service enterprises with less than 300 employees are classified as small and medium-sized enterprises (SMEs), and the Beijing elderly service enterprises studied in this paper are all SMEs. The good or bad development of these enterprises in the elderly industry not only involves the sustainable development of the environment and the economy but also affects the stability of the society, which is also a significant development issue that China is currently facing (Qiao, 2019; Wei, 2023). Therefore, accelerating the implementation of GSCM and improving the industry's overall capacity are critical factors in the sustainable development of the elderly industry.

Currently, Chinese enterprises in the elderly industry are encountering challenges in their development. There is a mismatch between supply and demand in the elderly industry market, a lack of a perfect industrial chain, limited independent innovation ability of enterprises, and products and services are still at the low end. Elderly people are the leading consumer group; due to their price sensitivity and low market prices, resulting in enterprises' lack of innovation ability, many enterprises have encountered challenges in their development (Rao, 2002; Qiao, 2019; Wei, 2023). The pressure to protect the environment has caused enterprises to incur rigid increases in production costs to improve environmental performance (Jiang, 2019). With the

advancement of environmental protection policies, an enterprise cannot obtain short-term profits at the expense of the environment in the long term (Hart, 1995). With the upgrading of industries, stakeholders are becoming more environmentally conscious, and as a result, enterprises are beginning to focus on greening their operations to minimize their ecological impact. Enterprises have used cleaner manufacturing, systems to manage the environment, and GSCM practices to enhance their environmental and economic performance (Zhu & Sarkis, 2007). Consumer demand for healthier, greener products is also increasingly influencing the greening of businesses (Vandermerwe & Oliff, 1990; Yang & Jiang, 2023a). Collaborative development of supply chains has become a trend in industrial development, where consumers have become part of the supply chain and directly influence its development. Enterprises upstream and downstream of the supply chain also recognize that only by strengthening GSCM can the sustainable performance of the whole industry be enhanced (Walton et al., 1998; Jayaraman et al., 2023). The elderly industry will develop towards clustering, accelerating core technology research and strengthening cooperation to drive regional and industrial development in the industry from the perspective of meeting group needs (Wei, 2023). Therefore, GSCM and GI have become popular research topics (Qi & Mao, 2020). By establishing a GSCM for the elderly industry and promoting GI, the profitability of enterprises in the elderly industry itself can be improved, thus realizing sustainable development.

Collating the existing literature reveals that although scholars have studied GSCM from different perspectives, such as drivers or pressures, mechanisms or models, GI, and sustainable performance, academics and practitioners continue to show deep interest in GSCM practices related to sustainable corporate performance (Zhu et al., 2012; Quintana-García et al., 2021; Le et al., 2022; Bag et al., 2022; Agyapong et al., 2023). With the deepening aging in China, consumer demand has changed and will cause a new round of production changes (Wang, 2023). With the rise of the elderly industry represented by the "silver hair economy" (Wei, 2023, p. 9), it is imperative to promote the sustainable concept of "green economy" to guide the sustainable performance of enterprises in the elderly industry.

Therefore, this study follows Wolf's "institution-behavior-performance" research paradigm (Wolf, 2014), and empirical research was conducted with samples of elderly service enterprises in Beijing based on constructing a model. Based on the research data, structural equation modeling (SEM) and hierarchical regression analysis were used to test the effects of GSCM, GI, and IP on the sustainable development of the enterprises concerned. This study expands the GSCM research object under the contingency theory perspective. It explores the gap in GSCM in elderly industry enterprises. The introduction of GI indicators expands and improves the influencing factors of enterprise sustainable performance, develops the moderating role of IP in the relationship between GSCM and GI, and provides an innovative meaning for further clarifying the idea of GSCM practice and the ability to promote sustainable performance of enterprises in the elderly industry.

Literature Review

Green Supply Chain Management

GSCM is one of the most critical factors affecting a company's sustainability (Zhu & Sarkis, 2007; Wolf, 2014). The importance of GSCM has been gaining attention due to the deteriorating environment, dwindling resources, flooding of waste, and increasing levels of pollution (Srivastava, 2007). Contingency theory suggests that no set management method can be applied to all types of organizations. Supply chain management has been related to whether or not there is an impact on global climate change, and the Contingency theory has been applied and developed in GSCM (Furlan Matos Alves et al., 2017). GSCM is based on developing

supply chain management by incorporating green and environmental awareness. In 1996, the University of Michigan in the U.S. introduced the concept of Green Supply Chain (GSC), which green manufacturing and supply chain management were GSCM practices integrate environmental thinking into the entire supply chain management, including product design, material sourcing, and selection, production processes, delivery of the final product to the consumer, and end-of-life management at the end of the product's useful life (Srivastava, 2007; Novitasari & Agustia, 2021). When GSCM practices are properly implemented, supply chain enterprises have a greater chance of achieving win-win situations (Zhu et al., 2012), and those Chinese firms with earlier GSCM practices achieve economic, environmental, and operational benefits relatively early. Yi & Xue (2016) argue that GSCM is a way for firms to realize economic benefits while improving their own and their partners' environmental performance. GSCM can also effectively improve the sustainable performance of enterprises in the elderly industry.

GSCM is fulfilling regulatory requirements and enabling enterprises to be recognized by consumers and enhance their brand image, leading to improved enterprise sustainable performance (Wolf, 2014). By implementing supply chain management proactively, enterprises can effectively and innovatively respond to stakeholders (government, consumers, customers, and partners), this helps minimize negative environmental and social impacts while enhancing productivity and sustainable enterprise performance (Seman et al., 2019; Wolf, 2014). By adopting a proactive strategy to manage supply chain environmental practices and seeking higher benchmarks than simply complying with government regulations, enterprises can also benefit from cost reductions and waste minimization (Walton et al., 1998). GSCM enhances the company's reputation, which is important for sustainable performance. Chinese enterprises are shifting their focus on GSCM from single-firm improvement to the entire supply chain (Zhu & Sarkis, 2004). Enterprises pay more attention to selecting suppliers and partners by including green procurement, green design, green process management, green R&D, disposal of hazardous materials, and certification of relevant management standards in the selection requirements, thus reducing supplier risk (Quintana-García et al., 2021). Enterprises must recognize the significance of supplier slack in environmental management (Yang & Jiang, 2023a). Therefore, enterprises' green procurement activities incorporate suppliers into GSCM, allowing suppliers to establish their environmental management systems, reduce waste generation at the source, reduce energy and material consumption, and improve the overall economic performance of the enterprise (Rao & Holt, 2005).

GSCM offers holistic benefits and a paradigm change from end-of-pipe regulation fulfilling environmental requirements to reducing ecological damage and increasing supply chain sustainable performance (Srivastava, 2007; Tachizawa et al., 2015). When supply chain members face uncertainty, their reliance on supply chain integration may be reduced or expanded, as influenced by their organizational structure (Flynn et al., 2016). Some recognized environmental management system certification systems are also better methods for green supply chain selection criteria. For example, the International Organization for Standardization (ISO) released the environmental management system standard ISO14001 in 1996 etc. (Quintana-García et al., 2021). The development of GSCM in China has mainly experienced the legal-driven and management-driven performance evaluation, regional and situational factors application, technology and innovation, and innovation has become the critical point of breakthrough (Qi & Mao, 2020). Increased focus on supplier development in GSCM leads to greater win-win scenarios in the supply chain and improved environmental and social performance (Seuring & Müller, 2008). GSCM emphasizes not only the enterprise's economic performance but also highlights social and environmental performance. In conjunction with

social and economic development trends, GSCM progresses in the direction of sustainable performance development.

Green Innovation

GI refers to improving products or processes to reduce environmental burdens or achieve sustainable development goals (Rennings, 2000). Fernando et al. (2019) argue that GI complies with environmental needs, optimizes internal resources through green technologies, and uses cross-disciplinary cooperation to improve firms' ability to produce new green products and services. The Organization for Economic Co-operation and Development (OECD) in 2009 defined GI as an innovation in the production, assimilation, or utilization of a product, production process, service, or management or business method that is designed to reduce environmental risks, pollution, and other negative impacts of the use of resources and energy. GI is a good strategy for enterprises to gain a competitive advantage because GI helps to produce sustainable products and services and enhance management tools and processes (Wang & Ozturk, 2023). Moreover, GI helps enterprises achieve economic growth, a cleaner environment, and higher social well-being (Jayaraman et al., 2023).

GI refers to the use of advanced technology by corporations to create eco-friendly goods, conserve power, reduce environmental damage, recycle trash, and enhance procedures for environmental management that promote sustainable development (Novitasari & Agustia, 2021). GI is the basis of a long-term strategy where "green" concepts are incorporated in the initial design to minimize costs and increase efficiency (Vandermerwe & Oliff, 1990). GI is important in fulfilling corporate social responsibility (CSR) and sustainable competitive advantage (Le et al., 2022). As a result, enterprises increasingly recognize GI as a vital strategy for achieving a sustained competitive edge in the marketplace (Fernando et al., 2019). GI can bring higher productivity, reduce waste and pollution, design and develop green products, gain higher profits, improve corporate image, and enhance the sustainable performance of enterprises (Chen et al., 2006). GI is also seen as the result of internal and external corporate social responsibility efforts to break cognitive inertia by influencing different stakeholders to adopt positive attitudes, innovate value, and ultimately contribute to stakeholder sustainability (Le et al., 2022).

Regarding GI practices, relative to those who come later, those firms that implement GI earlier can bring better economic, social, and environmental performance to the supply chain and thus can motivate those who come later to adopt GI practices as well (Zhu et al., 2012). Enterprises obtain information in their communication transactions with consumers, and consumers' environmental demands guide their GI (Yi & Xue, 2016). Enterprises that are proactive in GI can gain first-mover competitive advantage and get better markets, reputation, and revenue (Hart, 1995). Enterprises oriented towards GI are relatively more capable of solving business operational problems, providing better services to customers, and taking greater responsibility for society and the environment (Fernando et al., 2019). While GI by enterprises can benefit society as a whole, if a single enterprise bears the cost of the innovation and the result has the attributes of a public good or is easily imitated, the incentives for enterprises to green innovate will be insufficient, and IP will be needed to support it (Costa-Campi et al., 2017).

Sustainable Performance

Sustainable performance is the overall output of economic performance (EcP), environmental performance (EnP), and social performance (SoP) achieved by an enterprise that has implemented environmentally and socially relevant activities (Zhou et al., 2022). The World Commission on Environment and Development (WCED) first defined sustainability in 1987 as development that meets the needs of the present without compromising the ability of future

generations to meet their own needs. Elkington (1998) argued that sustainability involves achieving a balance between the economic bottom line, the environmental bottom line, and the social bottom line and proposed that sustainable performance is best known as the "triple bottom line" theory (TBL). Corporate management teams are held accountable for financial performance, regulators require companies to be accountable for their EnP, and businesses are part of society and are held responsible (Elkington, 1998). This study uses EcP, EnP, and SoP as the three main elements of sustainable performance.

As EnP becomes increasingly important, firms must consider and adopt organizational strategies, including cleaner manufacturing, environmental management processes, and GSCM, to enhance both EnP and EcP (Zhu & Sarkis, 2007). Social responsibility is also something that companies must consider. Firms must consider both their own and their suppliers' CSR (Yang & Jiang, 2023b). The existence of regulatory pressure motivates Enterprises to improve the environment through green purchasing, and mimicking the pressure greatly increases the economic benefits of GSCM practices (Zhu & Sarkis, 2007). Enterprises that proactively adopt GSCM instead of reactively responding to stress may perform better and faster (Zhu & Sarkis, 2012). GSCM benefits enterprises by helping them improve their environmental and economic performance and reduce operating costs.

Enterprise-specific innovation capabilities can also significantly impact an enterprise's EnP, SoP, and EcP (Paulraj, 2011). The ability to innovate green is increasingly becoming a firm-specific capability for sustainable performance. GI assists firms in developing their ability to innovate services and enhancing their long-term commercial success (Fernando et al., 2019). When a company's EnP improves, it leads to significant marketing advantages that result in increased revenues, an enhanced percentage of the market, and the discovery of novel market possibilities (Rao & Holt, 2005). In addition to EcP, companies are under increasing pressure from public concerns such as EnP and SoP. Enterprises should perform well economically in their operations and take on the mission of protecting the environment and being socially responsible. Some scholars believe that CSR reporting can be enhanced to showcase enterprises' practices and achievements in sustainable development, urging them to fulfill their social responsibilities (Zhou et al., 2022; Ren et al., 2023). The EcP, together with the EnP and SoP, contributes to the sustainable performance of the enterprise.

Institutional Pressure

IP can positively impact the overall well-being of the entire supply chain, due to government restrictions and stakeholder pressures, firms are compelled to adapt flexibly and responsively to environmental changes (Yu et al., 2017). As an integral part of society, enterprises must follow certain cultures, values, and norms and legitimize their operations (Zhu & Sarkis, 2007). Meanwhile, firms are pressured to adopt green management practices mostly from government regulations (Yu et al., 2017). As the concept of the legal system continues to deepen, people's awareness of legal and compliant business is raised. The public's awareness of environmental protection has been strengthened, and public opinion supervision of environmental damage has been maintained (Phan & Baird, 2015). Strict regulation and environmental taxation under IP are essential in promoting GI, but through subsidies, they are more effective in fostering GI (Costa-Campi et al., 2017). IP is necessary for incentivizing innovation, especially when combined with flexible approaches (Rennings, 2000). All IP influences the adoption of initiatives by organizations in GSCM (Zhu & Sarkis, 2007). Enterprises are subject to focused monitoring and attention as the primary factor of environmental impacts. Supply chain management has been correlated with whether or not it affects global climate change, and the contingency theory has been applied and developed in GSCM (Furlan Matos Alves et al., 2017). Policymakers should proactively provide a regulatory and infrastructural environment

that encourages and rewards environmentally friendly business strategies to facilitate business progress toward sustainable performance (Fernando et al., 2019).
Under IP, enterprises have implemented green procurement, internal environmental management, and investment recycling to achieve better EcP (Zhu & Sarkis, 2007). Zhu and Sarkis observed that Chinese governments on various levels have addressed the issue of limited resources and increasing environmental degradation by enacting and enforcing specialized laws and regulations. The comprehensiveness of an organization's system for managing the environment can be influenced by the pressure exerted by governments through the establishment of appropriate regulatory measures and public motivations, as well as by stakeholders (Phan & Baird, 2015). IP can be transformed into incentives that drive enterprises to engage in GI, thereby creating a competitive advantage (Chen et al., 2006). Regulatory requirements and consumer pressures are also driving the development of GSCM (Srivastava, 2007). Implementing GI in markets that have significant government control and face pressure from stakeholders may result in enhanced EnP and EcP (Yu et al., 2017).

Hypothesis Development

GSCM and GI

Incorporating GI initiatives and green practices into GSCM helps supply chain operations maintain ecological balance, reduce resource wastage, and minimize environmental and social risks (Le et al., 2022). Enterprises must build positive relationships with their supply chains to secure better resources to drive GI in their organizations (Jayaraman et al., 2023). Implementing GSCM by firms is a major driver of GI (Novitasari & Agustia, 2021; Bag et al., 2022). Firms should proactively promote GI, create sustainable goods, establish sustainable supply chains, and enhance supplier growth and integration (Seuring & Müller, 2008). The link between GSCM and GI is an interactive interaction between the stakeholders in a firm's supply chain that could be built up to deal with outside pressures, such as those imposed by governments or inspectors (Novitasari & Agustia, 2021). There is a synergistic relationship between GSCM and GI in its mechanism, in which GSCM has had an important and favorable impact on GI (Seman et al., 2019). YI & Xue (2016) concluded that GSCM positively influences the role of GI after studying 210 companies in China. Increasing GSCM may increase GI and create better enterprise performance simultaneously (Novitasari & Agustia, 2021). Li et al. (2022) concluded that the influence of GSCM on GI is both positive and considerable, and this connection holds for active and passive GSCM as well as sustainable supplier and customer management. GSCM is built through a network where supply chain members can share innovations and contribute more to GI (Roh et al., 2022). Some studies confirm the role of GSCM in generating GI and do not consider the impact of GSCM on GI in elderly industrial enterprises. The investigation concludes by stating the following hypothesis:
Hypothesis 1: GSCM is positively related to GI.

GI and Sustainable Performance

GI is a 'green' capability that firms need to develop. A firm's EcP may be enhanced by GI if it leads to less resource use, higher productivity, decreased production expenses, and more revenues (Seman et al., 2019). In 2020, Wang et al. reported when customers recognize a supplier's commitment to GI practice, they experience an elevated sense of contentment with the partnership and a stronger conviction in the profitability of the connection. In business-to-business (B2B) environments, GI efforts can improve relationship performance, which means that customer evaluations of suppliers' GI initiatives are typically positive (Wang et al., 2020). GI can increase enterprise revenues, but investment in GI research and development affects the

costs and revenues of enterprises upstream and downstream in the supply chain (Banerjee & Lin, 2003). Therefore, managers acknowledge that GI is crucial in fostering sustainable organizational growth (Fernando et al., 2019; Jayaraman et al., 2023). Taking a leadership role in the active pursuit of GI may lead to excellence in EnP and EcP, rather than playing the role of a follower whose sole goal is to comply with environmental IP (Yu et al., 2017). Enterprises can attract and retain customers, shareholders, and employees by improving their "green" capabilities (Vandermerwe & Oliff, 1990; Jayaraman et al., 2023). GI behaviors significantly contribute to the development of enterprises in the elderly industry. Enterprises utilize new technologies, processes, materials, and equipment to develop various types of products and supplies suitable for the physical and mental characteristics and unique needs of the elderly, to strengthen safety, reliability, and practicality, and to enrich product variety (Wei, 2023; Wang, 2023). Environmental regulations, market demand, and internal corporate initiatives all positively affect GI, which in turn positively affects the three types of sustainable performance (i.e., EnP, SoP, and EcP) (Paulraj, 2011). Considering this, we put up the following hypothesis:

Hypothesis 2a: GI is positively related to EcP.
Hypothesis 2b: GI is positively related to EnP.
Hypothesis 2c: GI is positively related to SoP.

GSCM and Sustainable Performance

GSCM is a potentially effective mechanism that aids firms in enhancing their reputation, reducing waste, prioritizing environmental compliance, and engaging in corporate social responsibility (Seman et al., 2019). In this process, efficient use of energy, water, and material is pursued, effectively improving business performance (Rao & Holt, 2005). In 2022, Bag et al. concluded that GSCM practices in companies can contribute to sustainable performance. By greening the supply chain, enterprises can achieve significant cost savings, increase sales and market share, and expand and explore untapped market potentials for more substantial profit margins, all contributing to the firms' EcP (Rao & Holt, 2005).

GSCM promotes the EnP of enterprises, which in turn leads to competitiveness and EcP, and enterprises increasingly recognize that through collaboration and partnership, they can make progress in pursuing EnP (Rao, 2002; Seman et al., 2019). GSCM covers activities to reduce the adverse environmental impacts of a company's products or services. The environmental impacts of products are predetermined, and environmental audits are conducted through program design, which guides the supply chain to operate efficiently by linking and handling the various links in the supply chain (Walton et al., 1998). Conducting GSCM on suppliers will greatly improve their own EnP, thereby increasing competitiveness and, ultimately, EcP (Rao, 2002).

GSCM is reflected in SoP in several ways. One is the sustainability of the supply chain as a whole. GSCM should be more than simply monitoring each other; the companies' cooperation in the supply chain is more important, which can bring performance for all parties and lead to the ongoing development of the entire supply chain (Tachizawa et al., 2015). Firms in a green supply chain reduce their own impacts by strengthening the management of their suppliers in their collaboration with them to induce them to improve their green sustainability (Li et al., 2022). For SMEs with high media attention upstream and downstream green supply chain communities, forming green alliances enhances the overall interest through alliances (Yang & Jiang, 2023b). On the other hand, it is reflected in the positive influence of consumers; enterprises can positively influence consumers' decision to purchase environmentally friendly products by using GSCM as an eco-friendly marketing strategy, reducing consumer distrust and, considering product features and taking into account product characteristics (Lee et al.,

2021). Moreover, GSCM can positively enhance an organization's reputation as a "good citizen" and thus improve the firms' SoP (Wolf, 2014). Considering this, we put out the following theory:

Hypothesis 3a: GSCM is positively related to EcP.
Hypothesis 3b: GSCM is positively related to EnP.
Hypothesis 3c: GSCM is positively related to SoP.

Mediating Role of GI Between GSCM and Sustainable Performance

It is known through the literature that GI mediates between GSCM and EcP, EnP, and SoP. GI's mediating role impacts the relationship between GSCM and enterprise performance (Novitasari & Agustia, 2021). In 2023, Wen, Cheah, Lim, and Ramachandran concluded, "GI is a mediator between GSCM practices and EcP, and the implementation of GI plays a crucial role in improving the sustainable performance of firms through GSCM practices" (p.10). GI mediates environmental regulation on EnP, partially mediates stakeholder pressure and EnP, and partially acts as a mediator in the interaction between environmental regulation and EcP (Yu et al., 2017). The mediating role of GI demonstrates the indirect effect of GSCM on EnP, and enhanced GSCM may lead to higher GI and improved EnP of organizations (Seman et al., 2019). GI reduces environmental burdens, can offset the burdens and costs associated with environmental regulations, and facilitates sustainable benefits such as reducing costs and increasing competitiveness to create new markets (Rennings, 2000). Through modeling, Seman et al. (2019) verified that implementing GSCM has a positive impact on GI and that an increase in GSCM has the potential to result in higher GI and simultaneously improve the EnP of the organization. Achieving effective and efficient GSCM and, in the end, sustainable performance is possible via optimizing GI in relation to technology, equipment, resources, training, and education in order to enhance environmental efficiency and address social concerns (Le et al., 2022). Wang et al. (2020) found from the relational perspective of customer power change that GI achieves good performance when it is recognized and engaged by customers in the supply chain and affects performance when customers in the supply chain are risk-averse or when GI involves the last critical product part. Given this, we propose the following hypothesis:

Hypothesis 4a: GI mediates the relationship between GSCM and EcP.
Hypothesis 4b: GI mediates the relationship between GSCM and EnP.
Hypothesis 4c: GI mediates the relationship between GSCM and SoP.

Moderating role of IP between GSCM and GI

The interaction between GSCM and GI is moderated by IP. The awareness of environmental concerns and their influence on firm performance has been heightened due to recent regulations, legislation, and competitive pressures (Zhu & Sarkis, 2004; Xiao & Zeng, 2017; Agyapong et al., 2023). Firms are pressured to enhance their environmental management due to regulators and the public's heightened knowledge of environmental concerns, increasing media attention on these issues, and firm recognition of the need to decrease environmental costs to improve efficiency (Phan & Baird, 2015; Ren et al., 2023). IP plays a significant role in encouraging businesses to use supply chain management strategies (Wen et al., 2023). The degree to which an organization is willing to embrace GSCM activities is susceptible to IP (Zhu & Sarkis, 2007; Agyapong et al., 2023). There is a moderating influence of institutional pressure on both certain GSCM practices and specific performance measures (Zhu & Sarkis, 2007; Xiao & Zeng, 2017). It is also important to see that regulations also have a two-sided role in GSCM; regulations promote the establishment of green supply chains but affect the

solidity of green supply chains, and regulations may make enterprises more stringent with their suppliers, which can reduce mutual trust (Tachizawa et al., 2015).
According to research, regulations and market demand attraction elements are firms' most significant forces behind GI (Bag et al., 2022). From the consumers' perspective, green supply chain enterprises also directly influence their consumption decisions. When people are provided with adequate information about green products, they are more willing to buy (Lee et al., 2021). Elderly service enterprises obtain information in their communication transactions with consumers, and consumers' environmental demands guide their GI (Yi & Xue, 2016). Different institutional pressures may affect firms of various sizes, while regulatory and market forces may significantly impact larger firms; smaller firms may be more vulnerable to competition (Zhu & Sarkis, 2007). Enterprises with stronger market capabilities can develop better GI strategies to cope with increasingly stringent government regulations (Yu et al., 2017). In summary, we make the following hypotheses:

Hypothesis 5: IP moderates the relationship between GSCM and GI such that the positive relationship between GSCM and GI is strengthened when IP is higher rather than lower.

According to the assumptions, the research framework of this study is shown in Figure 1:

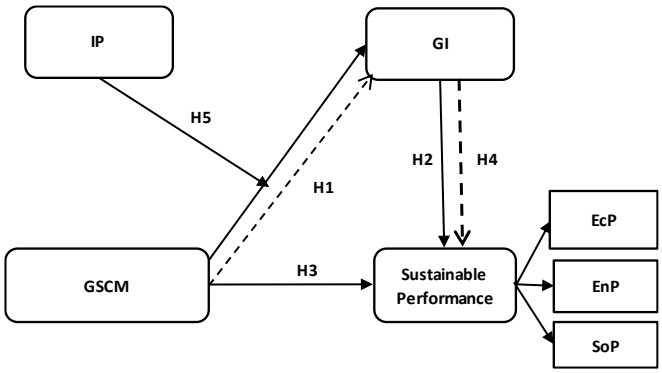

Figure 1. Research framework.

Methods

Based on the previous literature review, this study utilized validated measures identified and studied by previous scholars. The questionnaire of this study contains two parts; the 1st part focuses on demographic information and seeks to comprehend the respondents' fundamental data, such as gender, age, work experience, industry engaged in, work sector, and work position, among other six items. In this way, the characteristics of the respondents can be grasped. Part 2 is the questionnaire section, which is divided into four parts and includes 49 items. The questionnaire scales chosen for this study have been used and validated by scholars in the Chinese cultural environment with good validity and reliability and have not been modified in this study. The questionnaire includes the GSCM Scale (Zhu & Sarkis, 2007), which has a total of twenty-one items; EcP, EnP, and SoP validity scales (Paulraj, 2011; Zhu & Sarkis, 2007), each with five question items; and the GI Scale (Le et al., 2022), which has a total of six items; all of the above scales are originated from English-language research papers. Due to the country-specific differences in institutions, the IP Scale (Xiao & Zeng, 2017), with seven items, was adapted from Chinese papers published by Chinese scholars. The scales used a five-point Likert scale ranging from 1 "strongly disagree" to 5 "strongly agree." Because the respondents were people working in elderly services enterprises in Beijing, their understanding of English was limited. To ensure more accurate answers from the target respondents, the

questionnaire was translated from English to Chinese by an independent professional translator, and the translated Chinese questionnaire was translated back to English for comparison to confirm the validity of the questions.

This study utilized an online questionnaire survey. The survey was conducted on relevant managers and actual operators of elderly service enterprises within Beijing. The elderly industry is a service-oriented industrial system, and elderly service enterprises include elderly service integrators and elderly service providers; elderly service integrators are supply chain enterprises that provide solutions, and elderly service providers offer services (Wang, 2023). The online research business of Chinese research firms has developed rapidly after the pandemic. Securities Times, the China Securities Regulatory Commission's designated information disclosure platform for China's capital market, reported (2022) that online research has become a mainstream approach. Several large research firms have established and possessed their proprietary databases of industry enterprise profiles, which allow them to quickly sift through and accurately match the target group of the research. Considering that this research is highly targeted to the industry and the target respondents are at all levels within the target company, the advantages of a professional company can be utilized. Therefore, this research is entrusted to a well-known professional research company in Beijing to conduct the survey.

The G*Power analysis yielded a minimal sample size of 129 for the research model employed in the study. Considering that the questionnaire recovery rate is not less than 70% (Li, 2017), after confirming with the research company, 286 people who meet the target population are screened to participate. Finally, 200 questionnaires are screened and recovered, and the quantity and quality of questionnaires can satisfy the needs of this study. As mentioned earlier, in addition to striving to make the questionnaire meet the criteria of validity, clarity, and answerability, the following strategies were used in this study to maximize the response rate and address issues related to survey bias. First, a prudent sampling method was adopted, whereby the survey company database was compared with the number and names of registered relevant enterprises in Beijing. After meeting the requirements, a data sample of Beijing's elderly service enterprises was drawn from the survey company database. Exclusions were set up in the online questionnaire to screen out those who did not meet the requirements for responding to the questionnaire. Second, take the initiative to eliminate the concerns of those who responded to the questionnaire. An open letter was attached to the questionnaire, clearly stating the purpose of the study, the value of this study to the enterprises, the terms of the commitment to confidentiality of information, and a clear explanation of the structure of the questionnaire. Third, the online process was optimized. An optimized survey execution process was provided to improve the accuracy of the answers. In addition, a tracking process was added to remind the target respondents to answer the questions promptly.

Findings

The demographic characteristics of the respondents are presented in Table 1. Out of 200 respondents, 107 (53.5%) were female and 93 (46.5%) were male. In addition, 38 respondents (19.0%) belonged to the age group of 20-29 years, 67 respondents (33.5%) belonged to the age group of 30-39 years, 55 respondents (27.5%) belonged to the age group of 40-49 years and above, and 40 respondents (20.0%) belonged to the age group of 50-59 years and above. Regarding work experience, 85% of the respondents have more than five years of work experience, and 12% have 3-5 years of work experience. Regarding the work industry, 38.5% were engaged in elderly catering services, 32% in nursing care centers, 19% in community elderly service centers, and 10.5% in elderly medicine services. Regarding job positions, 56.5% of the respondents were grassroots supervisors, 20.5% were middle managers, 15.5% were

senior managers, and 7.5% were frontline staff in practical operations. The respondent group is evenly distributed among all 16 administrative districts in Beijing by an average of 6.25%, representing the region well.

Table 1.Representativeness of collected samples (n=200).

	Nursing Care Center	Community Elderly Service Center	Geriatric Medicine	Elderly Catering Service	Percentage (%)
Gender					
Male	23	19	13	38	46.50
Female	41	19	8	39	53.50
AAgetranges of respondents (years)					
Above 20-29	20	3	2	13	19.00
Above 30-39	21	14	8	24	33.50
Above 40-49	15	8	4	28	27.50
Above 50-59	8	13	7	12	20.00
Above 60					
Department of respondents					
Sales department	6	1	1	3	5.50
Manufacturing department	15	6	5	25	25.50
Procurement department	10	11	4	22	23.50
Operations management	33	20	11	27	45.50
Other departments					
AAgetranges of enterprises (years)					
Below 3	0	2	0	4	3.00
Above 3-5	6	4	2	12	12.00
Above 5	58	32	19	61	85.00
Positions of respondents					
Senior Manager	14	9	0	8	15.50
Middle Manager	11	5	3	22	20.50
Grassroots Supervisor	37	22	15	39	56.50
Front-line Worker	2	2	3	8	7.50
Others					
Administrative districts of respondents					
Dongcheng	6	3	0	5	7.00
Xicheng	2	7	0	4	6.50
Chaoyang	9	0	2	6	8.50
Fengtai	9	1	1	7	9.00
Shijingshan	2	0	2	6	5.00
Haidian	1	1	1	10	6.50
Shunyi	4	2	2	4	6.00
Tongzhou	6	2	3	2	6.50
Daxing	4	2	0	5	5.50
Fangshan	2	1	0	5	4.00
Mentougou	2	3	2	6	6.50
Changping	0	2	3	2	3.50
Pinggu	1	5	1	4	5.50
Miyun	3	2	3	3	5.50
Huairou	8	0	1	1	5.00
Yanqing	5	7	0	7	9.50

(Source： Author’s works)

This study began with a measurement modeling analysis focusing on the reliability and validity of the model. The goal was to determine the extent to which the explicit variables defined the latent variables. Measurement model analysis includes factor loading, reliability, convergent validity, and discriminant validity checks (Fornell & Larcker, 1981; Hair Jr et al., 2014). According to Table 2, the composite reliability values (CR) ranged between 0.870 and 0.955, which is higher than the critical value of 0.70 (Fornell & Larcker, 1981), and Hair Jr et al. (2014) stated that the composite reliability (CR) is more suitable for assessing the internal consistency of the model than the Cronbach's alpha, in PLS-SEM. Thus, showing higher reliability. The values of Cronbach's Alpha for each variable ranged from 0.812 to 0.950, and according to Ursachi et al. (2015), Cronbach's Alpha is 0.8 or higher, indicating an excellent level of reliability, which has good reliability. Items with factor loading values above 0.5 should be considered acceptable (Memon & Rahman, 2014), and in this study, the factor loadings (between 0.620 and 0.847) were above this criterion and satisfied the requirements. Convergent validity was also assessed in this study based on the Average Variance Extracted (AVE) values; all AVE values (between 0.503 and 0.577) exceeded the critical value of 0.50 (Fornell & Larcker, 1981), which indicates a high level of convergent validity. Therefore, the factor loadings, reliabilities, and convergent validity of the items in the present study were appropriate.

Table 2 Reliability results

Constructs	Alpha	CR	AVE
Green Supply Chain Management (GSCM)	0.950	0.955	0.503
Green Innovation (GI)	0.821	0.870	0.529
Institutional Pressure (IP)	0.855	0.889	0.535
Economic Performance (EcP)	0.816	0.872	0.576
Environment Performance (EnP)	0.815	0.871	0.575
Social Performance (SoP)	0.812	0.872	0.577

(Source： Author’s works)

After evaluating the measurement model, the structural model was evaluated. The hypothesized level of significance was determined by bootstrapping the 5000 subsamples through Smart-PLS version 3.20 software, which yielded results for standard deviation, t-value, p-value, and path coefficients (Hair Jr et al., 2014). The mean and standard deviation of the latent variables in this study are shown in Table 3. All items were measured using a 5-point Likert scale. The means of all latent variables in this study were greater than 3, with the highest mean being 4.174 (IP) and the lowest mean being 3.846 (GI). In addition, the standard deviation indicates the degree of dispersion of the mean. The highest standard deviation value is 0.627 (EcP), and the lowest value is 0.518 (IP). The results in Table 3 indicate that the square root of the AVE value is greater than the correlation between the latent variables; therefore, it confirms construct discriminant validity (Fornell & Larcker, 1981).

Table 3 Correlations Validity.

	Mean	Std. Deviation	GSCM	EcP	EnP	SoP	GI	IP
GSCM	4.000	0.593						
EcP	3.914	0.627	.757**					
EnP	3.856	0.610	.580**	.491**				
SoP	3.969	0.590	.642**	.590**	.533**			

GI	3.846	0.588	.558**	.516**	.475**	.609**	
IP	4.174	0.518	.607**	.539**	.411**	.641**	.580**

(Source: Author's work).

Figure 2. SEM analysis is demonstrated. It vividly illustrates the relationships in the structural model through SEM analysis metrics, including path coefficients, load coefficients, and unguided R-squared values.

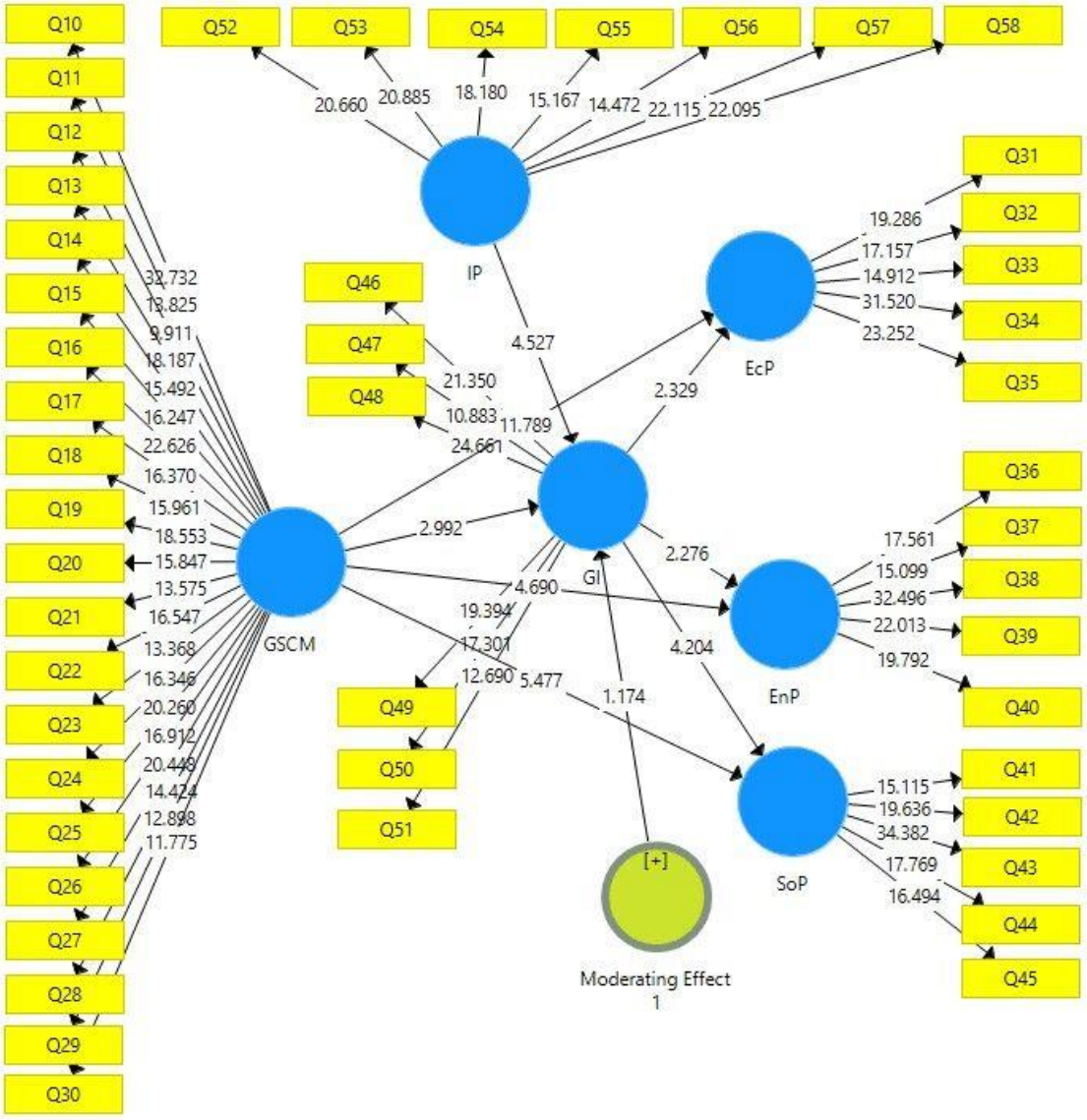

Figure 2. Structural Model Framework.

In addition, discriminant validity is examined. Discriminant validity refers to the extent to which a construct is empirically different from other architectures in a structural model. Henseler et al. (2015) proposed the heterogeneous-monomorphic (HTMT) ratio, which reflects the average of the mean of item correlations across architectures relative to the average of the mean of item correlations across constructs under the same construct, which suggests that HTMT ratios should be less than 0.90 to be discriminatively valid. In this study, the HTMT ratios were all less than 0.90, and the data in Table 4 indicate that discriminant validity exists in this study.

Table 4 Discriminant Validity (HTMT Ratio).

	EcP	EnP	GI	GSCM	IP	SoP
EcP	0.759					
EnP	0.497	0.758				
GI	0.527	0.479	0.727			
GSCM	0.764	0.584	0.567	0.709		
IP	0.538	0.423	0.597	0.611	0.732	
SoP	0.595	0.532	0.615	0.648	0.648	0.760

(Source: Author's work).

The results shown in Table 5 support the hypothesized relationship. GSCM had a significant positive correlation with GI ($\beta = 0.291$, $t = 3.005$, $p < 0.05$), confirming H1. In addition, the results showed that GI had a positive and significant effect on EcP ($\beta = 0.137$, $t = 2.289$, $p < 0.05$), EnP ($\beta = 0.217$, $t = 2.330$, $p < 0.05$), and SoP ($\beta = 0.365$, $t = 4.151$, $p < 0.001$), that H2a, H2b, and H2c were validated. In addition, GSCM had a positive and significant effect on EcP ($\beta = 0.687$, $t = 11.629$, $p < 0.001$), EnP ($\beta = 0.461$, $t = 4.872$, $p < 0.001$), and SoP ($\beta = 0.441$, $t = 5.324$, $p < 0.001$), a finding which confirms that H3a, H3b, and H3c. In addition, bootstrapping analyses indicated that there was no apparent mediating effect of GI between GSCM and EcP, and therefore, H4a was not supported. The results showed a mediating indirect impact of GI between GSCM and EnP ($\beta = 0.063$, $t = 1.938$, $p < 0.05$) and SoP ($\beta = 0.106$, $t = 3.243$, $p < 0.001$), thus supporting H4b and H4c. In addition, the results indicated that IP did not show a moderating effect on the relationship between GSCM and GI; therefore, H5 was not supported.

Table 5 Indirect Effects results.

Hypothesis	Links	Path coefficient	Standard Deviation	t- Statistics	P- Values	Result
H1	GSCM -> GI	0.291	0.096	3.005	0.003	Supported
H2a	GI -> EcP	0.137	0.060	2.289	0.022	Supported
H2b	GI -> EnP	0.217	0.094	2.330	0.020	Supported
H2c	GI -> SoP	0.365	0.088	4.151	0.000	Supported
H3a	GSCM -> EcP	0.687	0.059	11.629	0.000	Supported
H3b	GSCM -> EnP	0.461	0.094	4.872	0.000	Supported
H3c	GSCM -> SoP	0.441	0.081	5.324	0.000	Supported
H4a	GSCM -> GI -> EcP	0.040	0.023	1.750	0.080	Rejected
H4b	GSCM -> GI -> EnP	0.063	0.032	1.983	0.047	Supported
H4c	GSCM -> GI -> SoP	0.106	0.033	3.243	0.001	Supported
H5	IP -> GI	0.369	0.083	4.519	0.000	Supported
	Moderating Effect -> GI	-0.061	0.051	1.188	0.235	Rejected

(Source: Author's work).

Discussion and Conclusion

This research led to the creation of a novel theoretical framework to investigate the relationship between GSCM, IP, GI, EcP, EnP, and SoP to address enterprises' sustainable performance and to promote the ability of enterprises to conduct their business in a green development manner (Zhu et al., 2012; Le et al., 2022). The results of this study show that GI can positively affect enterprises' EcP, EnP, and SoP, which is consistent with the findings of previous scholars (Zhu et al., 2012; Le et al., 2022). GSCM can positively affect enterprises' EcP, EnP, and SoP, which aligns with Rao and Holt (2005). GSCM can enhance enterprises' competitiveness and improve

sustainable performance. The mediating effect of GI on the relationship between GSCM and EcP, EnP and SoP was also elucidated in this study, where GSCM can promote enterprises' EnP and SoP through GI (Zhu & Sarkis, 2004; Xiao & Zeng, 2017; Rennings, 2000). However, the GSCM can promote enterprises' EcP through the GI role, which is not positive because an increase in GI means an increase in inputs, which affects EcP (Banerjee & Lin, 2003). As a result of this study, enterprises increase the promotion of GI during GSCM implementation to enhance superior competitiveness, promoting enterprises' EcP, EnP, and SoP, thus enabling sustainable performance (Le et al., 2022). By reducing adverse effects on the environment and leading to greater SoP, GI helps firms gain a competitive edge, comply with environmental requirements, and enhance their competitiveness (Banerjee & Lin, 2003; Zhu & Sarkis, 2004). Corporate SoP is a critical capital that can play a protective role and enhance the enterprise's image even in times of crisis (Yang & Jiang, 2023b). Corporate proactive GI can prepare companies to actively respond to external uncontrollable factors conducive to sustainable development (Zhu et al., 2012; Xiao & Zeng, 2017).

This study found that the moderating effect of IP on the relationship between GSCM and GI was not significant, and this agrees with what other researchers have found, that enterprises would like to implement GSCM and GI to enhance EcP, EnP, and SoP to achieve sustainable development rather than responding to the pressures from IP (Walton et al., 1998; Wolf, 2014; Zhu et al., 2012; Xiao & Zeng, 2017; Seman et al., 2019; Le et al., 2022; Agyapong et al., 2023). These arguments are significant for emerging economies such as the elderly industry. This suggests that the elderly industry as a new industry, the government, and other organizations should reasonably use the institutional environment to influence the GSCM and GI of enterprises (Xiao & Zeng, 2017). More government incentives can better promote the development of GI and GSCM (Costa-Campi et al., 2017). In this study, IP has no positive or negative moderating effect on the relationship between GSCM and GI. This is due to the fact that, on the one hand, the survey respondents come from different positions with different work experiences and academic knowledge, and the inconsistency of their understanding of the system affects the answers; on the other hand, according to the contingency theory, in the implementation of green development, if the government and other institutions overuse the IP, the GI behavior of enterprises is more to cope with these pressures (Furlan Matos Alves et al., 2017; Agyapong et al., 2023), and does not really translate GSCM into sustainable development of enterprises. IP is a crucial element that directly influences firms' sustainable growth and motivates them to enhance GSCM (Xiao & Zeng. 2017); enterprises should proactively transform the environmental factors in laws and regulations into GSCM and GI to lay a good foundation for their sustainable development. The government and other organizations should reasonably use the institutional environment to influence enterprises' GSCM and GI (Xiao & Zeng. 2017).

Theoretical Implications

This study contributes to contingency theory. First, it provides an empirical model for the contingency theory that mediates the relationship between GSCM and EcP, EnP, and SoP using GI as a mediator while introducing IP to moderate the relationship between GSCM and GI. No relevant literature has been found to explore this. Second, this research offers further empirical proof of the significance of GI for GSCM and firms' sustainability performance (Seman et al., 2019; Jayaraman et al., 2023). In addition, this study provides insights into the relationship between GI and GSCM. It informs policymakers about the impact of IP on GI and GSCM and the sustainable performance of the elderly industry. These support the contingency theory and extend the concepts to the elderly industry, an emerging market, for empirical research. Third, this study applies GSCM, GI, and IP to enhance the sustainable performance of elderly service

enterprises, which has positive significance in solving the development dilemma of elderly service enterprises and meets the requirement of using the contingency theory to direct the practice and solve the practical problems. The significance of this contribution is to deepen the understanding of the factors involved in empirical research models of GSCM and sustainable performance (Le et al., 2022). As such, it contributes to a deeper understanding of how GI and GSCM contribute to sustainable performance and how GSCM facilitates the implementation of GI to achieve sustainable performance (Seman et al., 2019; Wang et al., 2020).

This research offers concrete evidence of the mediating role of GI in achieving sustainable performance between GSCM and EcP, EnP, and SoP. The existing literature reveals numerous research on the influence of GSCM on firm sustainability performance (Walton et al., 1998; Zhu & Sarkis, 2007; Xiao & Zeng, 2017; Le et al., 2022; Roh et al., 2022; Wang & Ozturk, 2023). However, empirical studies that apply GSCM to the elderly industry, such as this study, are not common in the existing literature. Therefore, this research's findings offer richer practical evidence in the field of supply chain management and contribute to the scientific development of GSCM. Globally, China has an enormous population of adults 60 and over, and there is a huge potential demand for elderly products (Wang, 2023). Therefore, there is a huge space for the development of the elderly industry (Wei, 2023), and the promotion of GSCM and GI in the elderly industry is extremely important in improving sustainable performance. The results of this research provide reference and theoretical research support to enhance the sustainable performance of the elderly industry through GSCM and GI.

Practical and Social Implications

This study provides sustainable performance management practices for Chinese enterprises in the elderly industry. China's elderly industry is currently undergoing rapid growth and development (Wei, 2023; Wang, 2023). Through this study, GSCM and GI significantly contribute to the sustainable performance of enterprises, which can provide a basis for establishing GSCM and conducting GI for enterprises in the elderly industry. It allows enterprises to manage GSCM effectively and supports enterprises in actively generating GI demand, thus fostering their independent GI capability (Jayaraman et al., 2023). Through GSCM, enterprises strengthen synergies with upstream and downstream of the industry, reduce resource consumption, and involve elderly consumers in the industry chain to raise the worth of their offerings, accelerate the realization of autonomous GI, and achieve sustainable performance (Yang & Jiang, 2023a).

This study also provides a basis for government policy formulation. In particular, in this study, it was found that the connection between GSCM and GI was not significantly affected by IP as a moderator, suggesting that enterprises are more interested in improving sustainable performance through the implementation of GSCM and GI, which enhances EcP, EnP, and SoP, and improves their own ability to achieve sustainable performance, rather than responding to pressures from the IP (Walton et al., 1998; Zhu et al., 2012; Wolf, 2014; Xiao & Zeng, 2017; Seman et al., 2019; Le et al., 2022). Although the government has initiatives to promote GSCM and GI firms, but customer demand is still the most significant driver (Walton et al., 1998; Jayaraman et al., 2023). The government invests many resources in green development and the elderly industry per year. However, there is still a large gap between the ability of these enterprises to realize and the actual demand, and some enterprises in the elderly industry even fall into development difficulties (Qiao, 2019; Wei, 2023). Therefore, it is suggested that the government can combine IP and incentives, on the one hand, put forward goals and requirements for enterprises through IP; on the other hand, combine incentives for the elderly industry with green development incentives to reward enterprises for their GI independent

innovations (Costa-Campi et al., 2017), so that enterprises can realize better sustainable development performance with the joint support of the two types of stimuli.

Limitations and Suggestions for Future Research

Several limitations should be noted in this study. To begin, there are some restrictions on the scope of this research. This study takes the elderly service enterprises in Beijing as the target audience. However, one thing to keep in mind is that this research doesn't include places outside of Beijing, which might show regional variations due to factors like economic development and geography. Furthermore, this research focuses on the elderly service firms with a significant position inside the supply chain. This is because these firms not only assume responsibility for providing products and services to consumers but also directly collect feedback from consumers (Vandermerwe & Oliff, 1990; Wang, 2023). It is worth noting that elderly service enterprises mainly comprise SMEs, which is only one component of the elderly industry. There are many different sectors and sizes of businesses in the elderly industry, providing numerous avenues for a comprehensive survey. In addition, this study is a short-term project effort designed to collect and analyze data. However, it does not involve monitoring the study population at different stages, collecting data at different intervals, or conducting a comparative study.

Therefore, it is recommended that future studies analyze enterprises in the elderly industry outside of Beijing to compare the development of the elderly industry in various regions. In addition, follow-up studies should focus on an in-depth examination of enterprises in different segments of the elderly industry and enterprises of different sizes. Finally, future studies might conduct continuous monitoring studies on specific companies to acquire a more thorough picture of the developmental changes experienced by these enterprises at various points in time.

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