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Literature Review of Stakeholders' Preference for Sustainability Information

──Focusing on Choice Experiments──

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Abstract　Recently, corporate information disclosure has been gradually increasing to achieve Sustainable Development Goals（SDGs）.　However, only limited research has been conducted on what sustainability information stakeholders prefer and how, and this has not yet been fully understood.　Among the studies that clarify the preferences of individual investors for sustainability information, this study reviews the literature using choice experiments and clarifies future research issues.

Key words　investors, sustainability information, preferences, choice experiment, Sustainable Development Goals（SDGs）

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I　Introduction

Recently, the possibility that corporate information along with its challenges and contributions towards the achievement of the Sustainable Development Goals (SDGs) introduced by the United Nations (UN) in 2015 (hereafter, SDGs information) will become widespread as new corporate evaluation criteria and international interest by way of information disclosure has been increasing more than ever. Target 12.6 of the SDGs encourages companies, especially large and multinational companies, to adopt sustainable practices and integrate sustainability information into their reporting cycles, thus emphasising the importance of sustainability reporting and momentum for expanding sustainability information disclosure. Research on SDGs information disclosure has been increasing recently in the field of corporate sustainability reporting (Corvino et al., 2020; Di Vaio and Varriale, 2020; Grimaldi et al., 2020; Pizzi et al., 2020; Pizzi et al., 2021). Over the past two decades, different frameworks for disclosing corporate sustainability information have been developed under different international initiatives. Recently, these frameworks have been aligned with each other in the context of non-financial information disclosure by companies, based on the financial market situation in which the Environmental, Social, and Governance (ESG) investment has been developing. The ESG investment can be generally featured as an investment that considers sustainability and governance issues as criteria as well as takes into account financial criteria in the investment decision-making process. In the potential integration of different disclosure frameworks through their reorganisation, the most important issue to be considered can be the balance between disclosure costs and benefits for information recipients.

While the framework for corporate SDGs information disclosure is expected to develop for stakeholders' information benefits, more focus is placed on stakeholder preferences for SDGs information in their decision-making. However, sufficient quantitative and academically rigorous research on what kind of SDGs information the stakeholders who receive the information prefer under what circumstances, has not been conducted.

To date, preferences for sustainability information have been analysed by choice experiment methods that measure preferences economically rigorously. In this study, private investors' preferences for sustainability information disclosure are reviewed, by focusing on the existing literature that uses the method of choice experiments to clarify future research issues. Various knowledge on the willingness to pay for sustainability information disclosures revealed by the method of choice experiments could provide the basis for discussion of the cost-benefit of sustainability information disclosure as well as give useful suggestions for formulating efficient information disclosure strategies for companies.

In the next section, the existing literature on SDGs information preference and choice experiment methods is reviewed. The discussion and conclusions are presented in Section 3.

Ⅱ Investors' preference and choice experiments for sustainability information

1 Investment decision-making and choice experiments

Many studies have analysed investors' preferences for sustainability information. Among them, many analyses have been conducted to question the effectiveness of sustainability information for investors' decision-making. It has been argued that it is difficult for investors to interpret corporate sustainability information accurately because the link between sustainability information and a company's economic fundamentals is ambiguous, and it is possible that the actual extent and scale of sustainability may be exaggerated and reported (Bassen et al., 2019, p. 73; Orlitzky, 2013). Moreover, it has been pointed out that disclosure of sustainability information increases volatility in the market and causes overestimation during corporate evaluation due to investors' cognitive characteristics, especially low cognitive abilities (Bassen et al., 2019, p. 73; Bosch-Rosa et al., 2018; Orlitzky, 2013). In addition, Breedt et al. (2019) point out that sustainability information does not significantly affect investment decision-making. However, other studies have shown that sustainability information influences investment decision-making in terms of corporate value creation and risk aversion (Ailman et al., 2017; Amel-Zadeh and Serafeim, 2018; van Duuren et al., 2016; Khemir et al., 2019; Kotsantonis et al., 2016; Stewart, 2015; Taliento et al., 2019). Cormier et al. (2011) also suggested that social disclosure reinforces the informativeness of environmental disclosure for stock markets and that environmental disclosure and social disclosure can substitute each other and contribute to reducing stock market asymmetry.

While considerable research has been conducted on investment decision-making preferences for sustainability information, including SDGs, choice experiments are one of the most economically rigorous methods. Choice experiments can compare and examine various alternatives with one questionnaire, as well as economically and rigorously calculate individual willingness to pay for each alternative. Choice experiments allow for a more complex analysis of trade-off relationships in investor decision-making compared to other methodologies. (Clark-Murphy and Soutar, 2004; Mear and Firth, 1987; Slovic, 1969). For this reason, some choice experiments have been conducted not only for the preference for sustainability information but also for investment decision-making in general. Moreover, choice experiments can help analyse private investors' preferences for sustainability information, including the SDGs. Choice experiments can examine not only investment decisions that already exist but also the attributes of products with immature markets and decisions about virtual information that do not exist in the market. Therefore, they are useful for analysing private investors' preferences for sustainability information. In addition, for example, choice experiments can analyse the utility for various combinations and trade-offs between ethical performance and financial performance of investments (Berry and Yeung, 2013, p. 488). They can also be useful as a methodology for simultaneously analysing sustainability information as non-financial information. Therefore, choice experiments have been conducted in the literature to determine the investor preferences for sustainability information in decision-making for various sustainability investments, including renewable energy investment (Chassot et al., 2014; Lüthi and Wüstenhagen, 2012; Salm et al., 2016), socially responsible investment (SRI), and ESG investment (Apostolakis et al., 2016, 2018; Bassen et al., 2019; Berry and Yeung, 2013; Gutsche and Zwergel, 2016;

Lagerkvist et al., 2020). However, to the authors' best knowledge, few studies, some of which are mentioned above, have systematically researched the trade-offs between the attributes of equity investment in general and those of sustainability investments, especially, SRI and ESG investment (Lagerkvist et al., 2020, p. 2).

2 Literature of choice experiments on investor preferences for sustainability information

In this study, for literature review, the relevant studies were extracted from Google Scholar using keywords, including choice experiments, choice model, preferences, investors, sustainability, ESG, CSR, conjoint analysis, and conjoint experiments. The main studies are examined below.

Preference for investing in renewable energy projects

The investment market for renewable energy can be divided into three categories: venture capital markets, general equity markets, and project finance markets (Hampl, 2012). In this study, investors' preferences in venture capital and general equity markets are examined, excluding investors related to project finance markets involving institutional investors. First, in the case of venture capital investors, a study by Masini and Menichetti (2013) found that the proven reliability of renewable energy technology is essential for investment, and confidence in the effectiveness of policy confidence is important when investing in solar photovoltaics and hydropower. In addition, in their study, it was also revealed that institutional pressure of both peers and outside consultants hinders investment decision-making, but more experienced investors can resist these pressures. Furthermore, regarding the impact of political influence on investment decision-making, a study on 63 European investors by Lüthi and Wüstenhagen (2012) revealed that political risk affects investment decision-making on only two renewable energy types, solar photovoltaics and hydropower. Similarly, a study on 29 European and American venture capitalists by Chassot et al. (2014) revealed that they are less likely to invest in renewable energy if their perceived regulatory risk is high.

Next, in the case of general equity markets' investors, Salm et al. (2016) analysed the investment preferences of German private investors for regional renewable energy projects. They found that sustainability information provides only a smaller preference than financial information. Salm et al. (2016) conducted choice experiments on 1,041 respondents who were interested in investment. Their study revealed that the respondents were more sensitive to several attributes, including returns on investment, which is a reward from the investment; a holding period which is the minimum time after which a retail investor can withdraw the initial investments; the partner through which a retail investor invests in renewable energies, rather than other attributes, including the type of renewable energy technology, and the location of renewable energy investment in relation to retail investors' residence. Moreover, Salm et al. (2016) found that private investors can be categorised as local investors and yield-oriented investors. They also suggested that most private investors calculate payback time and rely on intuition when investing.

Preference for investing in SRI and ESG investment

It has been argued that sustainability characteristics are less likely to affect the preferences of most investors than financial compensation. Berry and Yeung (2013) analysed the willingness of ethical investors to sacrifice ethical consideration for financial reward. Their study revealed that ethical performance is less likely to affect some investors' preferences concerning investment returns. However, they found that some do not prefer higher financial compensation at the cost of lower ethical performance (Berry and Yeung, 2013). In addition, it has been discussed that specific sustainability information may affect private investors' decision-making. When investors invest in equity fund savings, sustainability strategies, negative screening, and environment-focused information are critical in decision-making. Lagerkvist et al. (2020) analysed the preferences of 559 Swedish private investors for sustainability attributes for equity fund savings. In their study, main attributes, such as management and costs when the fund manager has an active or passive investment policy, risk classifications with historical spreads and returns, geographical focus when investee companies are listed on the Swedish or global markets, sustainability selection strategies (negative screening, positive screening, active engagement, and sustainability-themed investment), sustainability focus (environment, social, and governance), and expected returns, were analysed. As a result, within those attributes, they found that sustainability strategies are more important than other fund characteristics. They also revealed that negative screening is more preferred, and environmentally focused investments are strongly preferred among the ESG criteria. Therefore, they suggested that private investors respond more strongly in decision-making regarding information on the negative impacts of sustainability investments.

Private investors' preferences may also be affected depending on sustainability labels formatted with sustainability information when it is provided. In the study by Gutsche and Zwergel (2016), private investors expressed a positive preference for funds through sustainability labels. They conclude that the labels provide a chance to reduce information costs private investors incurred and enhance individual demand for SRI. Especially, they suggested that those who have knowledge about SRI and understanding of financial products in general are likely to decrease more information costs through the labels than others. Besides, the study by Bassen et al. (2019) which investigated the preferences of 953 private investors in six European countries suggested that different types of sustainability labels formatted with sustainability information related to climate-friendly investing differently influence investment practices. It was also clarified that the effectiveness of a climate-friendly label, including a star rating, is a potential nudge for investment decision-making. In addition, information costs should be considered in the methods as labelling in providing or screening sustainability information because information costs have been shown to influence the preferences of private investors. For example, Gutsche and Zwergel (2016) found that private investors would not invest in SRI if the cost of information was too high.

There is still no definitive view of what types of people prefer SRI and ESG investing. The socio-demographic characteristics of individual investors have not been found as factors which are related to SRI and ESG investment preferences in the literature. The study conducted by Lagerkvist et al. (2020) revealed that socio-demographic characteristics did not affect preferences for sustainable investment. However, it has been revealed that investors who prefer SRI and ESG investment are not uniform and can be divided into various types. Lagerkvist et al. (2020) classified private investors with similar attribute preferences into several potential tiers. Lagerkvist et al. (2020) revealed that there were two segments with strong SRI preferences. Namely, one segment was more interested in fewer financial risks, accepted lower financial rewards, preferred passive investment management policy and environmental focus than other investors. In contrast, the other segment was more interested in financial returns, preferred local investment focus, had a negative stance for SRI focus on governance, and preferred positive screening in decision-making.

In contrast, it is evident that the psychological aspects of individual investors influence their preferences. Among private investors, according to Bassen et al. (2019), intuitive decision-makers tend to place greater emphasis on fund climate change performance than financial performance, regardless of their preference for environmental issues. Thus, it can be said that, depending on the type of investor decision-making, if the same sustainability information is provided to private investors, they may perceive it differently and sometimes overestimate it.

When investing in SRI-related products, the determinants of the preference of private investors are their attitude and psychological distance from SRI and the distance between their investment business and their own business. Apostolakis et al. (2016) investigated the willingness to pay when investing in portfolios characterised by SRI and impact investing in collective pension schemes in the Netherlands. They found that a positive attitude towards SRI of investors positively affected the willingness to pay. They also found that those who are more involved in investment products are willing to pay additional costs (Apostolakis et al., 2016). In addition, Apostolakis et al. (2018) examined the preferences of Dutch pensioners for the characteristics of responsible investment and found that depending on the level of psychological distance to SRI, the preference trend for SRI and impact investing portfolios differs among the three segments, including on the fence′, materialistic′, and advocate′. Namely, they suggested that on the fence′ was the segment where respondents had less confidence in the real outcome of SRI, materialistic' was the segment where respondents were indifferent to SRI, and 'advocate' was the segment where respondents had greater psychological distance than the other two segments, and the distance produced inconsistencies in their real decision-making on SRI. In addition, regarding other psychological aspects, confidence in SRI and ESG investment providers can influence investment preferences. Gutsche and Zwergel (2016) found that if investors cannot trust SRI providers, they are less likely to invest.

Ⅲ Discussion and conclusion

Various sustainability information has been disclosed so far, but in recent years, the importance of disclosing information on SDGs has increased. The preference of private investors for sustainability information is a fundamental issue for understanding the cost-benefit of information disclosure. This article reviews the literature that reveals preferences related to sustainability information, by focusing on choice experiments. Since only a limited number of studies related to private investors' choice experiments could be extracted using keywords, it can be said that few choice experiments in this field have been conducted till date. However, since this method is useful for analysing the trade-offs between preferences for information disclosure content, including virtual information disclosure content, further implementation is expected in the future.

Previous studies have analysed private investors' preferences for sustainability information in choice experiments. These few studies have clarified that some psychological aspects, including investors' attitudes toward SRI, psychological distance from SRI, the distance between investment operations and their operations, and the credibility of SRI and ESG investment providers, have a greater impact on preferences rather than the socio-demographic characteristics of investors. In addition, it can be said that the literature has generally shown that private investors who prefer SRI and ESG investment have different degrees of preference and can be divided into various segments. Even if the same sustainability information is provided, the way the information is received may differ among private investors, depending on the type of investors' decision-making, such as whether it is intuitive or not. Thus, it can be suggested that the preference when sustainability labels are provided for investment characteristics are not necessarily the same effects for preferences on private investors. Some studies suggest that sustainability information has little effect on preferences; however, others reveal that sustainability strategies, negative screens, and environmental information have a strong impact on preferences, which can imply different results. While it is expected that the determinants of the preference of private investors for sustainability information will vary greatly depending on what kind of information the preference is for, it can be said that there remains a challenge in comprehensively extracting and analysing attributes. Therefore, as a direction for future analysis, it goes without saying that individual investors rarely make investment decisions based solely on sustainability information without considering any financial information, but it is necessary to consider the preference for more comprehensive sustainability information and the determinants of preference for each type of information. Closing these gaps in knowledge will enable us to consider what kind of sustainability information disclosure enhances the cost-benefit of information disclosure.

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Authors Contribution

All authors contributed to the idea and design of the study. The first author conducted all the literature reviews. All authors wrote the paper, made significant revisions to the treatise, and have read and approved the final manuscript.

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