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Why fashion companies adopt green technology innovation strategy: A perspective of environmental social responsibility

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1 Introduction

As the fashion industry booms, more and more environmental impacts are coming to the fore. In particular, the fashion industry is the second largest source of pollution after the petrochemical industry (Ostermann et al., 2021), so contemporary fashion companies must adopt a green technology innovation strategy to alleviate the environmental impacts of products. Indeed, green technology innovation strategy has been confirmed as a key source of sustainability (Du et al., 2022). Therefore, it is urgent to explore how to drive fashion companies to adopt green technology innovation strategy.

However, previous investigations have paid limited attention to how to facilitate the adoption of green technology innovation strategy by fashion companies, as little is known about the drivers of green technology innovation strategy adoption. Previous research on exploring antecedents of green technology innovation strategy almost pays attention to the institutional perspective (e.g., Chen et al., 2021), but the institutional perspective cannot assure that companies adopt environmental innovation instead of making a show. This article upgrades the literature on environmental innovation to define green technology innovation strategy as an innovation strategy for green activities and green technology systems (Wu et al., 2022). Finally, this article, thus, introduces a novel adoption model of green technology innovation strategy that describes the impact of how environmental social responsibility policy influences green technology innovation strategy adoption through the mediating role of green identity and moderation of external pressures based on cognitive consistency theory (Feldman, 2013) and upper echelons theory (Li and Tang, 2010; Hambrick, 2016; Neely et al., 2020).

This article uses the qualitative method to interview three top management teams of Taiwan's fashion companies to verify the proposed proposition and theoretical framework (Figure 1). The qualitative coding analysis is used to analyze the script of an interview, and the result confirms all propositions in this article.

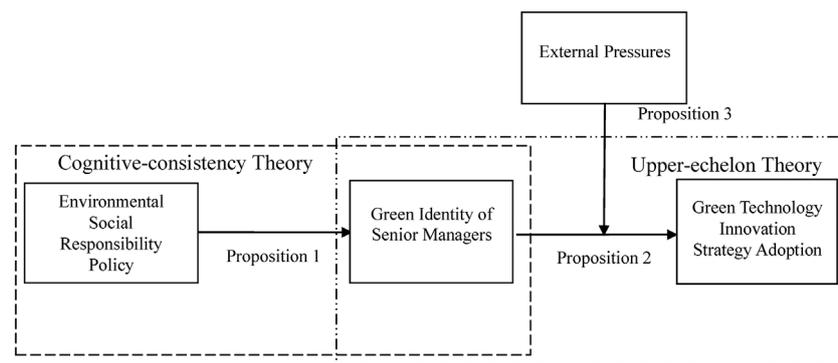


FIGURE 1
Theoretical model of this article.

2 Literature reviewing

2.1 Corporate governance

Corporate governance refers to how to deal with the relationship between different rights and stakeholders of the company. The important mean of corporate governance is to reasonably allocate the rights and obligations of all stakeholders, such as employees, customers, suppliers, shareholders/investors, government, community/non-government/non-profit organizations, external rating agencies, and media, etc. (Feils et al., 2018; Crifo et al., 2019; Nawaz, 2019). To achieve good corporate governance, companies should develop strategies to meet the rights and expectations of stakeholders (Munyede, 2021), such as corporate social responsibility (Ali et al., 2019). This paper proposes that fashion companies should adopt environmental social responsibility to meet stakeholder expectations. In particular, the fashion industry is the second largest source of pollution, so these environmentally friendly fashion companies should have a higher willingness to undertake environmental social responsibilities to meet the requirements of environmental-related stakeholders.

2.2 Environmental social responsibility and green identity

Past investigations confirm that individuals will identify with their companies because these individual desires their work values can mirror their companies' values based on cognitive consistency theory (Feldman, 2013; Yan et al., 2022). Cognitive consistency theory believes that individuals will expect their own perceived values to be consistent with their exhibited behavior. For example, when individuals' values are biased toward environmental values due to the influence of company values, they will also begin to have behaviors that identify with the environment (green identity). That said, when members of senior management teams perceive high levels of environmental social responsibility policy within their companies, they will revise their original work values to meet the companies' environmental values (environmental social responsibility policy), which form a green identity. For new hires, past research also

confirms that the socially responsible can attract employees of similar value (Ahn and Park, 2018; Pasricha et al., 2018; Tourigny et al., 2019). Therefore, if these members of senior management teams do not identify environmental social responsibility policy within their companies, they will leave their original companies or original senior management teams (Dobrev and Kim, 2019). This article addresses Proposition 1 as follows:

Proposition 1: Environmental social responsibility policy positively causes green identity.

2.3 Green identity and green technology innovation strategy

This article defines green technology innovation strategy as an innovation strategy for green activities and green technology systems (Huang and Li, 2017; He and Shen, 2019; Ali et al., 2022). Based on upper echelons theory (Li and Tang, 2010; Hambrick, 2016; Neely et al., 2020), senior managers' values (e.g., green identity) or features (e.g., age) will drive companies to adopt a strategy that meets their values or features, because these senior managers can allocate companies' resources and manpower towards their preferred business activities (Boone et al., 2019; Krause et al., 2022). For example, senior managers who have high levels of green identity will like environmental activities, so they will allocate companies' resources and manpower towards environmental activities, which will drive companies to adopt green technology innovation strategy. This article addresses Proposition 2 as follows:

Proposition 2: Green identity positively causes green technology innovation strategy.

2.4 The moderating role of external pressures

External pressures (Li and Lu, 2020; Uchida, 2023) represent the degree to which companies confront market pressures (e.g.,

an industry environment tendency), regulatory pressures (e.g., a government's environmental regulation), and competitive pressures (e.g., a competitor's environmental strategy), and these pressures will reinforce the intention of adopting response strategies. That said, companies who confront higher external pressures will have a higher intention to adopt green technology innovation strategy caused by senior managers' green identity, because green technology innovation strategy is one kind of response strategy to external pressures. For example, when companies who confront higher external pressures will show a higher adoption intention of green technology innovation strategy since green technology innovation strategy can meet the government's expectations and fight competitors. By contrast, when companies who confront lower external pressures will show a lower adoption intention of green technology innovation strategy since they have no urgent need to meet the government expectations and fight competitors. This article addresses [Proposition 3](#) as follows:

Proposition 3: External pressures positively moderate the relationship between green identity and green technology innovation strategy.

3 Research method

This article used a qualitative interview to produce the transcripts and then used qualitative coding analysis to verify [Proposition 1](#), [Proposition 2](#) and [Proposition 3](#) based on the content of the transcript. This article contacted several fashion industry associations in Taiwan to collect interviewees. The three senior managers of fashion companies in Taiwan agreed to join this qualitative interview of this article, and they are all male with at least a master's degree. The qualitative coding analysis supports [Proposition 1](#), [Proposition 2](#) and [Proposition 3](#) in this article. In addition, this article also interviewed followers of three fashion company executives to confirm the correctness of the content, which meets the triangulation method.

Supporting codings for [Proposition 1](#) from the three senior managers: Environmental social responsibility has become more and more common in the fashion industry (Senior Managers 1, 2 and 3) because the environmental issues of the fashion industry have been valued by everyone (Senior Managers 1 and 2). If a company adopts an environmental social responsibility policy, all senior managers will abide by it (Senior Manager 3), and in the end, everyone identifies environmental issues (Senior Managers 1 and 3). Moreover, companies that adopt environmental social responsibility will also attract more outstanding talents to apply, and eventually, all employees of the company will agree with the value of the environment (Senior Managers 1 and 2).

Supporting codings for [Proposition 2](#) from the three senior managers: Senior managers' identity of the environment will indeed affect the company's adoption of green technology innovation strategies (Senior Managers 1, 2 and 3) because the company's strategy is decided by senior managers (Senior Manager 1, 2 and 3). Senior executives can also use their

power to influence the company's adoption of strategies (Senior Managers 1 and 3), and most of the company's resources are controlled by senior managers (Senior Managers 1 and 3).

Supporting codings for [Proposition 3](#) from the three senior managers: To survive, companies must care about market trends, government regulations, and competitors' strategies (Senior Managers 1, 2 and 3). Although the company's senior management's recognition of the environment can affect the company's adoption of environmental strategies (Senior Manager 1, 2 and 3), if these external stakeholders are biased towards environmental protection, the company will definitely be more willing to adopt environmental innovation strategies in response to these stakeholders (Senior Manager 1, 2 and 3).

4 Discussion

4.1 Theoretical implications

This article adopts cognitive-consistency theory and upper echelons theory to address a novel adoption model of green technology innovation strategy in the context of the fashion industry and discusses its antecedents and moderator. Previous surveys have paid limited attention to how to drive companies to adopt green technology innovation strategies, so this article has a significant incremental contribution to the fashion industry and sustainable literature. Indeed, there is limited research that adopts a similar framework to this article to put forward the drivers of green technology innovation strategy.

Second, this article addresses a connection between environmental social responsibility, green identity, green technology innovation strategy, and external pressures to detect a novel moderated mediation model, and it can describe the mechanism of green technology innovation strategy adoption in detail. The mechanism is crucial as fashion companies can make a strategy to drive green technology innovation strategy adoption. The green technology innovation strategy adoption is an important source of green competitive advantage.

In practice, to introduce environmental social responsibility policy into fashion companies, this article suggests fashion companies can not only run more environmental social responsibility activities but also encourage environmental social responsibility education and training courses. These fashion companies can gradually integrate the value of environmental social responsibility policy into their company culture and then implement environmental social responsibility policy, which is a key antecedent of green technology innovation strategy.

5 Conclusion

This article pays attention to the fashion industry by addressing a novel adoption model of green technology innovation strategy based on cognitive-consistency theory and upper echelons theory.

The adoption model is unique and continues to help the fashion industry advance environmental protection issues. Indeed, past investigations rarely examine the drivers of green technology innovation strategy so there are no ideas about how to promote the adoption of green technology innovation strategy. Through the adoption of cognitive consistency theory and upper echelons theory, this article detects the black box of green technology innovation strategy adoption in the fashion industry setting.

Author contributions

The author confirms being the sole contributor of this work and has approved it for publication.

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