



## **Research Exposé:**

# **The managers' perception of Green Innovation's outcomes: an exploratory application in the Italian Fashion Industry**

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## **Abstract**

Increasing environmental concerns in recent years have directed consumers' demand toward responsible goods and have increased the focus of corporations on sustainable operations. Nowadays, companies no longer compete only on the quality and price of their products but also on their ability to implement sustainable processes and products. However, many firms tend to implement Green Innovations solely for the purpose of complying with regulatory requirements and not because they believe they can gain a real benefit. This research aims to explore this issue by investigating any internal factors that influence and consequently direct the decision-making process of this type of innovation. Specifically, the study aims to analyze the managers' perception of Green Innovation outcomes on the company itself determining the role this aspect plays in the evaluation process of these sustainable projects. The research will be applied in the Italian Fashion Industry as it is one of the most polluting sectors due to its manufacturing process and, although there is evidence of many sustainable practices, some companies are still skeptical. Using a qualitative approach, semi-structured interviews will be conducted with decision-makers who play an important role in evaluating the implementation of Green Innovations in selected companies. The ultimate objective of this research is to contribute to the scholarly discussion by advancing the discussion on the decision-making process of Green Innovation, enabling a deeper understanding of the factors that influence and undermine their implementation.

*Keywords:* Green Innovation, Outcomes, Decision-Making Process, Perception, Italian Fashion Industry

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## **List of Abbreviations**

|      |  |
|------|--|
| GI   | Green Innovation                                       |
| OECD | Organization for Economic Co-operation and Development |
| OI   | Organizational Inertia                                 |
| SDMP | Strategic Decision-Making Process                      |
| IDPM | Innovation-Decision Process Model                      |

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# 1. Introduction

## 1.1. *Research Context and Scholarly Discussion*

The limitation of natural resources, climate change, and the loss of biodiversity over the last decades have generated numerous environmental concerns and have increased the focus of companies on more sustainable operations. It became necessary to adapt to new regulations and stricter emission and pollution standards and this has led companies to search for environmentally sustainable resources and processes without forgetting to support economic growth. This scenario has also changed the way companies compete with each other (Yee et al., 2021). Nowadays, they no longer compete only on the quality and price of their products but also on their ability to implement sustainable processes and products (Yee et al., 2021). Indeed, the demand for sustainable products is steadily increasing, favoring companies with more attention to environmental issues.

This situation is a great incentive for the study and implementation of green innovations by companies in various sectors. GI is a managerial concept involving green products, processes, marketing, and management (Wang et al., 2021). It helps to increase a company's environmental performance while also improving the quality and consistency of the final products (Seman et al., 2019).

Many companies tend to implement green innovations solely for the purpose of complying with regulatory requirements and not because they believe they can gain a real benefit. Some studies (Weng et al., 2015; Tang et al., 2017; Rehman et al., 2021; Wang et al., 2021) have found a positive relationship between green innovation and corporate performance, however, this advantage does not yet seem to be clear to everyone. Indeed, several barriers to the implementation of green innovation in companies can be identified, such as improper attitudes and perceptions toward green innovation (Abdullah et al., 2016) or organizational inertia that reflects the excessively stable condition of products, production methods, and policies (Huang et al., 2013).

The fashion industry is one of the most polluting sectors due to its manufacturing process which results in negative environmental outcomes (Dicuonzo et al., 2020). The Italian fashion industry is one of the most avant-gardes and has always been looked upon as an example by the rest of the world. In recent years this sector is also distinguishing itself through its sustainable and environmentally responsible approach. However, there are still many companies that have little focus on sustainability, thus tending to implement “classical” products and processes with highly negative results for the environment.

Based on these assumptions, the purpose and structure of this research, which can be found below, were developed.

### *1.2. Research Gaps*

Some researchers, while analyzing the relationship between green innovation and corporate performance, discovered that some managers are not aware that GI doesn't undermine firm performance consequently they could decide not to implement GI or not to put much effort into it. They suggested future researchers verify this implication in specific industries and different countries to understand if it is generalizable or not.

Some scholars found that improper attitudes and perceptions toward GI could negatively affect its implementation. However, as external and internal barriers might be different across industries and countries, they suggested analyzing them in different contexts, regions, and sectors.

In addition to these gaps, no research was found regarding Italian Fashion Industry managers' perception of green innovation outcomes. A lack of studies can also be identified concerning the internal factors that favor or limit the implementation of green innovation in this particular sector.

### *1.3. Research Aim and Expected Contributions*

The main research question to be answered is:

*“How does managers' perception of Green Innovation's effect on the company influence the decision-making process?”*

This research aims to identify any internal forces that undermine the decision-making process of Green Innovation. In particular, it wants to analyze the Italian Fashion Industry's perception of GI outcomes on the company itself determining the role this factor plays in evaluating the implementation of these sustainable projects.

This study intends to contribute to the academy by advancing the discussion on the decision-making process of Green Innovation, giving a detailed analysis of the perception of its outcomes and internal factors that enhance or limit its implementation.

### *1.4. Theory*

This research will analyze how decisions regarding Green Innovations are carried out in Italian Fashion Companies, deeply investigating the position and attitude of managers at each stage of the IDP model. The Innovation-Decision Process Model was defined by Rogers in 1995 and

interpret this type of decision as composed of five stages: knowledge, persuasion, decision, implementation, and confirmation. This framework will be used during the data collection phase as a basis for developing the discussion, and later in the analysis phase as a model for structuring the findings.

### *1.5. Overview of the upcoming chapters*

The introduction just presented had the objective of exposing the aim of this research, also analyzing the context in which this study takes place and the gaps which it is intended to fulfill. The second chapter is called “*Theoretical Framing*” and aims to present in more detail the main themes explored during the research and the theory on which it is based. Successively, the main articles used to build the theoretical background of this research will be summarized in the Literature Review. Following, the research methodology will be presented. This chapter will explain the research design, describe the sample, and show the data collection procedures. Later, this paper will analyze the findings by explaining the procedure used to code the data and how the results were structured. The fifth chapter will cover the discussion of findings, connecting them with the theory. In addition, it will also present the main implications and limitations of this research. In the end, the study will end with a chapter of conclusions.

## 2. Theoretical Framing

### 2.1. Green Innovation

Green Innovation is a concept that could be found under different notions in the literature.

The term “Sustainable Development” was first used in the World Conservation Strategy Report by the International Union for Conservation of Nature and Natural Resources. They defined sustainable development as “*the integration of conservation and development to ensure that modifications to the planet do indeed secure the survival and well-being of all people*”.

Subsequently, numerous scholars have provided different definitions of this term, but the conation of it is attributed to Brundtland in a report commissioned by the United Nations: sustainable development is “*the needs of the present without compromising the ability of future generations to meet their own needs. The concept of sustainable development does imply limits, not absolute limits but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities*” (Brundtland, 1987).

Many different definitions exist for the term “eco-innovations” and one of the firsts states that they are “*new products and processes which provide customer and business value but significantly decrease environmental impacts*” (Fussler and James, 1996). In line with many other arguments, the Organization for Economic Co-operation and Development (OECD) defined eco-innovation “*as the creation or implementation of new, or significantly improved, products (goods and services), processes, marketing methods, organizational structures and institutional arrangements which – with or without intent – lead to environmental improvements compared to relevant alternatives*” (OECD, 2009).

Another notion that is often used for Green Innovation is “environmental innovation” defined as “*innovations that consist of new or modified processes, practices, systems, and products which benefit the environment and so contribute to environmental sustainability*” (Oltra and Saint Jean, 2009).

Lastly, the most widely used and well-known notion was defined by Chen et al., in 2006: “*hardware or software innovation that is related to green products or processes, including the innovation in technologies that are involved in energy-saving, pollution-prevention, waste recycling, green product designs, or corporate environmental management*” (Chen et al., 2006).

The above-mentioned definitions of the four notions of innovation (sustainable, eco, environmental, green) seem to have small differences, which is why they are often used as



synonyms. Indeed, according to Schiederig et al., (2012) six important common aspects can be identified in all the definitions:

1. Object: product, process, service, method.
2. Market Orientation: satisfy needs/be competitive.
3. Environmental aspect: reduce negative impact.
4. Phase: full life cycle.
5. Impulse: economical or ecological.
6. Level: setting a new innovation/green standard for the firm.

(Schiederig et al., 2012)

In the end, it is possible to state that GI focuses on improving or creating new products or processes to reduce the negative impact of the company on the environment. It is defined as “*exploitative*” when it focuses on improving existing products or processes and as “*exploratory*” when it focuses on creating new products or processes, with the objective to reduce environmental damage (Rehman et al., 2021).

Green Innovations not only help companies to improve their environmental outcome, but they also help them to improve their economic result. Many studies (Weng et al., 2015; Tang et al., 2017; Rehman et al., 2021; Wang et al., 2021) believe there is a positive relationship between the implementation of GI and the improvement of corporate performance. Indeed, this type of innovation can help companies apply a differentiation strategy, thereby achieving a differentiation advantage over competitors. This type of advantage can easily become a competitive one, thus having a positive effect on corporate financial and non-financial performance (Andersén, 2021).

*Proposition n. 1: Awareness of Green Innovation’s benefits to the company generally leads to its implementation.*

## 2.2. Barriers to Green Innovation

Companies are now driven to implement GI by combined pressures from society, customers, and government bodies (Wang et al., 2021). However, many firms tend to implement it solely for the purpose of complying with regulatory requirements and not because they believe they could gain a real benefit.

In the literature, various pieces of research try to identify which barriers prevent or limit the implementation of GI. As a first step, a distinction must be made between external and internal barriers. The former depends solely on factors outside the company, such as

government, society, market, competitors, or consumers; the latter is generated by factors under the company's direct control, such as staff skills, costs, available resources, and technology.

Some studies (Abdullah et al., 2016; Ullah et al., 2021) have identified several external barriers that may limit the application of GI in the manufacturing industry. The most common ones concern the lack of government, environmental institutions, and external partnerships support. The government and environmental institutions' regulations and incentives to implement green production are not enough if they are not accompanied by stringent controls to verify compliance with sustainable standards. External successful partnerships with which the company could share products and processes are necessary to implement green innovations. Indeed, a company needs the support of its suppliers, customers, and partners indispensably to be able to pursue environmentally sustainable initiatives and make them profitable.

The same studies also identified internal barriers to implementing GI that mainly limit decision-making. The main ones relate not only to lack of personnel expertise or lack of resources, but also to high perceived cost, lack of top management commitments, and improper attitudes and perceptions towards green practices. Indeed, many managers and employees are not aware that green innovations do not undermine firms' performances and they also believe that it has little environmental benefits. With the presence of these misconceptions in some corporate cultures, it is easy to understand that green innovations are often not implemented, as the perceived cost is far greater than the benefits they could bring.

*Proposition n. 2: Negative attitudes towards green practices limit the implementation of Green Innovations in the Italian Fashion Industry.*

### *2.3. Organizational Inertia*

The concept of inertia originated in physics with the postulation of Newton's first law of motion, according to which “*every object will remain at rest or in uniform motion in a straight line unless compelled to change its state by the action of an external force*”. As with every object, also human cognition has inertia: people usually behave based on previous experience and knowledge consequently following an antecedent pattern. The concept of inertia can also be identified in the way some companies act and develop: they are often subject to strong inertial forces that prevent radical changes in strategy and structure even in the face of strong threats from the environment (Hannan and Freeman, 1984).

The notion of “Organizational Inertia” was first introduced by Singh and Lumsden (1990) while studying the theory of organizational ecology. It can be defined as a “*phenomenon*

*of stagnant organization, and it reflects the excessively stable condition of products, production methods, and policies of an organization” (Huang et al., 2013).*

Over the course of time, scholars have defined different types of inertia into which OI can be divided (Moradi et al., 2021):

1. *Insight inertia*: lack of understanding of internal and external signals to change an organization’s behavior.
2. *Psychological inertia*: managers' and employees' resistance to change, despite the extent of the need.
3. *Action inertia*: people do not act also if they have gained the knowledge required to make changes.
4. *Structural inertia*: the organization does not change its process.
5. *Knowledge inertia*: the use of old, redundant, and stagnant knowledge to develop a problem-solving strategy (Liao, 2002).

Organizational Inertia can easily be a barrier to the implementation of innovations within a company. Indeed, the results of research by Moradi et al., conducted in 2021 “*approve the negative effect of organizational inertia on open innovation and business model innovation*”. When a company exhibits inertia, it means that its structure, processes, products, and actions are defined by previous patterns and consequently no change or development is taking place. This type of action inevitably blocks the implementation of innovations as, to occur, they require the company to be ready to make changes.

*Proposition n. 3: Organizational Inertia can undermine the implementation of Green Innovation in the Italian Fashion Industry.*

#### *2.4. Decision-Making Process*

Strategic decisions of a company are made by the top management, and they usually reflect the relationship between an organization and its environment (Ginsberg, 1988). They are influenced by both internal factors (psychology, culture, structure) and external factors (competition, government, social contest).

Research about strategic decision-making can be divided into two categories: process research and content research. Content research deals with issues of strategic content, while process research deals with the process through which decisions are made and implemented (Elbanna, 2006). As regards process research, many scholars have discussed numerous

dimensions of the strategic decision-making process, and among the most important and used ones are *rationality, political behavior, and intuition*.

*Rationality* can be defined as that characteristic that makes a behavior logical in pursuing a certain goal (Dean and Sharfman, 1993). For many years, scholars have debated whether the decision-making process was rational or bounded-rational, but the latest studies resolve this controversy by tending toward the last option. Indeed, according to Eisenhardt and Zbaracki (1992) empirical research supports the bounded-rationality theory of the decision-making process due to the: existence of cognitive limits to the rational model; following basic phases of problem identification, selection, and development; the complexity of the problem and the conflict between decision-makers that could influence the process. These three groups of factors can affect the SDMP leading to make not the best choice but a satisfactory one.

The SDMP is usually characterized as *political* in nature because, since it is made by people for people, is often influenced by conflict, power, and interaction of interests. Indeed, to exert influence on the process and make sure that personal interests are satisfied, decision-makers can use political tactics that lead to the emergence of conflict or the exploitation of power over other people (Wilson, 2003).

*Intuition* can be conceptualized as automatic expertise (Miller and Ireland, 2005) and a form of intelligence that decision-makers use when they cannot pursue a rational approach (Parikh, 1994). Khatri and Ng (2000) defined three indicators of intuition often used during the decision-making process: reliance on judgment, reliance on experience, and use of “gut feeling”. Despite making decisions by intuition being increasingly recognized as a valid method, the best decision-maker generally manages to balance rationality and intuition to achieve the best result.

The decision-making process aimed at assessing whether to implement an innovative project can take two forms: the one-stage model or the two-stage model (Du et al., 2007). The one-stage model assumes that companies must decide among four alternatives: not to innovate, innovate on process only, innovate on product only, and innovate on both process and product. On the contrary, the two-stage model assumes that companies first decide whether to innovate or not, and then decide if pursue process or product transformation. The innovation decision-maker faces higher problems than a decision-maker confronted with a more routine task because this type of choice is mainly characterized by uncertainty. Indeed, innovation is by definition “something new” whose outcome and success are often insecure. In these situations, managers cannot rely on historical data or reliable benchmarks, and they usually must rely on intuition and “gut feeling”. The decision-makers also face difficulty in judging the importance

of attributes of their alternatives since they cannot be compared to each other as they are uncertain and may have never been implemented before (Heerkens, 2006). Overall, the decisions concerning innovations are characterized by a lack of knowledge (De Oliviera et al., 2015) which complicates the process and often leads to an incorrect or poorly implemented resolution.

*Proposition n. 4: There is ambiguity about the outcomes of Green Innovations in Italian Fashion Companies.*

*Proposition n. 4.a: Green Innovation's outcomes are often unknown.*

*Proposition n. 4.b: There are difficulties in predicting the consequences of sustainable innovations on companies.*

*Proposition n. 4.c: There are difficulties in measuring the outcomes of Green Innovations.*

## 2.5. *Innovation-Decision Process Model*

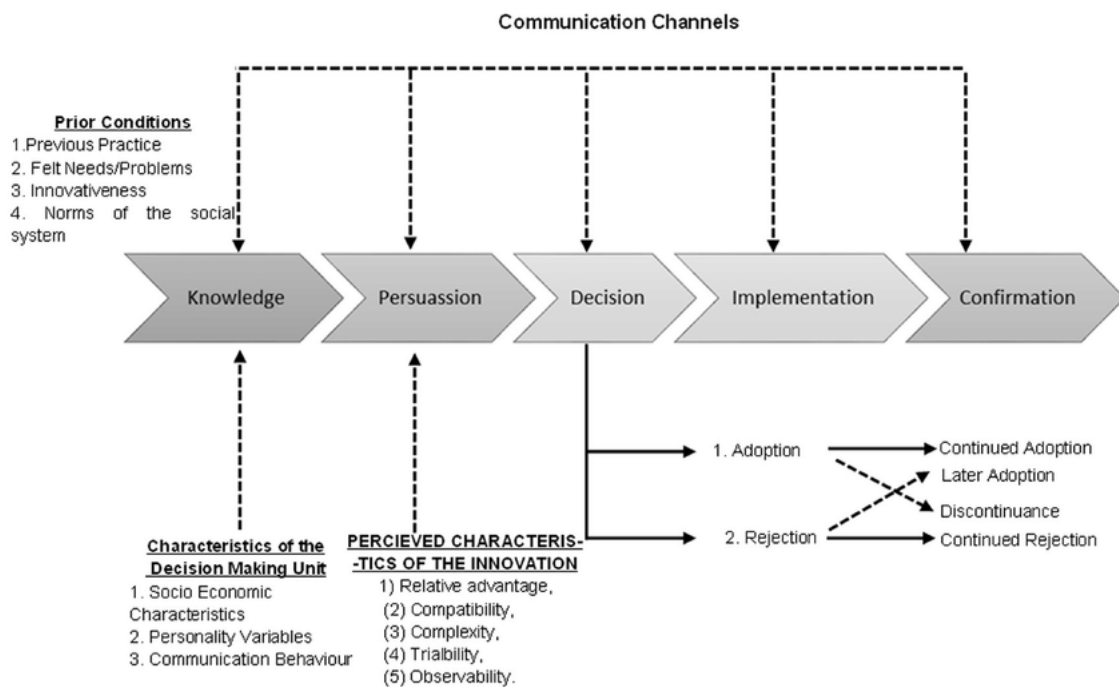
The Innovation-Decision Process Model (Figure 1) was defined by Rogers in 1995. He describes the innovation-decision process as “*the process through which an individual (or other decision-making units) passes (1) from first knowledge of an innovation, (2) to forming an attitude toward the innovation, (3) to a decision to adopt or reject, (4) to implementation of the new idea, and (5) to confirmation of this decision*” (Rogers, 1995). This process is usually applied by individuals when they must decide whether adopt new technology, but it can also be applied to companies' decision-makers that need to evaluate the implementation of an innovation in products or processes.

In the knowledge stage, the decision-maker seeks information about the innovation understanding what the innovation is, how it can be implemented and what would be their output. The second phase is “*persuasion*” which occurs when the decision-maker develops a positive or negative attitude toward the innovation. The knowledge stage is a cognitive-oriented one, while the persuasion stage is a more affective-centered one, influenced by the degree of uncertainty of the project and the exposure to social factors. The third stage is called “*decision*” and is the one in which the decision to adopt or reject the project is made. In the fourth stage, the project is implemented and put into practice. During the last stage called “*confirmation*”, the decision-maker search for support for the decision made, evaluating the project implemented.

This research wants to investigate the Italian Fashion Industry's perception of green innovation's outcomes, analyzing any internal barriers or organizational inertia factors which

limit the implementation of GI. The study will analyze how these kinds of decisions are carried out in companies, deeply investigating the position and attitude of managers at each stage of the IDP model. This framework will be used during the data collection phase as a basis for developing the discussion, and later in the analysis phase as a model for structuring the findings. In particular, the study will investigate in depth the first and second phases (knowledge and persuasion) analyzing the information available about GI's outcomes and delineating the perceptions and attitudes that managers develop at these stages.

Figure 1: The Innovation-Decision Process Model



### 3. Literature Review

This research is aimed at analyzing the perception of Italian Fashion Industry managers on the outcomes that Green Innovations can have. To develop a theoretical starting point, numerous articles were consulted and searched on the Google Scholar database with the following keywords: “*Green Innovation, Decision-Making, Process, Barriers, Perception*”. In addition to them, also some “Green Innovation” synonyms were used such as “*Sustainable Innovation, Environmental Innovation, Eco-Innovation*”. Through this research, many articles were identified, however, not all of them were analyzed. Only papers that could serve the purpose of this study were selected by reading the abstracts and conclusions and understanding their field of research and findings. Three main inclusion criteria were used: generalizability of the research, year of publication, and publisher. Indeed, the preferred articles did not refer to a specific sector and consequently had findings that could be applied in different contexts. A number of studies were selected with a narrower investigation scope as they were specific to the manufacturing sector, and thus with results that are probably also applicable to the Fashion Industry. Furthermore, articles were selected that were as recent as possible and could reflect the trends and changes of recent years. Particular attention was paid to the publisher, which had to be qualified, relevant, and preferably specific to the economic field.

The two main domains of research were “Green Innovation” and “*Decision-Making*”. Regarding GI, several articles were discarded as they referred to the technical process of implementing these projects, which was not of interest to the purpose of this study. Instead, the papers that defined the concept, showed its main aspects, and analyzed its impact on companies were selected. A similar search was carried out in the field of “*Decision-Making*” and special attention was paid to those studies that could describe the process, characteristics, and influencing factors. Subsequently, a search was conducted for articles that could combine the two domains of research, using queries such as “*innovation decision-making*”, “*innovation decision-making process*”, and “*managerial decision-making in innovation*”. This search proved to be quite difficult due to the lack of articles in this field. However, the selected studies clarified the steps of the decision-making process in innovation and the difficulties associated with it. This search was also useful for individualizing and studying the IDPM theory on which the present study is structured.

Another field of research that was used, although of minor relevance than the others, was “*Organizational Inertia*”. Indeed, one of the propositions of this study states that there are factors of OI within companies that limit the implementation of GI. For this reason, the topic

was explored in depth, understanding the different types of inertia and how they can influence innovation decisions.

To conclude, in order to develop this research, 32 articles were selected, of which 16 were related to Green Innovation and its barriers, 8 to decision-making, 4 to decision-making in innovation, and 5 to organizational inertia.

Below (*Table 1*) a summary of the articles mainly consulted in this study is proposed.

*Table 1: Literature Review*

| Nº | References  | Contents  | Field            |
|----|---|---|------------------|
| 1  | Schiederig, T., Tietze, F., & Herstatt, C. (2012). Green innovation in technology and innovation management—an exploratory literature review. <i>R&amp;d Management</i> , 42(2), 180-192.   | This paper provides a useful overview of the existing body of literature in the field of green innovations. It contributes to a clarification of the concept of “green innovation” explaining different notions that are often used as synonymous.  | Green Innovation |
| 2  | Rehman, S. U., Kraus, S., Shah, S. A., Khanin, D., & Mahto, R. V. (2021). Analyzing the relationship between green innovation and environmental performance in large manufacturing firms. <i>Technological Forecasting and Social Change</i> , 163, 120481. | This study analyzes green intellectual capital (GIC), green human resource management (GHRM), and green innovation (GI) impacts on the environmental performance of firms. It verifies that GIC and GHRM have a direct impact on environmental performance, as opposed to GI. In its theoretical background, the article also proposes an in-depth analysis of Green Innovation and its impact on the overall performance of companies.   | Green Innovation |
| 3  | Andersén, J. (2021). A relational natural-resource-based view on product innovation: The influence of green product innovation and green suppliers on differentiation advantage in small manufacturing firms. <i>Technovation</i> , 104, 102254.            | This article applies a Relational Natural-Resources-Based View (RNRBV) on product innovation to examine the relationships between green product innovation (GPI), differentiation advantage, and firm performance. The results demonstrate that GPI positively affects the differentiation advantage which in turn has a positive impact on corporate financial and non-financial performance.  | Green Innovation |
| 4  | Wang, H., Khan, M. A. S., Anwar, F., Shahzad, F., Adu, D., & Murad, M. (2021). Green innovation practices and its impacts on environmental and organizational performance. <i>Frontiers in Psychology</i> , 11, 553625.                                     | This study aims to investigate three relationships: impact of stakeholders’ view on green innovation (GI), effect of GI on environmental and organizational performance, the moderating influence of innovation orientation on the previous relationships. The findings proved a positive relationship between stakeholders’ view and GI, a positive link between GI and environmental and organizational performance, but lastly a negative moderating effect of innovation orientation. | Green Innovation |



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| 5 | Tang, M., Walsh, G., Lerner, D., Fitza, M. A., & Li, Q. (2018). Green innovation, managerial concern and firm performance: An empirical study. <i>Business Strategy and the Environment</i> , 27(1), 39-51.  | This paper proposes an empirical study in China to verify the positive relationship between green innovations and financial and non-financial performance of a company. Analyzing this relationship, they found out that two of the greatest limits to green practices' decision-making are the lack of managers' concern about green issues and the unawareness that GI don't undermine firms' performance.   | Barriers to Green Innovation |
| 6 | Ullah, S., Ahmad, N., Khan, F. U., Badulescu, A., & Badulescu, D. (2021). Mapping interactions among green innovations barriers in manufacturing industry using hybrid methodology: insights from a developing country. <i>International Journal of Environmental Research and Public Health</i> , 18(15), 7885. | This empirical research investigates green innovations barriers in Pakistani manufacturing firms. The findings highlighted both external and internal obstacles, including lack of collaboration with government and environmental institutions, high perceived cost, and lack of resources. The study contributes to promote green innovation in manufacturing industry.  | Barriers to Green Innovation |
| 7 | Abdullah, M., Zailani, S., Iranmanesh, M., & Jayaraman, K. (2016). Barriers to green innovation initiatives among manufacturers: the Malaysian case. <i>Review of Managerial Science</i> , 10(4), 683-709.   | This study analyzes external and internal barriers to green innovation using as sample Malaysian manufacturers. It examines obstacles for both product and process innovation decision-making finding out that in both cases negative attitude and perception towards green practices represent a relevant barrier. The authors suggest conducting a similar study also in other contexts since external and internal barriers could be different among countries and industries.  | Barriers to Green Innovation |
| 8 | Moradi, E., Jafari, S. M., Doorbash, Z. M., & Mirzaei, A. (2021). Impact of organizational inertia on business model innovation, open innovation and corporate performance. <i>Asia Pacific Management Review</i> , 26(4), 171-179.  | The research examines the role of organizational inertia on business model innovation, open innovation, and corporate performance since it often represents a barrier to change. The study affirms that organizational inertia as a negative effect on open innovation and business model innovation, while these last two concept have a positive relationship with corporate performance. The paper presents a detailed research background explaining 4 different types of organizational inertia (insight, psychological, action, structural). | Organizational Inertia       |
| 9 | Eisenhardt, K. M., & Zbaracki, M. J. (1992). Strategic decision making. <i>Strategic management journal</i> , 13(S2), 17-37.   | The article offers a detailed overview of decision-making literature. It focuses mainly on three paradigms resulting from previous studies: rationality and bounded rationality; politics and power; garbage can. The authors conclude that decision-maker are boundedly rational, and that  | Decision-making process      |

|    |  |  |                                    |
|----|--|--|------------------------------------|
|    |  | power and chances play and important role in choosing alternatives.  |                                    |
| 10 | Elbanna, S. (2006). Strategic decision-making: Process perspectives. <i>international Journal of Management reviews</i> , 8(1), 1-20.  | The paper presents a detailed overview of strategic decision-making literature assuming a process perspective. It also examines and explain three process dimensions: rationality, political behavior, and intuition.  | Decision-making process            |
| 11 | Du, J., Love, J. H., & Roper, S. (2007). The innovation decision: An economic analysis. <i>Technovation</i> , 27(12), 766-773.   | This research aims at studying and testing determinants and effects of innovation, assuming a decision-making perspective. It explains and test two alternatives model of innovation decision: one stage model and two-stage model.  | Decision-making process            |
| 12 | Heerkens, H. (2006). Assessing the importance of factors determining decision-making by actors involved in innovation processes. <i>Creativity and innovation management</i> , 15(4), 385-399.                           | The article analyzes the “importance assessment process” used to evaluate different factors in the decision-making about innovation. It highlights the necessity to implement this process in decisions regarding innovation due to their non-routine nature that limit the possibility of decision-makers to use past experience and judgment.  | Decision-making process            |
| 13 | De Oliveira, M. G., Rozenfeld, H., Phaal, R., & Probert, D. (2015). Decision making at the front end of innovation: The hidden influence of knowledge and decision criteria. <i>R&amp;D Management</i> , 45(2), 161-180. | The paper presents the DeBK (decision making based on knowledge) method used to analyze the decision-making process at the front end of innovation. The method helps to evaluates the importance of decision criteria and the knowledge of project information. The research asses that decisions regarding innovation are often characterized by a lack of knowledge that complicates and hinders the process.          | Decision-making process            |
| 14 | Rogers Everett, M. (1995). Diffusion of innovations. <i>New York</i> , 12.   | This book examines the several ways in which users accept novel concepts and technological advancements. It explains the innovation adoption process’ stages, the various innovation adopters, and how the diffusion process can be altered. The author also proposes the Innovation-Decision Process Model (IDPM) that explain the stages decision-makers take to choose the adoption or implementation of innovations. | Innovation-Decision Making Process |

## 4. Methodology

The objective of this research is to analyze internal factors that undermine the decision-making process of Green Innovation, paying particular attention to the perception of GI outcomes on the company. The study will be carried out using a qualitative approach as there is no evidence in the literature of hypotheses that could be used for running a quantitative approach.

The application domain of the research is the Italian Fashion Industry. This sector is one of the most developed ones in Italy, contributing significantly to the economy of the country. In recent years there has been an increasing consumer demand for responsible and environmentally friendly products, making sustainable operations of companies an important competitive advantage (De Chiara and Iannone, 2020). This great opportunity seems to have been grasped mostly by the new generations entering the fashion world with “born-sustainable” start-ups focused on the production of sustainable and responsible clothing using innovative technologies. Among the most interesting examples are the use of automotive waste to create a dye for clothes in Turin, the transformation of organic materials such as citrus peels to create a new fabric in Sicily, and the recycling of fishing nets to make nylon in Trentino. There are also some big, world-renowned companies that are trying their hand at sustainable innovation, such as Prada using the ECONYL® material made from plastic waste collected from oceans, fishing nets, and textile fiber waste. However, many companies still limit their sustainable efforts to using vegan or recycled materials, without actually implementing innovations in products and processes.

This sector was chosen as the application domain because, despite being quite developed in the field of sustainable innovation, many companies still seem to be skeptical. This contrast can be extremely useful to understand the decision-making process of companies that have already implemented sustainable innovations and at the same time investigate the factors that limit this decision. For this reason, the selected companies will be at different stages in the application process of green innovations, from the decision-making phase to the actual physical implementation. These corporations, in addition to being part of the Italian fashion industry, should also have a hierarchical structure to better identify decision-makers. Both new companies such as born-sustainable start-ups and large, established companies will be selected in order to obtain different and more comprehensive points of view.

The research will be carried out by conducting interviews with figures involved in the decision-making of sustainable practices. To get a truthful analysis, respondents will only be selected if they have been working in the target company and sector for more than two and five

years respectively. The reference sample will be composed of people from both higher and lower hierarchical levels, such as the CEO and Production Director or Sustainability Manager, Project Manager, and Product Developer Manager. These two perspectives will allow for a broader and more precise analysis of the decision-making process, the attitude toward sustainable products and processes, and the perception of possible outcomes.

The semi-structured interview will be carried out remotely with the use of video call software such as Zoom, Microsoft Teams, or Google Meet. Afterward, the interviews will be transcribed and translated in case they are conducted in Italian. The data will be coded and analyzed with the help of the MAXQDA software which was designed for computer-assisted qualitative and mixed methods data. Through content analysis, data will be linked together and then structured into useful findings.

## **5. Expected Contributions**

### *5.1. Scholarly Contributions*

This research intends to contribute to the academy by filling the gaps explained in the introduction, giving a detailed analysis of the perception of green innovations' outcomes and internal factors that enhance or limit its decision-making. In particular, the study would like to delve into the causes that lead to the non-implementation of green innovation among which might be the managers' lack of awareness that green innovation does not undermine the company's performance (Tang et al., 2018). In addition, this research wants to better investigate external and internal barriers to GI verifying if negative attitudes and perceptions towards green practices play a relevant role (Abdullah et al., 2016). Using the Italian Fashion Industry as the field of research, this study contributes to the literature by filling the lack of articles investigating the GI decision-making process and its influencing factors in this sector. Indeed, an absence of articles was detected concerning the internal factors that influence the decision-making process and consequently favor or limit the implementation of GI in this sector.

The last contribution that this article aims to provide to the literature is to verify whether the IDPM model (Rogers, 1995) can be applied to the decision-making process regarding the implementation of GI. This model originated with the intention of explaining the steps by which an individual adopts new technologies but was later also used to investigate the decision-making process that takes place in companies when considering implementing an innovation. However, the five stages have never been tested in the decision-making process of sustainable innovations. In addition to analyzing the influencing factors in the decision-making process,

this study will verify the steps that led companies in the Italian Fashion Industry to implement GI, checking whether there is congruence with the IDPM model. Eventually, this research will advance the discussion on the implementation process of innovation by making it specific to a sustainable one, enabling a deeper understanding of the decision-making process and its differences from the already known model.

### *5.2. Implications for Business and Society*

This research aims to contribute to the business by providing a greater awareness of the decision-making process that leads to the implementation of green innovations, paying particular attention to the internal factors that may influence it. By having a greater knowledge of this field, managers could implement more informed and conscious decisions regarding innovations and sustainable ones. Decision-makers could approach the process from a different point of view aware of its limitations, its difficulties, and the internal factors that may influence it.

The contribution of this research to society is less tangible than those just explained. In fact, by contributing to the growth of awareness of green innovations' outcomes and decision-making, the study could promote their implementation. Growth in the application of sustainable innovations in the Italian Fashion Industry would lead to a reduction in the environmental impact of this particularly polluting sector. Consequently, this study could indirectly and in its own small way lead to a greener transition for Italian manufacturing companies and contribute to a reduction of environmental pollution.

## **6. Chapters Overview**

Presented below is a temporary structure of the final research thesis chapters:

Abstract

List of Abbreviations

List of Figures

List of Tables

1.1. Introduction

1.1. Research Context and Scholarly Discussion

1.2. Research gaps

1.3. Research Aim and Expected Contributions

1.4. Theory

1.5. Overview of the upcoming chapters

- 2.1.Theoretical Framing
  - 2.1. Green Innovation
  - 2.2. Barriers to Green Innovation
  - 2.3. Organizational Inertia
  - 2.4. Decision-making process
  - 2.5. Innovation-Decision Process Model
- 3.1.Literature Review
- 4.1.Methodology
- 5.1.Analysis of Findings
  - 5.1. Coding of data
  - 5.2. Structuring of findings
- 6.1.Discussion
  - 6.1. Findings
  - 6.2. Limitations
- 7.1.Expected Contributions
  - 7.1. Scholarly Contributions
  - 7.2. Implications for Business and Society
- 8.1.Conclusions

Appendix

## 7. Work Plan

Table 2: Work Plan

| Time period   | Activity                | Details   | Stage                               |
|---|-------------------------|---|-------------------------------------|
| 12 <sup>th</sup> Sept. 2022 – 18 <sup>th</sup> Sept. 2022 | Introduction writing    | Research Context, Scholarly Discussion                | <input checked="" type="checkbox"/> |
| 19 <sup>th</sup> Sept. 2022 – 25 <sup>th</sup> Sept. 2022 | Introduction writing    | Gaps, Aim, Contributions, Chapter Overview            | <input checked="" type="checkbox"/> |
| 26 <sup>th</sup> Sept. 2022 – 2 <sup>nd</sup> Oct. 2022   | Exposé writing          | Theoretical Framing and Propositions                  | <input checked="" type="checkbox"/> |
| 3 <sup>rd</sup> Oct. 2022 – 9 <sup>th</sup> Oct. 2022     | Exposé writing          | Literature Review                                     | <input checked="" type="checkbox"/> |
| 10 <sup>th</sup> Oct. 2022 – 16 <sup>th</sup> Oct. 2022   | Exposé writing          | Methodology, Expected Contributions, Chapter Overview | <input checked="" type="checkbox"/> |
| 17 <sup>th</sup> Oct. 2022 – 23 <sup>rd</sup> Oct. 2022   | Interviews' Preparation | Structure and questions                               | <input type="checkbox"/>            |

|   |                         |  |                          |
|---|-------------------------|--|--------------------------|
| 24 <sup>th</sup> Oct. 2022 – 30 <sup>th</sup> Oct. 2022 | Interviews' Preparation | Search and contact the interviewees        | <input type="checkbox"/> |
| 31 <sup>st</sup> Oct. 2022 – 20 <sup>th</sup> Nov. 2022 | Interviews              | Conducting and transcribing interviews     | <input type="checkbox"/> |
| 21 <sup>st</sup> Nov. 2022 – 4 <sup>th</sup> Dec. 2022  | Data Analysis           | Coding with MAXQDA                         | <input type="checkbox"/> |
| 5 <sup>th</sup> Dec. 2022 – 11 <sup>th</sup> Dec. 2022  | Thesis writing          | Structuring of findings                    | <input type="checkbox"/> |
| 12 <sup>th</sup> Dec. 2022 – 18 <sup>th</sup> Dec. 2022 | Thesis writing          | Discussion of findings                     | <input type="checkbox"/> |
| 19 <sup>th</sup> Dec. 2022 – 25 <sup>th</sup> Dec. 2022 | Thesis writing          | Limitations and contributions, Conclusions | <input type="checkbox"/> |
| 26 <sup>th</sup> Dec. 2022 – 8 <sup>th</sup> Jan. 2023  | Thesis review           | -  | <input type="checkbox"/> |
| 13 <sup>th</sup> Jan. 2023                              | Thesis submission       | -  | <input type="checkbox"/> |
| 16 <sup>th</sup> Jan. 2023 – 22 <sup>nd</sup> Jan. 2023 | Thesis defense          | -  | <input type="checkbox"/> |

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