LUISS

Dipartimento
di Impresa e Management

Cattedra Research Methodology for Marketing

The green revolution: to be or not to be? The role of the FMCG's ecolabels on young consumer behaviours.

Prof.ssa Carmela Donato

RELATORE

Prof. Simone Mori

CORRELATORE

Luca Gambino

CANDIDATO

Anno Accademico 2020/2021

Summary

1. Topic relevance

In this research, the French and Italian Z-Generations' (Z-Gen) sociological phenomenon will be analysed. According to a study conducted by McKinsey (Francis, T., & Hoefel, F., 2020), Z-Generation includes people born between 1995 and 2010, who are influenced in their decisions to consume Fast Moving Consuming Goods' products by companies that use Eco-labels.

The topic that this research aims to investigate has a huge relevance for those economic and social actors who want to proactively approach the ethical production of goods. Moreover, the young consumers' behaviour that will be analysed, could deeply influence the Brand management decisions about the adoption of an ecolabel according to colour, perception, visual and conceptual structure.

1.1 The environment and the Z-Generation

From the European Council held in Paris in 1972 to the Treaty of Lisbon in 2009 (Laky, Z. 2019), the European Union did not pay attention to the issues related to pollution, climate change, and sustainable production and consumption.

The report "Attitudes of European Citizens towards the environment" (Directorate-General for Communication, 2020) has highlighted, from the first lines, that 94% of the respondents affirmed that protecting the environment is important to them personally, and 53% of them considers it very important. Moreover, it is reported that the respondents in Spain (90%), Italy (86%) and Cyprus, France, Bulgaria, and Greece (all 82%) are the most prone to consider the climate change as a very serious problem in their country.

However, all these actions seem not to be sufficient to contrast the changing in the environment. In response to this delay on taking a significant action by the politics, in the last years we have seen, for the first time in history, spontaneous movements protesting and remonstrating all over the world, asking the governments to fight the climate change.

The fact that has astonished the world press, the political classes and the public opinion was that this movement, called "School strike for climate", is mainly composed by school children, represented by Greta Thunberg, a student and environmental activist born in 2003. This protest, also known as "Fridays for the future", has significantly contributed to a radical change of view by the majority of the political class all over the world and has shown that the generation of digital natives has some characteristics that are completely different from the predecessors.

The above-mentioned McKinsey's study (Francis, T., & Hoefel, F., 2020) reports some relevant key points related to the Z-Gen's behavioural traits:

- Undefined ID: they do not define themselves through stereotype but in multiple ways which can be shaped over time (gender fluidity is an example);
- "Communaholic": they are strongly inclusive and do not distinguish between friends met in the real life and virtually. "They continually flow between communities that promote their causes by exploiting the high level of mobilization technology makes possible";
- Dialoguer: they strongly believe that the dialogue is the key to resolve conflicts;
- Realistic: they are very pragmatical on what they want, and this is due also to the fact that they are growing up in a situation of economic stress. This fact has generated a more realistic point of view about the world on them than on the previous generation.

As stated in the report from McKinsey, Z-Gen, also called I-Generation, has a particular way of thinking which is strongly affected by the even more digitalized world. All of these characteristics lead them to consider the consumption act in a different way, focusing their purchasing decision on goods that are linked to the self-expression of their identity - "58% of A-class and 43% of C-class consumers say they are willing to pay more for personalized offerings"- (Each class correspond to the consumers' household income. The A-class includes those consumers who have a family income above $6.631 and the C-class are those ones with an income between $516 to $1,540) and they are more prone to brand which are acting for those ethical causes they feel close to.

Based on this introduction, it is understandable that there is a close relationship between this generation and the events that happen around them. Therefore, their way to react to these events drastically shapes their beliefs, their purchase acts, and their consideration set.

From this reflection, the willingness is used to understand if these feelings may vary across different countries and how they change if compared to other generations.

In the next chapters, these aspects will be reviewed and tested by different analyses.

1.2 Ecolabels: the UE attempt to achieve a more conscious consumption

During the last 30 years, there has been a proliferation of quality certifications both in Europe and in the rest of the world. International and national organizations for quality standard -as the International Organization for Standardization (ISO)- emerged, and the markets recorded an increasing use of eco-labels either on products or on packages.

As stated in the Global Ecolabelling Network's website (Global Ecolabelling Network, 2020), the environment friendly labels are marks voluntary applied on products that have received an eco-performance certification by a third part. They attest if the products are preferable within a market category in terms of impact on the nature.

In 1992, the Council of the European Union has established the "EU Ecolabel" with the Council Regulation (EEC) N 880/92 (The Council of the European Communities, 1992). This label is assigned to all products and services meeting the European standards for low impact during the entire goods' lifecycle.

The intention of the European Council, regarding the creation of a European environment mark, was to encourage a more conscious consumption among the European citizens and to push companies towards a greener implementation of products' production.

Until 2018, EU Ecolabel has been certified to 70.000 products (Global Ecolabelling Network, 2020) belonging to the following goods' categories:

- Cleaning up products
- Clothing and textile goods;
- Coverings;
- Indoor and Outdoor paints and varnishes;
- Electronic equipment;
- Furniture;
- Growing media, soil improvers and mulch;
- Lubricants;
- Bed mattresses;
- Paper products;
- Personal care products.

The Eurobarometer n.468 (Directorate-General for Communication, 2017) reports in its charts that the EU ecolabel, through the usage of an aided recall, is more recognised and bought than the national ecolabels, such as "The blue angel" in Germany or the "NF Environnement" in France.

Although these reported facts could let someone imagine that the European mark is a great success, there are relevant issues on its usage and on its functionality.

First, as also reported in the report mentioned above, the 44% of the analysed sample, including 27.881 respondents, declared that they had not seen or heard about an eco-label. This could mean that a huge percentage of European people either do not know what an ecolabel is, or they are not aware of its existence.

Secondly, there are several works accusing the ecolabels of an information asymmetry between the mark and the final consumer, thus causing a dramatical reduction of the recognized trustworthiness by the clients to the labels. If the customers do not know why this product can generate long-terms benefits on the environment, they may be induced not to purchase those goods (Testa F. et all., 2013). These effects can be attributed either to a lack of an easy explanation of the benefits generated by the products, or by misleading claims made by companies, regarding the eco performances of their products. (Kärnä, J. et all ., 2001)

Nevertheless, the ecolabels are one of the most important communication tools of the products' greener features (Rex, E., Baumann, H., 2007). And the clients' knowledge of eco-friendly marks has a positive impact on their environmental attitudes and pro-environmental consumer behaviour. (Taufique, K. M. R., 2016)

Thus, it is important to facilitate the relation between the consumers and the ecolabel to generate an increase of the sustainable consumption market and more conspicuous investments by the social and private actors on being more eco-friendly.

1.3 The Fast-Moving Consumer Goods' market: general overview, main market players and their commitment toward the environment

This chapter is meant to determine the scope of the research, which will focus on ecolabels, the graphic elements put on packages of the so-called Fast-Moving Consumer Goods' products. The definition of the market, the main players, and the green commitments made by these companies, are the main points of this section.

1.3.1 Definition and features

The Fast-Moving Consumer Goods (FMCG) as stated by Kenton "*(…) have a short shelf life because of high consumer demand (…) or because they are perishable."* (Kenton, W., 2021). Indeed, these products follow four main features conveying their short-term belonginess to the shopfloor:

- Used at least once a month;
- Used directly by the end customer;
- Not sustainable;
- Sold as a package.

The frequency of usage is an essential characteristic bringing the "Fast" as the first keyword of the sector denomination. The demand of the end customer, consuming the good at the end of the chain, determines the increasing offer, the lowest prices, and the high competition residing in the market.

The Fast-Moving Consumer Goods' market has a huge relevance with an increasing challenge between the competitors that are continuously searching for competitive advantages. This market is composed by an impressive number of companies – big or small – who sell an enormous quantity of goods with relative low prices and low manufacturing costs associated. These products could be food or non-food and they are distinguished in various categories, such as Packaged food, Beverages, Personal Care, Frozen food, Home care, Alcoholic Drinks and so on.

Thanks to this high level of concurrency among the firms and the constant evolution of the marketing strategies, the companies' executive chiefs are looking for a long-run sustainable strategy following the five sustainable marketing principles (Kotler, P., & Armstrong, G., 2011):

- "Consumer-oriented marketing: the company should view and organize its marketing activities from the consumer's point of view";

- "Customer-value marketing: the company should put most of its resources into customer-value-building marketing investments".
- "Innovative marketing: the company should continuously seek real product and marketing improvements".
- "Sense-of-mission marketing: the company should define its mission in broad social terms rather than narrow product terms".
- "Societal marketing, a company should take marketing decisions by considering consumers' wants, the company's requirements, consumers' long-run interests, and society's long-run interests"

According to Kotler and Armstrong, there is a societal classification of products that put in relation the capability to give an immediate satisfaction to the consumers and also to furnish them with a benefit in the long run – as we can see in the table.

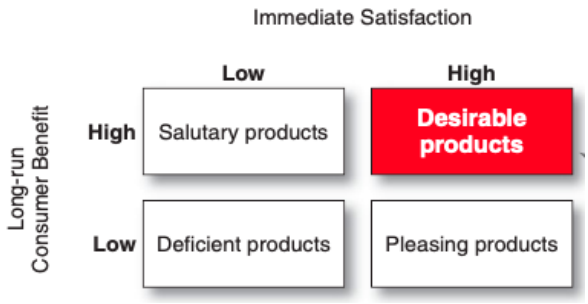


Figure 1: "Long-run Consumer Benefit vs. Immediate Satisfaction" (Kotler, P.; Armstrong, G., 2020)

The company goal is to have a desirable product that can accomplish two important functions at the same time: it has to furnish a high instantaneous gratification and its usage has to be perceived as a long-time benefit.

According to the paper written by Tormala and Rucker in 2015 (Tormala, Z. L., & Rucker, D., 2015), the brand managers and the marketing directors should use the certainty principles at the strategic level "as a managerial tool in interpersonal or team settings and strategically". The principles are:

- Consensus: other people agree with your ideals;
- Repetition: they communicate their point of view several times;
- Ease: the feasibility on which you remind an idea;
- Defence: fight for your thoughts.

If the companies adopt this approach, they can create a match between the consumer beliefs and the product characteristics, thus obtaining, in accordance with the previous mentioned

work, clients who are "more likely to buy, buy sooner, and spend more; more willing to recommend products; and more apt to resist challenges to their beliefs"

However, the swift timeline, the high demand, these are also important contributors to the intrinsic low sustainability of the product resulting from the fast and cheap production. Finally, the impact on the environment is exacerbated by the packaging, which is detrimental from the very production until the end of its life cycle. Of course, this is the case for most of the products manufactured so far, as in the past few years, thanks to the sensitivity of the newest generations, as well the attention to the environment has been evolving in the direction of a more attentive production. Ecolabels are a major indicator of this progress.

The main players of the FMCG setting are at the same time among the founders of this market: P&G, Unilever, and Nestlé. In the following paragraphs the history of these three crucial actors and their efforts toward sustainability will be examined, with the aim of outlining the current benchmark that FMCG companies follow.

1.3.2 P&G

It was born in 1837 in Cincinnati, USA, from a partnership between a candle maker and a soap manufacturer. At the turn of the century the company already had about thirty different soaps in its portfolio (candles were overtaken by electricity). In successive stages, P&G first becomes a joint-stock company in 1920, and then introduces the method of market research even before the telephone contact was possible. It is obvious that data collection is primary in the development of new products, and that the response to the needs of the consumer must keep him/her at the centre of any decision. The company flourished during World War II, and its success benefited from the development of the railroad for distribution, and the improvement of the postal service for the introduction of advertising in women's magazines. The international expansion is the ultimate stage that consecrates the fame of the company that is present in 23 countries in 1980. In twenty years, internationalization reaches 70 countries, thanks mainly to the acquisition of numerous companies such as Max Factor. P&G reveals itself as the typical FMCG company, which first develops a range of products, following the hard-won market data; which creates a recognizable brand in magazines and in advertising as a whole; which finally internationalizes and above all buys other companies, which is the strategy that allows several companies to succeed in the strong global competition.

"Ambition 2030" indicates both the deadline and the efforts the company is making. Established in 2018, the actions constituting the plan are divided into main interest areas: brands, supply chain, society, and employees. Brands are not only to reduce the use of virgin

plastic by 50% but also to inspire a responsible consumption through a thorough communication and sustainable packaging. Supply chain in terms of energy consumption, to be fully purchased as renewable by 2030, enhance forests and increase water efficiency. Society, as in supporting local communities and restoring critical ecosystems. Finally, the education, integration, and recognition of employees, inspired and enabled to build sustainable practices. (Procter & Gamble, 2020)

1.3.2 Unilever

The company brings forward a strong heritage as well, starting off with the farming family Jurgens, selling butter in the 1860s. The expansion to other markets is also an important step of the establishment of the early FMCG, as the business starts to sell out of the Dutch border in the United Kingdom. It is only in the 1930s that the corporation Unilever takes the shape and the name we know today. The merge being among the Margarine Unie, a conglomerate of the family Jurgens, Van den Bergh, Jbusinesses, Centra and Schicht, that strived through the First World War but suffered from the Great Depression, and Lever Brothers, a UK based soap producer that started its business in 1884 and was already internationalized to South Africa, Canada, Australia and the United States by 1906. As Unilever is officially born the 1st of January 1930, this is also the year that P&G penetrates the UK market, starting the on-going rivalry still visible today. During the Second World War, it is capable of developing a structure that allows for local independence in cut-off territories such as Germany and Japan. The booming post-war economy sees the rise of African and Asian market, with seized opportunities and the beginning of mass-consumption, following Europe's trend. Product innovation and smart acquisitions are the strategies that lead Unilever to be the 26th largest business in the world by the 1980s. The phenomenal expansion of the company leads to a big restructuring in the 90s, where four businesses emerge as the core: Home Care, Personal Care, Foods and Speciality Chemicals. From the 2000s on, the focus will not only be on these primary categories, but also on the environmental-friendly commitment that in 2010 takes the shape of "Unilever Sustainable Living Plan". The three main goals of the program are as follows: by 2020 helping more than 1 billion people to improve health and well-being; by the same year to enhance the livelihood of millions; by 2030 to half the environmental impact of the products. Many other targets are currently source of commitment, such as reaching the net zero emissions by 2039, having a deforestation-free supply chain for most of the raw materials by 2023. (Unilever, 2021).

1.3.2 Nestlé

The company known as Nestlé takes off with an innovative product in 1867, the "farine lactée", a powdered milk to help new-borns' nutrition in the early stages of life. Selling chocolate in 1870s and merging with the competitor Anglo-Swiss in the early 1900s allows the business to grow rapidly and to internationalize the sales network in Africa, Asia, Latin America, and Australia. During the First World War, Nestlé faces both the high demand created from the British Army supply and a milk shortage that will push it to sign supply agreements in US and Australia. Furnishing both armed forces and civilian will help the company out of the depression in the Second World War. The well-known product Nescafé is launched just before the war, and will find its success throughout the entire period, together with Nestea and Maggi that will be launched at the end of hostilities, post-war. The economic boom of the 50s will contribute to the expansion of the company, that eventually restructures to follow the paradigm of "Nutrition, Health and Wellness" from the 80s, laying off unprofitable brands to the profit of more conscious brands. In particular, a number of joint ventures enable the company to carry out a more responsible image such as the one with L'Oréal, Galderma, specialized in dermatology, or Cereal Partners Worldwide, with General Mills or again Beverage Partners Worldwide, with The Coca-Cola Company. On a sustainable level, Nestlé reinforces the consciousness of both the company and the consumer by determining three main goals for 2030: helping 50 million children to live a healthier life, improve 30 million livelihoods of communities connected to the business, reach a zero environmental impact in all operations.

1.4 General discussion

As it was possible to understand from the previous paragraphs, the environment is a crucial external contingency which is having a huge impact on all the actors involved in the consumption act.

In fact, in the first paragraph the main features of the Z-generation and their preoccupation for what is happening to the planet were described. Their proactive approach toward the main issues that are impacting the world and their beliefs are crucial points affecting their outputs as consumer, such as their willingness to pay, their perceived attributes and their perceived quality of the products.

Thus, for the business and the social actors it is important understand how to interact with the new consumers through the daily life product, as the FMCG's ones, in order to match their willing to consume sustainable products and, at the same time, taking into consideration how this willing may change across generations and nationalities.

Furthermore, in the second paragraph it was explained what the ecolabels are and how they are applied on the products. Specifically, thanks to the introduction that was done it is possible to capture the main barriers on trust related to these labels. The low degree of knowledge about these environmental-friendly marks and the low communication campaigns on how they work and what they are guaranteeing are the main factors that compose the informative asymmetry between the suppliers and the consumers.

So, the understanding of how to stimulate the consciousness and the consumption act is crucial, because through the increase of consumption it is possible to generate a sustainable lifestyle and an increase of expenditure by all the social, private and institutional actors on these themes.

Lastly, in the third paragraph it was possible to understand what is the FMCG's market, which are the three main top players, and which are their sustainable ambitions. It is quite clear how sustainable aspirations are quite close, particularly comparing the Unilever and Nestlé ones. On a business point of view, the three major companies relate and compete on a higher level. In 2019, P&G net sales worldwide accounted for 67.7 billion US$, Unilever for 58.21 billion US$, Nestlé for 92.5 billion CHF (equal to 102.8 billion US$).

Therefore, the sustainable supply of goods is not only a relevant advantage to gain in order to win the competition, but it is also a way to reduce their footprint on the planet, maintaining the profit margin generated by the products they sell.

2 Literature review

2.1 Z-Generation: cross-cultural factors and FMCG products' WTB

The before mentioned I-Gen has a peculiar understanding of the world and a peculiar interpretation of the relationships within their social environment and among the communities.

Indeed, on this generation the impact of the modern technologies, especially Internet with the development of social medias, has drastically influenced their way to interact within the world, as they are born in an age when everybody can access all the available information.

Thus, this event, continuously changing and developing, is generating some relevant key features of the digital natives as consumers and, at the same time, is giving to the companies the opportunity to have a deeper understanding of their needs and to expose them to focused advertisements (Budac, A., 2015).

But how do consumers interact with a green product? Which are the factors that can influence their purchase intention? And how can the cross-cultural differences modify their willingness?

A recent research made in Indonesia (Dalimunte, I. et all, 2019) has studied the statistically significant differences - through the utilization of the Structural Equation Modelling (SEM)- in using digital wallets for online or offline store transactions by Z-Gen clients. What they found, is that performance expectancy (0.38), habits (0.49) and price value (0.38) were the factors with a more positive relationship with the behavioural intention. So, the habit is the most relevant features affecting their usage of a digital wallet for their purchasing intention in an E-commerce. The main result of this Indonesian study is that the analysed sample does not have any friction related to the e-commerce usage. This affirmation could be explained by the fact that the Z-Gen, as made by digital natives, has a high confidence on this type of transactions in online stores.

A research on online shops' customer satisfaction in terms of sustainable development has highlighted that the features associated with the sustainable concept are noticed by the respondents and are considered a must-have. The sustainable development refers to the three pillars of the *Triple Bottom Line* Concept (Ingaldi, M., & Ulewicz, R.,2019) which are:

- A limited impact on the environment, but the need to do business in order to maintain clients' quality of life;
- A society that pursues an equality among the people differences, like gender, race, religion and so on;

- An economic longevity in order to obtain an income from the business.

Furthermore, another research focused on the greener e-shops sustainability, has pointed out that the customers with a huge range of product choice are being pickier on their consumption decision. Specifically, the environmental sensitive ones check the product labels and consider if the goods are obtained by recycled stuffs. (Arora, S., 2019).

In particular, a research done by Global Web Index (Young, K.,2019) has stated that the 58% of the Z-Gen respondents would pay more for an eco-friendly product and that "62% of eco-conscious consumers in the UK and U.S. believe eco-friendly products are better for their health".

Finally, from Budac's work (Budac, A., 2015) it emerges that the youngest generation is constantly connected, and they communicate through social networks with other young people with different cultures from all over the world, but this does not influence their buying process.

Even though this age group is more dynamic and related to their brand selection, and this is due to the company's ethical choices that they must consider, their response to advertisements and brand communications changes in relation with their cultural origin.

The aim of this study is also to consider the cross-cultural differences on the consumer willingness to buy eco-labelled product as a variable.

For example, the before mentioned study measured the behavioral intention to buy green products (Mufidah, I., 2018), comparing the Taiwanese and the Indonesian consumers. They found that the Indonesian people are more likely to buy eco-labelled product. According to this study, the reason behind this intention is related to the fact that, in contrast to Taiwan and its developed economy, the Indonesian country is in a developing economy context. So, people are more interested and intrigued to "go green".

However, this consideration can be affected by underestimation of all the other cultural dimensions that can influence the psychological context in which the consumers grow and live day-by-day.

To support this personal consideration, the huge work made by Geert Hofstede can be quoted. He was one of the most important researchers in the cultural organization's fields. He has stated 6 dimensions of national culture, which are (Hofstede, G., & Hofstede, G. J., 2004):

- Individualism – Collectivism, which represents the relationship among people. In an individualistic culture, people care exclusively for themselves and their strictly

families. On the other hand, in a collectivist society, people are interpreted as members of a whole group looking after each other;

- Uncertainty avoidance, which is the people's need for a high degree of certainty, because they feel vulnerable in ambiguous situations;
- Power distance, that is a measure of power inequality and the acceptance level of this inequality by the less powerful social classes;
- Masculinity – Femininity, which measures the differences between the emotional gender roles. In a masculine environment they are well distinct and defined;
- The long-term orientation, concerning how people think about the future. In a long-term culture, people work to be prepared to what will happen, whereas in a short-term one, the vision is related to the actual state surrounding them;
- Indulgence, that it is defined as the perceived degree of freedom to do what they want.

Observing the data reported on the bar chart below (Hofstede Insight, 2020), it emerges that there are some significant differences between the two countries in the masculinity dimension, and in the indulgence one, and, lastly, on power distance.

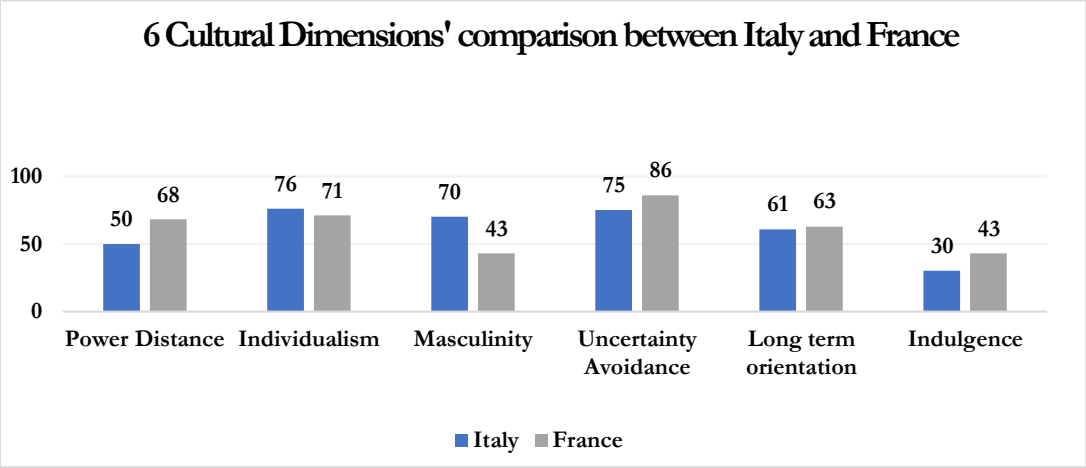


Figure 2: Personal reworking of "6 Cultural Dimensions" Comparison between Italy and France (Hofstede Insight, 2020)

The cultural dimensions model "has been simultaneously enthusiastically praised and acidly criticized"(Soares, A. M., 2007), because, although it could be "the beginnings of the foundation that could help scientific theory building in cross-cultural research", the work made by Hofstede for the firsts four dimensions took six years. So, the opinion that the results obtained by Hofstede might be outdated, was advanced (Soares, A. M., 2007).

On the other hand, the cultural changes are believed to happen slowly (Sivakumar and Nakata, 2001) and, in order to invalidate a country index score, a basic cultural change shouldn't be perceptible for a long time (Hofstede, 2001).

During the years, several critics related to the Cultural dimensions were raised, as the applicability of the five dimensions' work to all the cultures, highlighting that various samples might produce diverse results. (Schwartz, 1994; Erez and Earley, 1993)

However, Hofstede explained that what was tracked were gaps between counties' cultures and "the need for matching samples derives from the difficulty of obtaining representative national samples" and that what was measured were differences between national cultures and "any set of functionally equivalent samples from national populations can supply" (Hofstede, 2001; Soares, A. M., 2007).

A practical example of application of all the Hofstede's Cultural Dimensions is given by a study published on the Ecological Economics journal (Liobikienė, G., 2016). This study explains that not all the dimensions impact the green purchase directly, but they directly influence those behaviours which are strictly connected with the acquisition act, in accordance with the theory of planned behaviour. However, this study also affirms it should be considered that, across time, the cultural values can shift, and a series of economic crisis, cultural convergences, and also the global pandemic recently due to coronavirus, could have changed the Hofstede's dimensions.

A study on the ethical consumption of green products conducted across Finland, Germany, Portugal, and the United Kingdom, found that the cultural collectivism has a statistically significant relationship with the values related to the green consumption (Halder, P., 2020).

However, this result is not true in all the cases analysed worldwide. For example, a study conducted in Pakistan showed how the collectivism has not a significant influence on the purchase intention of environmental-friendly products (Ansari, M. Y., & Siddiqui, D. A. (2019).

The study also affirms the important role played by the 5 cultural dimension of Hofstede on the customer preferences for green products, and also that these dimensions should be considered in developing the products by the marketeers. In addition, this study also highlights the crucial function covered by the environmental knowledge on green purchase behaviour. (Ansari, M. Y., & Siddiqui, D. A. (2019).

An interesting cross-cultural study on the role played by the eco-label Country of Origin (COO) label, a nutrition claims of new aquaculture products, shows how the presence of eco-label is fundamental for this type of product across France, Germany, Italy, Spain and United Kingdom, because it is a signal for the customers that the products derive from a reliable source in all the countries considered (Banovic, M., et all.2019)

Another study focused on Americans, Brazilian and Japanese consumers' decision making has demonstrated how these dimensions effectively influence relevant factors of the decision-making process, summarised in the Consumer Style Index (Sprotles, G. B., & Kendal, E. L., 1986), as the quality consciousness, or the confusion over choice.

Lastly, there is a study that has validated a model of evaluation of the cross-cultural 6-dimension analysis in connection with the pro-environmental behaviours (Mi, L., et all., 2020). Thanks to this study, there was a significant expansion of the Hofstede's dimensions as it has defined a new way to evaluate cultural differences among individuals.

Taking into account that the cultural dimension can switch during the time, and that the economic crisis can have influenced and modified the green purchase behaviours (Liobikienė, G. et all., 2016), the study propose to analyse the following hypotheses:

H1a: *"The Consumer Country of Origin is correlated with the ecolabel knowledge."*

H1b: "When the consumer is French (vs. when the consumer is Italian), the ecolabel aesthetical appeal will be higher than in the other case."

The reason why the French consumers' ecolabel appeal is hypothesised to be higher than the Italian one is due to the fact that the transalpine individualism index is lower than the Italian one and also because the French long term orientation index is slightly higher than the Italian one. Thus, it is conceivable that the French have a better knowledge of the ecolabels and, consequently, a better relationship with them. In its previously quoted study, Liobikienė (2016) explains that the cultural factors do not directly impact the purchase act, but they influence the behaviours linked with the acquisition of green products, as explained also by the theory of planned behaviour.

2.2 Ecolabel's choice in consumer purchase actions

2.2.1 Consumer choice evolution study

Across years, the social scientists have tried to study which are the reasons lying behind human actions and their decision-making process.

In the third chapter of his book *The last Mile: Creating Social and Economic Value from Behavioural Insights* (Soman, D., 2017), Dilip Soman showed the evolution of the consumer choice's studies.

The first studies on the consumer choice were born thanks to the economic studies done by several economists, starting with the book *Theory of Games and Economic behaviour* written by Neumann and Morgenstern. (Neumann, J. V., & Morgenstern, O., 2020).

The book states two significant theorems related to the consumer choice, the Games Theory and the Utility maximization.

The first one was created to understand which the reasoning is to drive a strategic decision making. The measurement of the Utility through the usage of the mathematical theorem was postulated to assess the "rational" behaviour of consumer decision making based on utility maximization, like an optimization problem between various resources.

The Utility of an object or outcome, as explained by Soman in the previous cited book, "refers to its usefulness, its ability to satisfy a particular need". (Soman, D., 2017)

The economic approach states that the consumers can assess the utility generated by different products, and calculate the expected utility generated by an option.

Subsequently, the theory assumed that consumers could choose the option generating the maximum level of expected utility among an heterogenous range of product options. Moreover, the Neumann and Morgenstern's book posits three axioms that should be fulfilled by the behaviours in order to be consistent with the theorem. They are:

- The *completeness axiom*, which implies that a customer must have a definite scale of preference or indifference among all the options. So, there can't be a case in which the consumer doesn't know what he/she wants.
- The *transitivity axiom,* which states that if a subject prefers the option A to the B one, and he/she also prefers the option B to the C one, he/she should prefer the option A to the C one.
- The *substitution axiom*, which posits that if a consumer is indifferent between x and y, he/she should also be indifferent between two bets offering the two options with an equivalent probability. The corollary of this axiom is the *cancellation principle*, which

postulates that a removal of an equal amount from two options should not change the subject's preferences for both.

These axioms were violated several times by various scientists, and the expected utility model was modified and revised during the years, in order to have a more consistent and coherent explanation of the consumer behaviours.

One of these violations was demonstrated by Maurice Allais with the homonymous paradox (Allais, M., 1953), that showed the inconsistency of consumer behaviours in relation to the substitution axiom.

In fact, Allais proved that between the two options shown in the first experiment in the table below, the consumers choose the A1 gamble. According to the substitution axiom, the subjects should have preferred also the A2 gamble over the B2 one in the second experiment. However, thanks to Allais's work, it's demonstrated that consumer will prefer B2 option thus violating the axiom previously described.

Experiment 1				**Experiment 2**			
Gamble A1		**Gamble B1**		**Gamble A2**		**Gamble B2**	
Winnings	Chance	Winnings	Chance	Winnings	Chance	Winnings	Chance
\$1 million	100%	\$1 million	89%	Nothing	89%	Nothing	90%
		Nothing	1%	\$1 million	11%	\$5 million	10%
		\$5 million	10%				

Table 1 Personal reworking of Allais Experiments (Allais, M., 1953)

The first wave of studies in response to the utilitarian approach, is represented by the cognitive approach. This interpretation of the consumer decision-making process is summarized in a series of information-processing operations.

This theory – acknowledgeable to the work made by Professors Bettman, Payne and Johnson – refers to the so-called contingent decision making, or adaptive decision making and identifies two reasons that lead the consumers to make a choice: the accuracy and the effort. (Payne, J. W., Bettman, J. R., & Johnson, E. J.,1993)

Moreover, they discovered that the degree of effort implemented by the consumers on the choice action, varies in accordance with the accuracy implemented on the decision action.

The required degree of accuracy used in a decision-making process depends on a wide range of factors, as price, involvement, and context.

It is also true that the people do not need to make only an explicit choice, but they also must decide which process tactic they want to use.

Sometimes, the decision-making strategies can be used intuitively, based on previous experiences or practices.

Several decisional strategies exist, based on the amount of Elementary Information Process units, also called EIP, used during the cognitive process on a cognitive comparison.

These tactics were developed to explain how the subjects can evaluate and compare different alternatives according to a range of attributes, assigning a numerical value to each attribute, assuming that they have the ability to do it.

The first strategy implemented on the choice process is called Weighted Additive Decision rule (WADD). It leads to assign a different weight to each attribute and to calculate an overall score for each option. This score is the result obtained by summing up the mark allocated to each feature, multiplied by the associated weight. This process is the most effortful in terms of EIPs, as it requires additions, multiplications, and comparisons among the proposed alternatives.

The secondo tactic, called the Equal Weight rule (EQW), is represented by a simple addition of the different scores assigned to each attribute of a singular product, followed by the selection of that one with the highest grade. Compared to the WADD, the EQW approach is easier, as it does not provide the usage of weights, but it is simply made by additions and comparisons.

The third decision-making process is called Satisfaction (SAT) and states the possibility to choose the alternative which overcomes a determinate minimum score required by the subject in terms of aspirational level for each attribute. This process just requires a comparison among the various products or services.

The fourth decisional process is the Eliminating by Aspects (EBA) meaning that consumers evaluate the alternatives on the basis of the most important attribute, deleting those options which do not reach the minimum level, and go ahead with the next feature until when there will be just one product. This process requires only several comparisons on attribute base.

Lastly, we have the Lexicography strategy (LEX) which requires both the choice of the most important attribute and the selection of the option with the highest score on that feature. This tactic is that one which requires the minimum amount of EIPs, as it requires only two comparisons: the first among the attributes, to decide which is the most important one, and the second among the options.

The contingent decision-making process introduced by the cognitive approach, explains also the role played by the bounded rationality, and the use of decision shortcuts.

In the bounded rationality world, as first introduced by Herbert Simon (Simon, H. A., 1955), the subjects still want to optimize their choices under decreased available resources and streamlining decision shortcuts that are useful when the consumers under adverse cognitive capacity conditions (Hogarth, R. M., 1981).

The second wave of studies contrasting the utilitarian approach, is represented by the social psychological one. As suggested by its name, this approach seeks "to understand and explain how the thought, the feeling and the behaviours of individuals are influenced by the actual, imagined or implied presence of other human beings" (Allport, G. W., 1985).

The social psychology science has found evidence that the subjective choices are affected by the decisions made by other members in a group. During his studies, Asch discovered that there is high level of social conformity, and this means that people prefer to follow the decision made by the majority of the people in a group, even if the group choice is evidently wrong (Asch, S. E.,1955).

There are two different types of social conformity in decision-making. The first effect is due to the people desire to conform themselves with the reference group, which is an inspirational model that the people want to emulate.

The second influence is caused by additional information and knowledge given by the other participants, which create a conformity effect on the individual choices.

Professor Itamar Simonson has proven that the consumers choice options are supported by a logical reasoning, instead of seeking for that option which can maximize the utility (Simonson, I., 1989).

A second line of social psychology studies on group choice, focused on the influence of a person's decision on other people. When the consumers are in a group, they need to achieve an equilibrium between two goals: the first objective is to obtain the maximum well-being; and the second purpose is composed by a set of different goals that are due to the presence of a group, such as group uniformity, self-representation and more (Ariely, D., & Levav, J., 2000).

2.2.2 Consumer choice of green products

Consumers have different opinions and interpretation of what is happening to the environment and, at the same time, towards this argument they have also different sensibilities that are strictly correlated to the green consumption.

A research, focused on the green consumer behaviour during the purchasing act, illustrates a circular movement of individual green consumer's purchase (Young, W., et all., 2009).

The first part of this concept is represented by the consumers' green values, because they work as a motivation to prosecute with the green consumption. This element is influenced by the consumers' awareness of the main problems that are affecting the environment and by the previous purchase experiences.

The second factor is the selection of a green criteria for the single purchase. Usually there are few criteria that can be primary or secondary standards, as searching online or asking to friends, relatives and so on.

During this evaluation process, the primary source of information is fixed while the secondary one changes in function of barriers as the lack of time, the price, the lack of available information on the environmental and social performance of a product, the effort in researching for the product, and the non-green criteria.

On the other hand, there are also items which facilitate the consumers' eco-friendly criteria during the buying process, like trusting in some information sources (i.e., labels or organizations providing shortcuts to choose a greener product), availability of green products, and feeling guilty.

The purchase act is at the end of this circular system, and it is influenced by both a different mix of facilitators and barriers each time, and the feedback, which will influence the next purchase.

Looking at the work made on consumers' behaviour intention in using green ecolabel products (Mufidah, I., 2018), there are evidence highlighting the importance of the personal attitude is the strongest factor that affects the behavioural intent to buy an ecolabel product. However, this study, that used a developed version of the Planned Behaviour Model, demonstrates also that the subjective norms, made by all the social pressures that should motivate the people to buy an eco-friendly product, have the weakest effect on the consumers' behavioural intention.

In relation to the important role played by the personal attitude towards the green consumption, in 2004, a research focused on the eco-labels under the consumer point of view proposed the *"Two-dimensional model of the cognitive perspective of environmental products"* (D'Souza, C., 2004). This model represents the benefit/risk perception of a green product by a consumer on the y-axis, and the cognitive (or not) perspective on the x-axis. From this model, four different consumer profiles emerge, with different features and behaviours.

The four consumer profiles represented by the Two-dimensional model are:

- The *"conventional consumers"* are those who ignore the potential benefits that an environmental-friendly product can have. They perceive this kind of products as well risky as the others they buy during their shopping journey.
- The "*emerging green consumers"* are aware of the potential pros of buying green products, but they do not apply any information search related to the environmental signals on products during their purchase action. These consumers might not have any motivation to buy eco-products, because they believe that all the brands will do something for the nature.
- The *"environmentally green consumers"* are worried about the environment, as the emerging one, and they buy green products whenever they have the opportunity to do it. They check through the label information with the aim to find an *"environmental justification"* for the product they are going to buy.
- The *"price sensitive consumers"* are buyers who know what the eco-labels are and may appreciate them, anyway they may not be willing to pay more for eco-friendly products.

A study conducted in Malaysia explains that the perceived critical mass is considered determining for the consumers' confidence towards eco-labelled products. Based on this result, the research proposes to create eco-labelled membership programmes or consumers' club in order to create a higher perceived critical mass (Choshaly, S.H. & Tih, S., 2017).

In 2008, a research on the buyer preferences for green packaging has demonstrated that general consumer groups' attitudes toward an environment-friendly packages are equally positive among them (Rokka, J., & Uusitalo, L., 2008), but it stated that "companies can benefit from helping consumer concretely, for example, by offering new environmental product alternatives, green packages and labels". Related to this last example, an Italian study (Testa, F. et al., 2013) focused on the effectiveness of the eco-labels as marketing tools, has discovered that the trust that the consumer assigns to both the EU ecolabel and the FSC (Forest Stewardship Council) ecolabel is strong enough to decrease the role of the brand on their purchasing intention, because the consumer trusts on third-party certification generating a kind of fidelity. So, these findings could be very important for those markets where there is a high degree of competitiveness.

Which is the influence that the eco-labels have on consumers' willingness to buy products? Is it different from the effect that was previously described?

In the next paragraph, the review of the literature aims to figure out which are the effects of ecolabels on consumers' choice, and which could be the aspects that can switch the consumers' decision-making process toward a more sustainable choice.

2.2.3 The ecolabel's effects on consumers' product selection

Since 1960, various actors started to increase their consciousness about the human footprint on the planet and habitats worldwide, also due to the increasing temperatures, the desertification of large areas, the extinction of several animal species, and so on.

There were various approaches to face the issue, such as taxes, green regulations on externalities produced by companies and other regulatory-based approaches. One of the most used and well-known way to regulate this fight against the climate change is represented by the environmental-friendly labels, as the EU Ecolabel or the Forest Stewardship Council label, also known as FSC. In the green literature, it is often possible to observe how the consumers generally have mental prejudice in relation to the use of an ecolabel on a product, because it is common to think that these labels are just a merely tool of marketing instead of the representation of a true green philosophy adopted by a company willing to reduce its impact on the planet. About this aspect, there is a research focused to discover if there is any correlation between the subjective and objective green indicators. The study is focused on Spanish firms which have an ecolabel, and the result is that there is a strong correlation between the two groups of indicators. Thus, the study concludes that it is possible to think of them not only as a marketing tool, but they possibly reflect a new emerging environmental-friendly philosophy. (Chamorro, A., Bañegil, T. M., 2006).

Do consumers have a reason to be suspicious? In order to answer to this relevant question, it is useful to understand which is the role of an ecolabel, which are the different types of labels, and which are the potential effects that they have both on the demand and the supply of eco-labelled products.

First of all, the role played by a generical green label is to communicate to the consumers about the impact of production, consumption and waste disposal phases of the consumed good (Galarraga Gallastegui, I., 2002). The two main goals that these labels want to achieve are:

1. To provide additional information about the effect of their consumption toward the environment, stimulating a switch to more green-friendly products;
2. To leverage on this consumers' change of habits in order to boost the environmental standards operated by companies, governments, and other agents.

According to the Organization for Economic Co-operation and Development, also called OECD (1997), there are three main categories of label that can be identified:

1. The first type of label has its focus on the sustainable quality of a product/service compared to others, with the aim to stimulate a change toward a green consumption. Usually, these labels belong to third-party certification programmes with a government support, and their goal is to certify both products/services and the production processes in relation to different standards. These are linked with the entire life cycle of the product/service. The adoption of these labels is on a voluntary base.
2. The second category of labels is represented by the one-sided green claim used by manufacturers or large retailer organizations, and they refer to a single attribute of a product, such as the reduced quantity of virgin plastic.
3. The third kind of labels communicate quantified information linked to the product, based on third-party control.

This variegated scenario allows to understand that there is such a large variety of labels on the market that can have both positive and negative outputs, because:

- On one hand there is a clear signal of increasing competition among companies, agents, regulatory agencies and other actors to provide and to adopt the most competitive label;
- On the other hand, the increasing number of environmental-friendly labels is generating a lack of information and trust both on these labels and on the product on which they are used on.

Indeed, a research focused on both the eco-label credibility and the role played by the retailers on the green product purchasing, illustrates that there is a higher consumers' willing to buy green products than the normal ones in all the retailers considered, as in shopping malls, supermarkets and online retailers (Cai, Z., et all. 2017).

From those findings, it also emerges that a detailed green information enhances the eco-label credibility. This fact means that the selection of a well-known and reliable eco-friendly label can also improve the market share for the green products (Cai, Z., et all. 2017).

Moreover, another study conducted on the Chinese e-commerce market (Wang, Y., 2019) discovered that a third-party green certificate can reduce information asymmetry between the e-retailers and the consumers. In fact, according to this study, the credibility of eco-friendly products on e-commerce has a huge relevance on consumers' decisions. The study represents three factors that compose the green product credibility and the most relevant is

the green certification label, with a weighted coefficient of 0.427. In addition, there are also the previous pleasant shopping experiences and the credibility of brand, whose weighting coefficients are 0.314 and 0.283, respectively.

Thanks to the previously cited work, it is possible to conclude that when the ecolabels reassure the consumers, they usually do it thanks to their origin (third party one or internal one), their prestigiousness and their reliability.

A study published by the *Journal of Advertising* in 2014 (Atkinson, L., Rosenthal, S.,2014). showed that the source of the label is relevant only as an eco-label trustworthiness predictor, where the government labels reach a greater trust than the corporate one. The outcome changes depending on the level of involvement that the consumers have with the product they are purchasing. In fact, according to the study the eco-label source has a greater impact in the lower involvement situation than in the higher one. Specifically, when the consumers consider the trust on a low involvement product -in this study they considered the milk as a variable- the government eco-label has a greater effect than the company one; on the other hand, in terms of attitude towards the product, the low involvement consumers find the corporate eco-label more fascinating. So, the study concludes that when the consumers are looking for a reliable and trustworthy eco-label, they prefer the government one, because they perceive it as more controlled. However, for them it is more likely to be attracted by a company environmental label.

The ecolabeling organizations ought to increase the consumer trust in the eco-labelled products because it will be beneficial for all the actors involved in the economic relation.

Unfortunately, this relation is also influenced by other external factors that can influence the consumers' decision making, such as the information that they catch during their decision-making process (Chen, X., et all.,2015).

Another study, published by the *Sustainability* journal (Gutierrez, et all., 2020), demonstrates that the consumers' environmental attitudes have a fundamental role on the interpretation of the eco-label message. This evidence confirms that the design of an ecological label is relevant to capture the consumer perception, even more among those people who have a low environmental knowledge. According to this study, the subjects with a low environmental knowledge looked at the eco-label 236% more frequently than the other people. So, those people are more likely to analyse the label in detail, to better understand the information given. This important insight means that consumers who are more favourable to a green consumption have the potential to feel positive vibes from their consumption act. The labels have often hidden characteristics, and the producers need to

make them visible to consumers with the aim to make the label and its message clearer to the customer. (Rex, E., Baumann, H., 2007)

In conclusion, as stated in the previously analysed studies, it is crucial to influence the consumers' decision-making to increase their willingness to buy an eco-labelled product. Switching them toward a greener choice, starting from those elements which can influence their consumption, is increasingly important, and requires the perfect design to catch the eye.

2.2.4 The role played by the visual and the conceptual fluency on ecolabel choice

Nowadays, there are many eco-labels which can be differentiated on the basis of some related features, i.e., by colours, design, typeface and so on. Each characteristic can affect the perception that the people have about the object, website, product, or other stuff on which the environmental labels are represented.

For example, Henderson et al. (2004) have studied four dimensions of typeface impression (pleasing, engaging, reassuring and prominent) and six kinds of typeface design (elaborateness, harmony, naturalness, flourish, weight and compressed), finding various relationships between these variables, such as the inverse relationship involving the typeface weight and the natural, harmonious, and flourish typeface on the prominence perception. Specifically, the bigger the typeface weight is, the most the prominence perception will be, but the natural, harmonious, and flourish typeface can reduce it.

According to previous studies, also the logo shape, which is defined as the graphic design of a brand logo by Henderson & Cote (1998), has effects on perceptions, preferences, and brand equity.

For instance, the angular shapes are perceived to "being hard" and stimulate a brand masculinity in comparison with the circular and slender shaped logos which are perceived as softer than the first one and increase the brand femininity. (Jiang et al., 2016; Lieven et al., 2015).

These examples allow us to understand the breadth and complexity of the subject matter related to the visual and conceptual complexity of a logo.

The visual complexity is defined by Berlyne (1970) as the variety of visual information represented in a logo, and the conceptual complexity is the ability of a logo to generate different interpretations but not a shared one. (Perussia, F; 1988)

In order to clearly explain the difference between these two variables, it is useful to use the example made by Miceli et all. (2014)

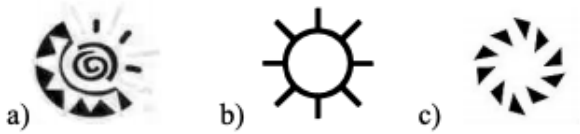


Figure 3: Differences between visual and conceptual complexity. (Miceli et all; 2014)

The a) and b) logos can be easily recognised as the image of a shining sun (low conceptual complexity), but their structure is complex and rich of details, especially the first one (high visual complexity).

Simultaneously, the third logo is simpler than the first logo under a visual point of view, but it has a higher conceptual difficulty than the first sun. It can be also interpreted as a black hole or a firework.

This is a simple demonstration of the difference between the two elements and, more importantly, it explains that the meanings evoked by a logo are independent from the visual fluency.

The reason why there is this difference between the visual complexity (hereafter: VC) and the conceptual fluency (hereafter: CF) is explained by the fact that, more generally, they are part of two different domains of the human cognition. The activity of understanding the meaning that is elicited by a logo is different by the cognition of the shapes that compose the logo. (Blaxton, T.A.; 1989)

A practical explanation of this concept is represented by an interesting study based on the visual image of the eco label. It showed how the presence of a logo on a product has more chances than a text label to capture the consumer's attention. In addition, the study suggests also to implement the text on an eco-label when there is a low knowledge degree about that graphic, in order to educate the consumer to the meaning of the logo. (Rihn, A., et all., 2019)

These labels are used in a large scale of communication channels, such as the packaging and the media, and they are the bridge between the brand and a sustainable association. Nevertheless, they have a certain small dimension that is adapted to various surfaces, as credit cards, plastic bags, products and more.

Because of all these elements, there is a large scale of logo in terms of visual elements that can be found in the market, but they have a huge association with their sustainable message under a perceptual point of view.

The complexity positively influences subjects' pleasure in reaction to an object until an optimal level. In fact, there is a reverse U -shaped relation in which there is a first boost of pleasure due to the visual excitement and the learning potential of the stimulus. Then, as a consequence of any additional units of complexity over the optimal peak of the curve, there

is a reduction of the pleasure linked to an uncertainty about the interpretation and to a reduced margin of elaboration of the stimulus (Berlyne, D.E., 1970).

For example, Henderson and Cote (1998) found a relation, as that one cited previously, related to the Visual Complexity's effects toward the logo. However, a research conducted on a large-scale survey has found that logo elaborateness has a generally positive effect on the attitude toward the logo (Henderson, Cote, Leong, and Schmitt, 2003; Van der Lans, et al., 2009).

A research on the conceptual dimension of logo complexity made by Janiszewski and Meyvis (2001) shows the manipulation between verbal and visual parts of logos in multiple experiments. In their results, it is possible to observe that, generally, mono-meaning logos (i.e., logos in which text and visual elements both have the same meaning) are initially preferred to multi-meaning logos. Conversely, when the number of exposures increases multi-meaning logos are relatively preferred to the mono-meaning logos.

Thanks to these conclusions is possible to state the following hypothesis:

H2a: *"Product using Low Visual Complexity logos (vs High Visual Complexity) will generate more favourable consumer responses, as: willingness to buy, willingness to pay, share of voice, perceived quality and perceived attributes."*

H2b: *"Ecolabel Conceptual Complexity will moderate the relationship between the visual complexity and the consumer responses. Specifically, when the label has a low conceptual complexity, a Low visual complexity ecolabel (vs a High Visual Complexity one) leads to higher consumer outputs."*

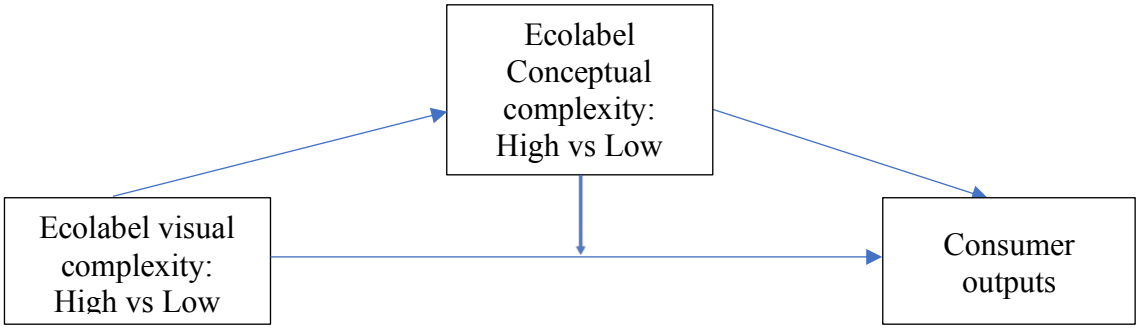


Figure 4: Representation of the visual and conceptual moderation framework

2.2.5 The role played by colours on ecolabel choice

The term "colour" is defined as the "characteristic of a visual perception that can be described by attributes of hue, brightness (or lightness), and colourfulness (or saturation or chroma)" and it continues affirming that "perceived colour depends on the spectral distribution of the colour stimulus, on the size, shape, structure and surround of the stimulus area, on the state of adaptation of the observer's visual system, and on the observer's experience of the prevailing and similar situations of observation." (Elliot, A.J. et all.; 2018)

A first distinction report by Elliot et all. (2018) is between the colour stimulus, that can be distinguished on:

- Unrelated colours: when the colour is perceived to be part of an area that is isolated from another one;
- Related colours: when the colour is perceived to be part of an area that is in relation with another one.

Furthermore, the colours are defined by six dimensions, which are:

- Hue, when an area appears to be similar to red, yellow, green, blue colours or a combination of the close one, such as the mixed range of colours generated by mixing different amounts of red and yellow;
- Brightness, when an area is perceived to emit or reflect more or less light;
- Lightness, when the brightness of an area is judged in relation to a similarly bright area, and it appears to by white or not;
- Colourfulness: when a colour in a determinate area is perceived to be more or less chromatic;
- Saturation: when the colour of an area is judged in function of its brightness;
- Chroma: it is the colourfulness of an area that is judged as a proportion of the brightness of a similar close area.

Figure 5: Six dimensions of the colours. (Elliot, A.J. et all. 2018)

The values of each scale vary based on the change of each of the six variables.

Previous research on colour psychology hypothesized that colours can be linked to emotions (Jacobs, Keown, Worthley, & Ghymn, 1991; Wexner, 1954).

For example, a research done by Whitfield and Wiltshire (1990) found that people hue preference has a descending order structure, from blue to red. Conversely, the order of hue preference, as well as the association between a colour and an emotion, can change across different cultures. For instance, the study made by Madden et al. (2000) conducted across Austria, Brazil, Canada, China, Colombia, Hong Kong, Taiwan, and the United States, found that preferences and colour meanings for blue, green, and white are the same one. However, the conception of colours like black and red is significantly different even though these countries are well connected among each other.

How can the colour perception influence the consumers' judgment? A research has discovered that consumers make a first judgment on people, products, and environment within 90 seconds after interacting with them, and about 62–90 % of it is uniquely based on colour (Singh, 2006).

Moreover, a research based on ninety-eight college students discovered that the green colour reached the highest percentage of positive emotions (95.9%), such as relaxation, happiness, comfort, peace, and hope. It was mainly associated with the nature and trees, so it creates a relaxing sensation (Kaya, N., & Epps, H. H., 2004).

The yellow was generally perceived as energetic and generated also positive emotions (93.9%), because it was associated with summertime and the sun. Then, also the blue colour has obtained a high percentage of perceived positive emotions (79.6%) followed by the red and the purple (64.3% each one).

Furthermore, the study also focused on the intermediate hues and found that the blue-green generated the highest number of positive reactions by the subjects interviewed (81,6%). The other hues which elicited a high number of positive feelings were the red-purple (76.5%), yellow-red (75.4%), and purple-blue (65.3%).

On the other hand, the colour green-yellow has induced the highest percentage of negative feelings, because it was reconducted to the sickness feeling and the disgust.

Lastly, the white colour aroused a high percentage of positive reactions (61.2%) only when it is compared with only 19.4% reached by the black colour and with 7.1% of positive responses obtained by grey.

The reason why the white colour has obtained this result is explained by the fact that it is associated with the feeling of peace, hope, and innocence. However, it is also associated with

negative emotions as boredom and loneliness. Also, the black evoked negative emotions, such as anger, depression, and fear, even if it is also associated with richness, power and wealth.

The colour grey is mainly associated with the bad weather, and so it links to all the negative emotions that a person can feel during a rainy day, such as boredom, sadness, and depression.

Another analysis on the Lithuanian market has demonstrated that the colour has a huge potentiality as a tool for sensory marketing to create product distinctiveness (Sliburyte, L., & Skeryte, I., 2014).

In fact, according to this study the colours can built emotional links with potential outcomes, such as: an increase in shelf visibility, a better product recognition, a strong connection with positive emotions and willingness to try.

The greatest advantage of colours is that they are a tool which can be crucial for the consumers' choice because it can generate positive feelings, and it is an inexpensive tool that can be studied and strategically used by companies.

In the last research, it was also found that consumers' colours perception depends on age, sex and education level and this variation on what they perceive may affect their purchase intention.

Thus, is important to study how the colour of an ecolabel can influence the consumers' outputs across the generation of belongings.

H3a*: The consumer responses to a product will be more positive when the consumer is belonging to a young generation (Z generation and Millennials) than an older one (X generation and Baby Boomers).*

H3b: *Ecolabel colour will moderate the relationship between the generation of belonging and the consumer responses. Specifically, when the label is multicolour, a young generation of belonging (vs an older one) leads to higher consumer outputs.*

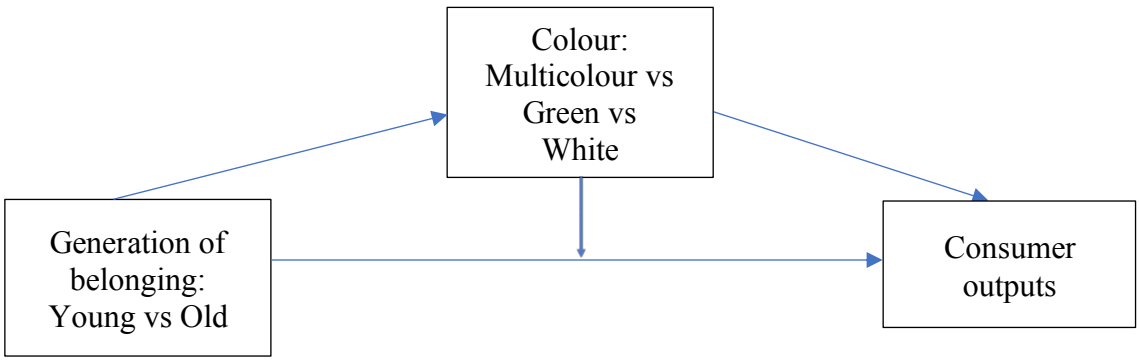


Figure 6: Representation of the generation of belongings and label colour moderation framework

2.3 The role played by the emotions about the green consumption

In the previous paragraph we have observed how the Z-Gen has a particular mixture of beliefs and behavioural traits giving to this generation the opportunity to be an interesting case study. Observing the results reported in the 2019's Amnesty International Global survey (Amnesty International, 2019), it comes out that the digital natives consider the climate change as one of the most important challenges of their age, with a percentage of 41% in 10.000 people. The perception of this climate change challenge perceived by the youngest generations can generate different emotions.

Therefore, it is crucial to understand how the emotions vary in function of the people generation of belonging.

2.3.1 Appraisal theory

The emotion as defined by the appraisal theories are a gathering of components, that are subjective, cognitive, motivational, somatic, and motor (Moors, A., 2017), which are the outputs generated by different stimulus that are appraised as fundamental for a determinate aim (Frijda 1988; Lararus 1991; Moors 2007; Oatley and Johnson-Laird 1987). Thus, there is an inclination to have a behaviour with a priority in influencing a behaviour (Frijda 1986, 2007), and/or elevate level of synchronization between all the parts involved in this process (Scherer 2001, 2009).

The assumptions of the Appraisal theory are (Roseman, I. J., & Smith, C. A., 2001):

- Each emotion shows typical facial expressions, and action tendencies are generated by various evaluations of events. Thus, every emotion is induced by a specific pattern of appraisals;
- People who evaluate the same situation in significantly diverse ways at the same time (or in different times) will feel different emotions;
- All the events in which the common evaluation pattern is assigned will elicit the same emotion;
- The appraisals are assumed to precede and elicit the emotions. So, when an event happens, there is a cognitive process that notices a change on the status quo and subsequently generates an evaluation of the change evoking the emotion.
- The evaluation model makes likely that emotions are coherently coped with the situation they take place. Thus, the emotions can be represented as adaptive responses to the external and internal conditions that affect the evaluation process.

- Irrational aspects of emotion can be elicited by conflicts between the automatic, unconscious appraisals and the consciously ones.
- Changes in appraisal through the development of situations or psychotherapeutically inducted, emotion's reaction to those situations should modify and adapt.

In accordance with Appraisal Theory, there are different stages that generate and elicit the emotions and the behavioural response.

Thanks to the figure 3 it is possible to observe the multistage process that compose the theory of evaluation.

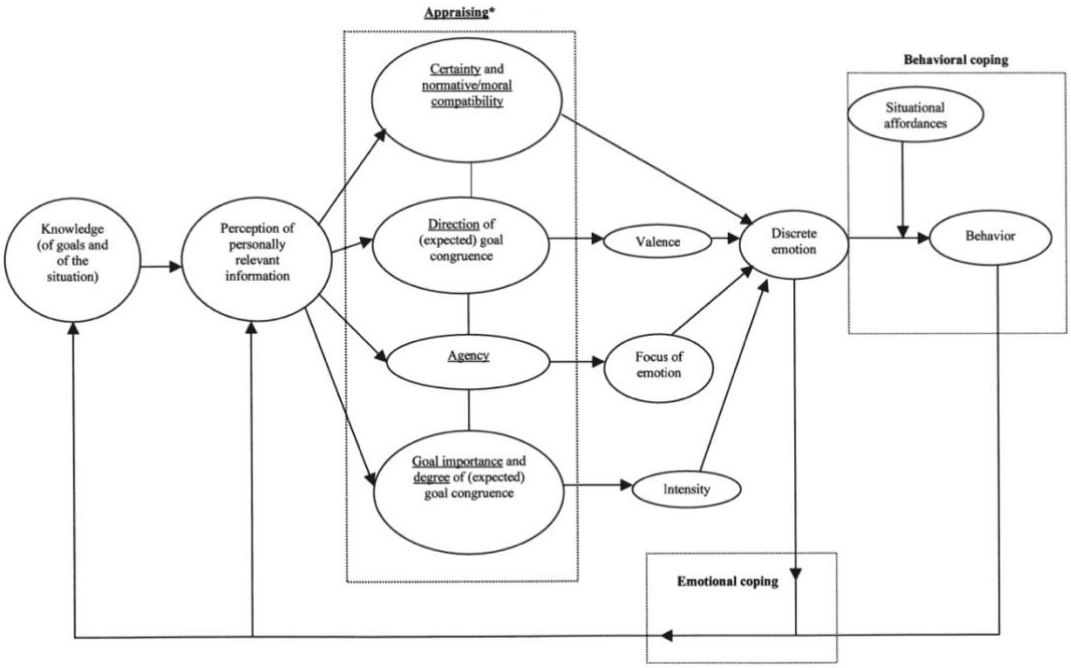


Figure 7: Appraisal Model of Emotion (Johnson A.R. & Stewart D. W., 2005)

The first stage of the Appraisal theory is represented by the antecedents of the evaluation. The knowledge that the individuals have regarding the situation in which they are, even if sometimes the people consciously try to get in a specific situation, and the goals that they have in the scenario influencing their interpretation of the specific event and its characteristics. The knowledge about a situation is composed by the beliefs and the expectations that individuals have about the opportunities and the resources in a giving scenario. Such a knowledge could be generated by prior experiences lived by the individuals in closed situations, or by what they learnt by other experiences, or by other sources. When the individuals enter in a specific event, they have their unique point of view based on their personal experiences, expectations, and goals (Johnson, A. R., & Stewart, D. W., 2005).

In relation to this last subject, the knowledge of the goals in each scenario is composed by the expectations and the beliefs of what it would mean to achieve a prespecified result. This

factor gives information related to which is the desired outcome, and it can have different forms, as completing tasks, or achieving a particular social relationship/experiential outcome, or avoiding a determinate one.

The impact of the goal awareness on the emotional response and on the event interpretation is huge, whether considering if the individuals can recognize the meaning of an information in relation to the goal pursued or not.

The appraisal is the process through which the individuals give a meaning to a situation they are living. The personal information process leads to different dimensions based on the cognitive process done on personally relevant information in evaluating the meaning of the situation. The personal processing task entails inferences, evaluations, and judgements on the essence of the personally relevant information.

The personal evaluation of the information relevance has a direct impact on emotions unless the objective truth is related to the situation (Lazarus, R. S., 1995).

This variability on the personal evaluation of the information in a common situation by individuals explains the wide range of emotions that the individuals feel, that are influenced by the individual goals and expectation they may have (Johnson, A. R., & Stewart, D. W., 2005).

The dimensions of evaluating information that diversify and inform the feel of discrete emotions are linked to specific tasks and inferences regarding:

- The direction of goal congruence leads to assess if the achieving of the personal relevant goal is either an obstacle or is aided by the current situation. The evaluation of the direction (closer to the goal or away from it) determinates the direction of the emotion (positive or negative). The emotional reaction is not bipolar, even though the appraisal goal congruence direction itself is bipolar, because it is influenced by each piece of information evaluated that can lead to positive and negative responses.
- Appraising agency includes the evaluation of the role played, or potentially played, by a subject, that can be a person, an object, or a product. This role is evaluated in relation to a situation or to the effect that the subject has or might have on the outcomes. This process involves the identification of a focus or a target towards which to direct the emotion, even if the subject is not considered as the responsible for the situation. Sometimes, the agency appraisal can indicate the absence of a subject involved in the situation or in the outcome, called circumstance-caused agency appraisals;

- The evaluation of certainty involves the estimation to which extent the individuals are confident on the outcomes. This factor is crucial for the determination of the emotional reaction differing on the wide grades of certainty about an outcome, or in relation to the individuals anticipate reactions when raise up elevate levels of uncertainty;
- The appraisal of normative/moral compatibility affects the emotions, and it is the evaluation of the situation in terms of what is perceived as right and normal by the individual and within the social context of belonging. It indicates the direct influence of norms and moral issues in the situation.
- The emotional intensity is generated by two types of appraisal: the goal importance and the degree of congruence. The importance of the goal is directly linked to the desirability of the results or the consequences that can result if the individual does not achieve that status. Based on this, the intensity of the emotions can vary. This emotional intensity is also influenced by the degree of congruence between the situation in which the individual is and the expected and estimate state. If the individual's situation overtakes the expectations, there would be more intense positive emotions. Conversely, if the expectations are barely met, the intensity of the negative emotions would be very strong.

The evaluations of each dimension can differ from the others, each of them influences the others. The certainty and the normative/moral compatibility dimensions have a direct effect on the discrete emotion, but this is not applicable to the other dimensions.

In fact, the direction of the goal congruence influences the emotions through the valence of the emotional reaction, and the agency affect the emotion thanks to the focus of the emotional reaction. Moreover, the individual's goal importance and the degree of goal congruence impact the emotional response through the emotions' intensity (Johnson, A. R., & Stewart, D. W., 2005).

When the appraisal process is finished, the individual lives the emotion and becomes aware of his/her emotional response to the situation. From this response the subject can reach additional information, and behaviours envisaged or acted in response to the emotions can provide feedbacks about the goal and the situation, both enriching the individual knowledge about the situation, and the goal. The behavioural tendencies triggered by the discrete emotions are attempts to adapt the situation to the coveted state of the goal.

The Appraisal theory is used in consumer behaviour research because it allows to assess the different combination of dimensions that could lead to different emotions, and it gives the

opportunity to understand which possible causes and consequences are generated by the emotions (Johnson, A. R., & Stewart, D. W., 2005).

2.3.2 The emotions on green consumption

The environmental-friendly products' purchase intention is influenced mostly by the emotional value. If the consumers' conception of the environmental-friendly product's purchase is experienced with positive sentiments, for them the probability to buy the product would be higher (Rizkalla,N.,& Setiadi D.D., 2020). These positive feelings can have different forms as pleasure, proud, comfort, and relax (Rahnama and Rajabpour, 2017).

Furthermore, from the evidence of another study it also emerges the crucial role that emotions play in the glance of an environmental-friendly label (Gutierrez, et all., 2020). The strongest the emotions perceived through the eco-labels are, the most the consumers' purchase intention will increase.

There is also evidence that proves the anticipating positive future emotional status from greener decisions have a greater impact on the pro-environmental behavioural intentions than anticipating the negative ones from inaction. (Schneider, C. R., Zaval, L., Weber, E. U., & Markowitz, E. M., 2017).

These results were also obtained using the Norm Activation Model (NAM) (Schwartz, S. H., 1977) with the anticipated proudness and guiltiness feelings. The anticipated emotions mediate the effect of personal norms on behaviour. This result was still valid when the Theory of Planned Behaviour was implemented on NAM, although the impact between the anticipated emotions had an impact through the behavioural intention on the attitude (Onwezen, M. C., Antonides, G., & Bartels, J., 2013).

These assumptions are meaningful for this study, because they prove the relation between the green consumption and the emotions that can be experienced before, and during the purchase behaviour.

It is also true that the effectiveness of the green products perceived by the consumers influences the relation between the positive/negative emotions and the ethically minded consumer behaviours. Especially, there is a strong moderation effect on the relationship with the positive emotions. Further, the green stimuli characteristics have a significant impact on the positive and negative feelings (Gayathree, P. K., & Samarasinghe, D., 2019).

A study suggests that when the consumer decision-making process elicits the self-accountability, they prefer the promotion of a product on ethical attributes basis than on self-benefits.

Moreover, from the same study it also emerges that combining the consumer ethical option with explicit guilt-arousing promotion can be negative (Peloza, J., White, K., & Shang, J., 2013).

So, it is possible to hypothesize that this perception that the youngest have about the climate change can influence their willingness to buy green product, and this can be generated by different emotions.

In relation to this point, a study analysed the changes in Europeans' values during the Global Financial crisis. The results of this research highlight that the youngest values registered a switch toward the self-protection values, with a particular increase on the security and tradition values.

Conversely, the youngest shifted away from growth/self-expansion values, as hedonism, stimulation, and self-direction (Sortheix, F. M., et all., 2017).

For example, a study conducted in India has analysed the relation between the egoistic and the altruistic values and the purchase intention of green product. The reason behind the choice of these two feelings is that in the Indian population the concerns related to the health and the environment are increasing. So, it is possible to imagine that the green consumption in the youngest can be inducted by altruistic values, as the environmental concern, and also the egoistic ones, as the health concern (Prakash, G., et all., 2019).

The evidence of the study highlights that both feelings influence the attitude toward green products. Specifically, the altruistic values have a stronger effect on the purchase intention than the egoistic ones (Prakash, G., et all., 2019).

Moreover, it is also interesting to observe how the presence of an eco-label on a package of a product can stimulate emotional reactions. There are evidence confirming that people have more positive self-reported and neurophysiological emotional reactions to packages with recyclable label than those without it (Songa, G., et all., 2019).

The feeling of proudness and guiltiness may lead to increase the intention to purchase green products. Particularly, consumers feel emotionally linked to their positive or negative outcomes that they have caused on the environment, even when this consumption act is unvolunteered (Antonetti, P., & Maklan, S., 2014).

This last study explicits as research gap the necessity to better understand how emotions influence the ethical consumption in order to develop meaningful marketing campaign.

Moreover, it is also useful to take into consideration the fact that the generations of consumers that are in front of the shelf everyday have completely different backgrounds, behaviours, and consumptions.

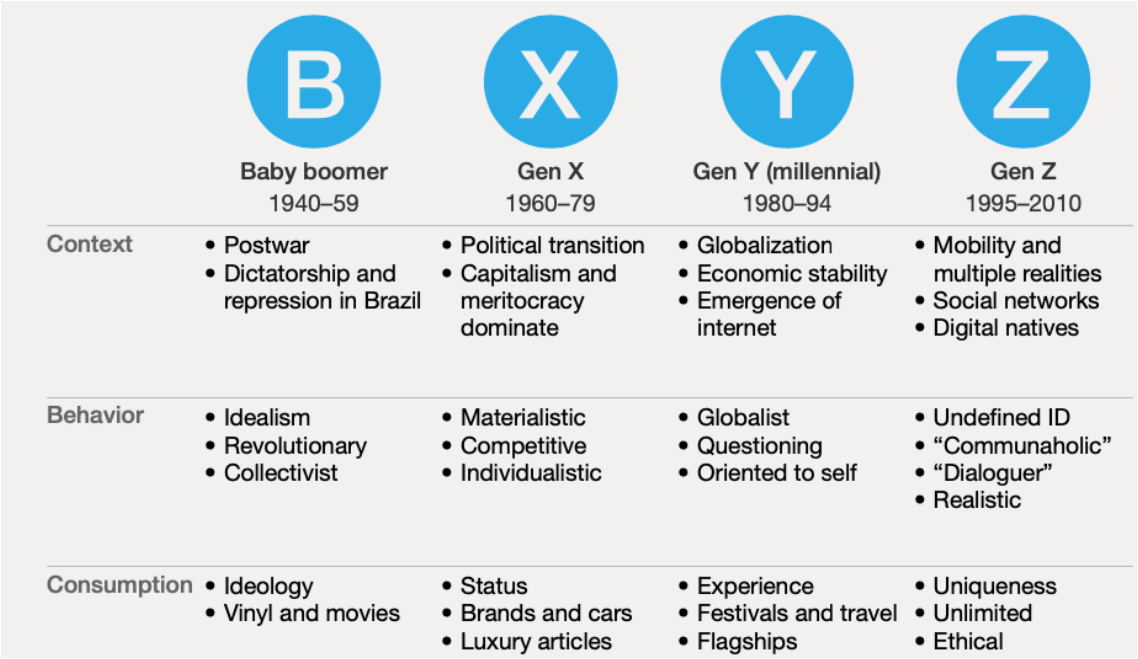


Figure 8: Cross generational differences (Francis, T., & Hoefel, F., 2020)

Therefore, in accordance with the previously explained theory of planned behaviour and norm activation model, there are various subjective norms, perceptions of the relevant information and contexts across generation that may change the perception of a determinate set of emotions and perception in relation to an ecolabel.

As stated before, the youngest are worried about the climate change, and this aspect can generate different emotions on their consumer outputs, such as the perceived quality, the share of voice or the willingness to buy.

Taking into consideration all the aspects cited, the study proposes to examine the following hypotheses:

H4a: *"Consumer responses will be higher when the consumer is belonging to a young generation (Z generation) than another one."*

H4b*: "The environmental concern, the proudness and the ecolabel attitude will mediate the effect of the generation of belonging (Z generation vs others) on consumer responses."*

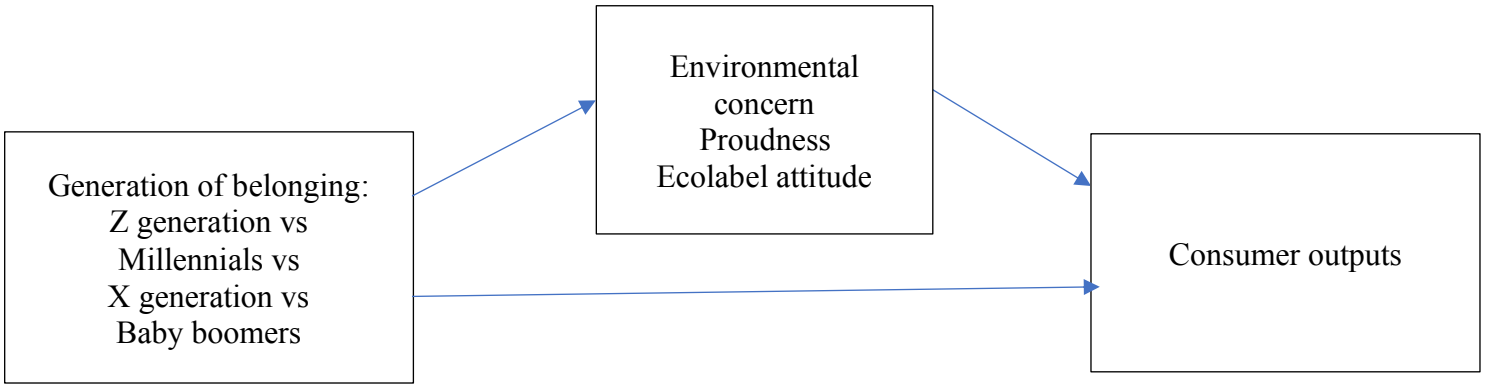


Figure 9: Representation of the generation of belongings and emotions mediation framework

3 Overview of experiments

Below, the study present two experiments – one preliminary study and one experimental study. The main purpose of the preliminary study was to understand whether there is any statistically significant difference between the French Z-Generation sample and the Italian one in terms of ecolabel knowledge, aesthetical appeal, and in relation to the environmental concern too. Through the experimental study, the research wanted to assess the effects of ecolabels' colour, visual and conceptual complexity on consumer responses and how the generation of belonging can influence these reactions.

The results of the two studies were collected with Qualtrics software and were calculated through the statistical software SPSS.

3.1 Preliminary study: Z-Generations comparisons on ecolabel knowledge and environmental concern

The preliminary study aimed to demonstrate that the consumers knowledge elicited by the eco-label images has a statistically significant difference between the Italian Z-gen and the French one. Moreover, the research sought to find a statistically significant gap between the two sample in terms of environmental concern.

Particularly, the expected result is to find an eco-label which is in relationship with the respondents' country of origin, and that statistically differs in terms of label aesthetical appeal. The reason why the current research wants to investigate on this aspect is that, as stated by Halder (2020), the collectivistic cultures have a relationship with the values linked to the green consumption, and according to the figure 2, the French are more collectivistic than the Italian people.

Moreover, the French sample could have a greater consumer knowledge and a bigger environmental concern in comparison with the Italian one, because, as it was written before, a more collectivistic culture can influence their green values. (Halder, P., 2020)

In conclusion, the research question that the study wants to assess if:

1. Is there at least one ecolabel that is related to a specific respondents' nationality?
2. Is there at least one ecolabel that can influence the respondents' aesthetical label appeal?
3. Is there any statistically significant mean difference between the respondents' Country of Origin and the average environmental concern?

3.1.1 Methods

An online survey was conducted in order to explore the study propositions previously mentioned. The respondents were assigned to one of the two experimental groups on the basis of their nationality – French or Italian – with a questionnaire in the respective countries' languages.

After the survey introduction, the subject had to answer to various questions about the ecolabel's knowledge and perceived aesthetical appeal for each label visual stimulus.

Figure 10: Ecolabels used in the preliminary study

Each of these environmental-friendly labels was selected because they are the most frequent labels used in the Italian and French FMCG's market.

Lastly, they faced some questions related to the environmental concern, and some demographic ones. The first part of the survey was related to the label knowledge, and it was composed by a dichotomic question, which was: "*Have you never seen this label?*". Then, it was asked *"In your opinion, for which type of product could this label be used? (You can choose more options)"* with the following multiple-choice answers: cosmetic, food, home care, personal care, pharmacy, stationery, and other. Moreover, the respondents answered to the question "*Choose how much you agree with the following affirmation: the label is aesthetically appealing.*" with a Likert scale from 1(completely disagree) to 7 (Completely agree). At the end of the survey, it was asked "*Indicate whether you agree with the following statements regarding your concern for the environment"*, on a scale of 1 to 7 where 1 = "I completely disagree" and 7 = "I completely agree" in relation to the following items: *"The issue of corporate social responsibility is important to me", "The issue of corporate environmental responsibility is important to me"*, and *"It is important to me that companies maintain high ethical standards in general."*

The participant recruited through a snowball sampling method are people who are born between the 1996 and the 2005 in France and in Italy. The total amount of subjects who have completed the online questionnaire were one hundred and sixty-five people divided in 81 Italians ($M_{ageIT} = 22.21$; Standard Deviation $(SD_{age}) = 2.28$), and 84 French respondents ($M_{ageFR} = 21.19$; Standard Deviation $(SD_{age}) = 1.56$).

3.1.2 Results

3.1.2.1 Organic EU - Results

The first block of questions was focused on the *Organic EU* label. The 56% of the Italian sample declared to already have seen the Organic label, but only the 75% of them knows on which products the label is applied. The 82% of the French sample is composed by people who declared to know the label. However, only the 80% of them have correctly selected the food option among the other options.

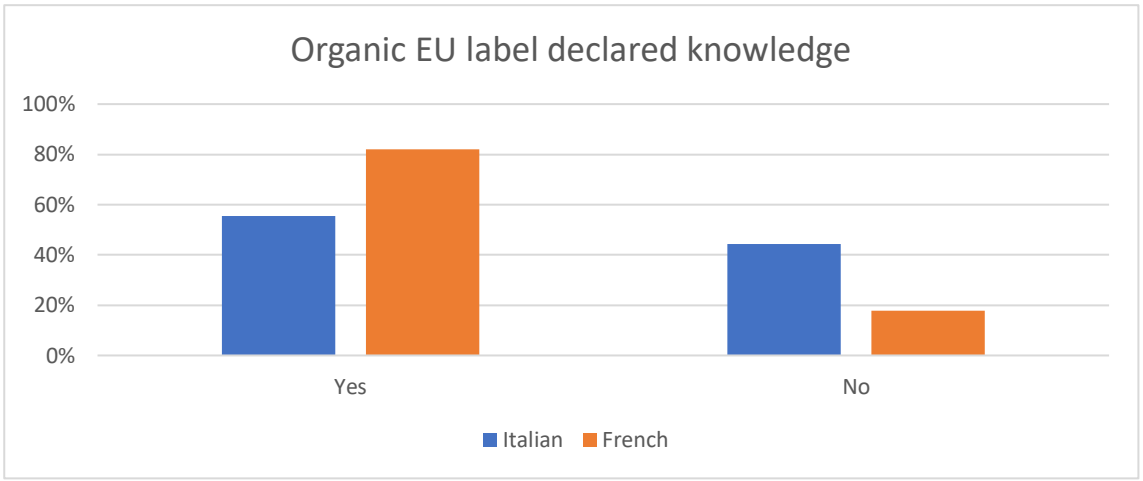


Figure 11: Personal representation of the results obtained from the question "Have you never seen this label?" (Organic EU)

A Chi-square test was performed in order to understand if there is a relation between the respondents' label knowledge and their country of origin.

The hypothesises are:

- H0: There is no association between respondents' country of origin and the Organic EU eco-label knowledge;
- H1: There is association between respondents' country of origin and the Organic EU eco-label knowledge.

The results obtained from this analysis highlight a relationship between the two variables, because the Chi-square value is χ 2 (1) = 13.6, p =.000 Thus, it's possible to conclude that nationality and Organic EU knowledge are not independent, and we can refuse the H0 hypothesis.

A t-test was conducted between the two sample on the label appealing as a dependent variable in order to understand if there is a relevant difference between these samples. The Levene's test hypothesises are:

- H0: $\sigma 2 = \sigma 2$
- H1: $\sigma 2 \neq \sigma 2$

The results doesn't support the unequal variance assumptions (M_{IT} = 4.48 (SD = 1.54); M_{FR} = 4.89 (SD =1.38); F = 3.796. p =.053). So, we can't reject the status quo. Therefore, assuming that the variances are equals, the t-test hypothesises are:

- H0: There is no mean difference between the French and the Italian Organic EU ecolabel appeal.
- H1: There is a mean between the French and the Italian Organic EU ecolabel appeal.

Despite there is an appeal mean differences of 0.411 between the two samples, the p-value is too high for refusing the status quo. M_{IT} =4.48 (SD=1.54); M_{FR} = 4.89 (SD=1.38), t(163)=-1.807, p=.073. Thus, the population mean on Organic EU appealing for Italians and French does not significantly differ.

3.1.2.2 Forest Stewardship Council - Results

The second block of questions was related to the *Forest Stewardship Council* label, also known as FSC. Observing the data represented on the figure 12, it is possible to note that there is a lower difference between the two samples in terms of label's knowledge in comparison with the results obtained by the Organic EU label.

In fact, the 80% of the Italian respondents affirmed to know the label, and the 85% of the French sample declared to know the FSC label too.

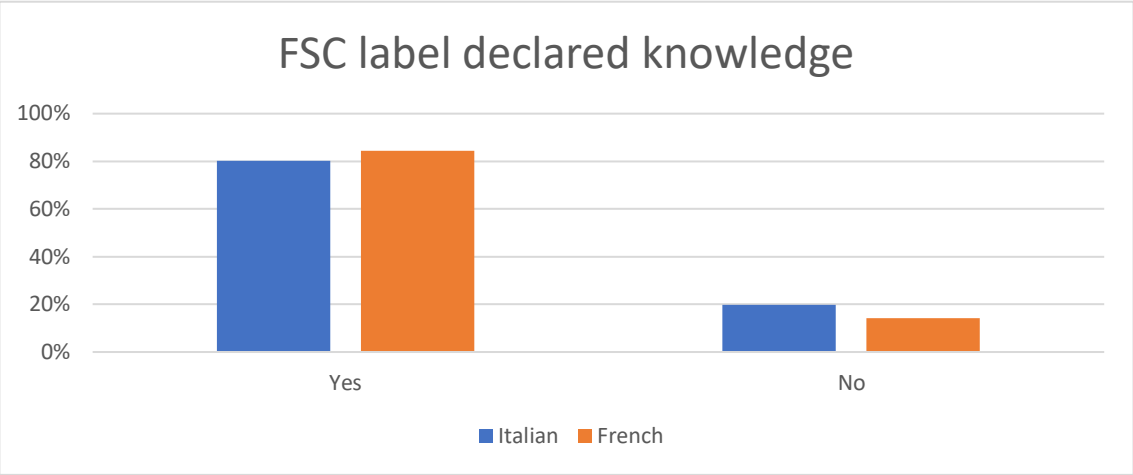


Figure 12: Personal representation of the results obtained from the question "Have you never seen this label?" (FSC)

A Chi-square test was conducted between the variables Nationality and FSC knowledge with the following hypothesises:

- H0: There is no association between respondents' country of origin and the FSC eco-label knowledge;
- H1: There is association between respondents' country of origin and the FSC eco-label knowledge.

From the results emerges that there is not association between the two variables, so we cannot reject the hypothesis 0. $\chi 2$ (1)=0.857, p=.350 Thus, the current research can conclude that Nationality and FSC knowledge are independent (i.e., being Italian or French do not make any difference in terms of FSC knowledge).

The study also presents a t-test with the aims to discover if there is any relevant mean difference between the French and the Italian samples in terms of the FSC label appeal

The hypothesises for the Levene's test are:

- H0: $\sigma 2=\sigma 2$
- H1: $\sigma 2\neq\sigma 2$

The variances are equal, because the results highlight the impossibility to reject the status quo. M_{IT} = 4.70 (SD = 1.4); M_{FR} = 4.48 (SD =1.5); F=0.046 p=.830

Furthermore, the t-test hypothesises are:

- H0: There is no mean difference between the French and the Italian FSC ecolabel appeal.
- H1: There is a mean between the French and the Italian FSC ecolabel appeal.

The study cannot reject H0, because the p-value obtained is higher than 0.05. M_{IT} = 4.70 (SD = 1.4); M_{FR} = 4.48 (SD =1.5); t(163)=1.00 p=.320 So, there is not a statistically significant difference between the two samples in term of FSC appealing.

3.1.2.3 Roundtable on Sustainable Palm Oil - Results

The third block of questions was related to the *Roundtable on Sustainable Palm Oil* (RSPO) label, that has 223 members in Italy and 188 members also in France. (Impact, 2020)

As it is possible to observe in the figure below, the majority of the samples' respondents declared to not know the RSPO label.

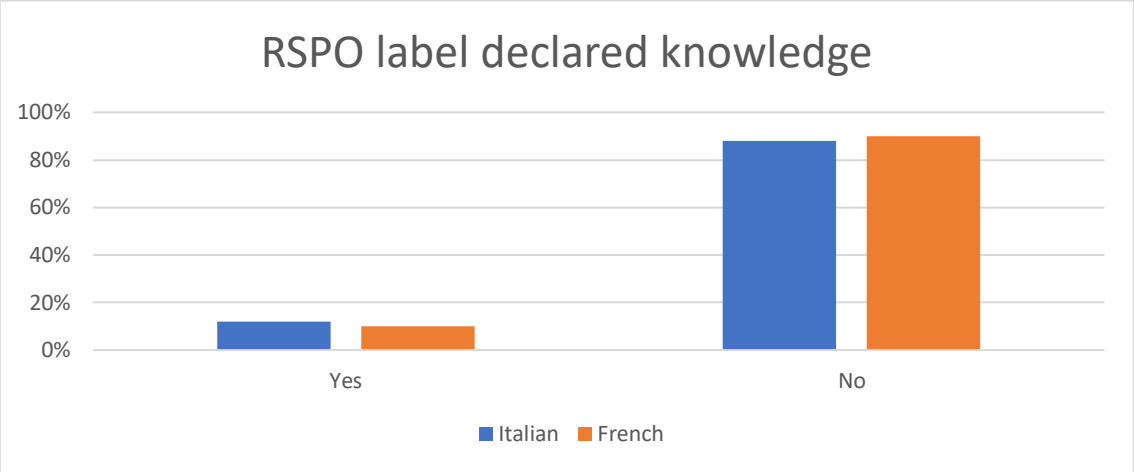


Figure 13: Personal representation of the results obtained from the question "Have you never seen this label?" (RSPO)

The research has done a Chi-square test with the goal to observe if there is a relevant level of relationship between the respondents' nationality and the mark knowledge.

The hypothesises was the following one:

- H0: There is no association between respondents' country of origin and the RSPO eco-label knowledge;
- H1: There is association between respondents' country of origin and the RSPO eco-label knowledge.

The study failed on rejecting the status quo, because there is not a significant result that support the alternative hypothesis. $\chi 2$ (1)=0.108, p=.743 Thanks to this result it is possible to affirm that there is not an association between the respondents' nationality and the RSPO knowledge.

Furthermore, a t-test was done between the subjects' country of origin and the RSPO appeal. Firstly, it was analysed the Levene's test with the following hypothesises:

- H0: $\sigma 2=\sigma 2$
- H1: $\sigma 2\neq\sigma 2$

The Levene's test results highlight that it is not possible to reject the status quo hypothesis.

M_{IT} = 4.21 (SD = 1.5); M_{FR} = 3.96 (SD =1.3); F=2.8 p=.096

Secondly, the t-test was exercised with the following hypothesises:

- H0: There is no mean difference between the French and the Italian RSPO ecolabel appeal.
- H1: There is a mean between the French and the Italian RSPO ecolabel appeal.

Even if there is a mean difference of 0.246, the study failed on rejecting the hypothesis 0.

M_{IT} = 4.21 (SD = 1.5); M_{FR} = 3.96 (SD =1.3); t(163)=1.125 p=.260

Thus, there is no evidence that the label appealing means statistically differ between the two samples.

3.1.2.4 Fairtrade - Results

The fourth block of questions is linked to the *Fairtrade* (FT) eco-friendly label, which has estimated sales for an amount of 9.8 billion euros worldwide among retailers, restaurants, café, etc. (Fairtrade, 2020)

The figure 14 shows the frequency percentage distribution between the Italian and the French subjects that have answered to the first question. The 82% of the French respondents have recognised the Fairtrade label, and the 30% of the Italian sample have remembered the label too. The reason why there is such a huge difference between the two sample can be triggered by various factors, like the country sensibility or the relevance that the companies give to this label on their product packages. (i.e., label dimension, position and integration with the package)

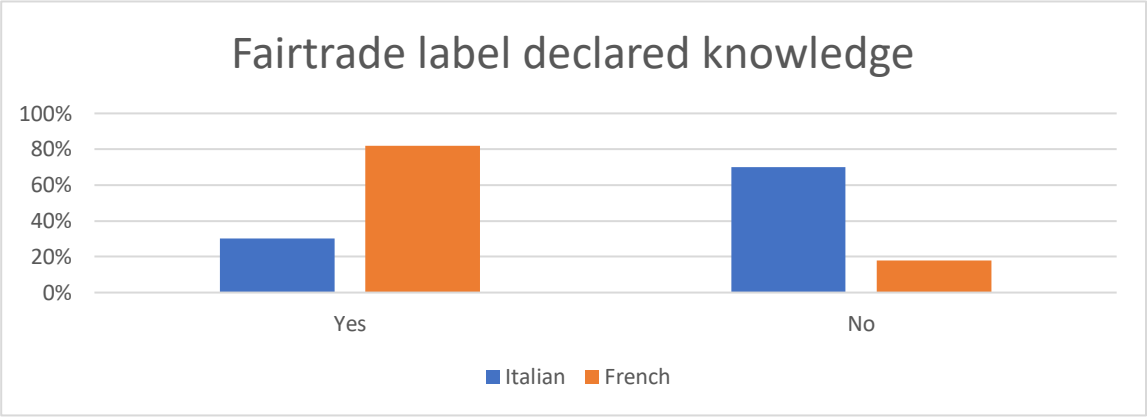


Figure 14: Personal representation of the results obtained from the question "Have you never seen this label?" (FT)

A Chi-square analysis was conducted in order to understand whether there is an association between the nationality and the Fairtrade label. The proposed hypothesises are:

- H0: There is no association between respondents' country of origin and the FT eco-label knowledge;
- H1: There is association between respondents' country of origin and the FT eco-label knowledge.

The test has demonstrated that there is a relationship between the subjects' country of origin and the Fairtrade mark, because the results of the study show that is possible to reject the status quo. $\chi 2$ (1)=46.235, p=.000

Indeed, it's possible to affirm that nationality and the FT knowledge are associated, and the study can refuse the H0 hypothesis (i.e., being French or Italian make difference in terms of FT label's knowledge).

Moreover, it was examined if there is mean difference on eco-mark aesthetical appeal between the Italian and the French samples.

First of all, the Levene's test was conducted with the subsequently hypothesises:

- H0: $\sigma 2=\sigma 2$
- H1: $\sigma 2\neq\sigma 2$

The study failed on rejecting the hypothesis 0, hence the result has equal variances between the two samples. (M_{IT} = 4.44 (SD = 1.4); M_{FR} = 5.04 (SD =1.4); F=0.004 p=.949)

Secondly, the research focused on the t-test, that has the next hypothesises:

- H0: There is no mean difference between the French and the Italian FT ecolabel appeal.
- H1: There is a mean between the French and the Italian FT ecolabel appeal.

From the results of the study emerge that the mean of the Italian (4.44) is significantly different than mean of French (5.04) for label appealing. (M_{IT} = 4.44 (SD = 1.4); M_{FR} = 5.04 (SD =1.4); t(163)=-2.649 p=.009)

Thus, the study conclude that the French Z-generation people perceived the Fairtrade label 0.591 more appealing in comparison to the Italian Z-gens one.

3.1.2.5 Rainforest Alliance - Results

The fifth block of questions is related to the *Rainforest Alliance* (RA) mark, which works from 33 years on developing the biodiversity conservation and sustainable livelihoods worldwide. (Rainforest Alliance, 2020).

Observing the percentual frequency distribution showed in the bar chart below, the 57% of the French respondents have affirmed to have seen the sustainable label.

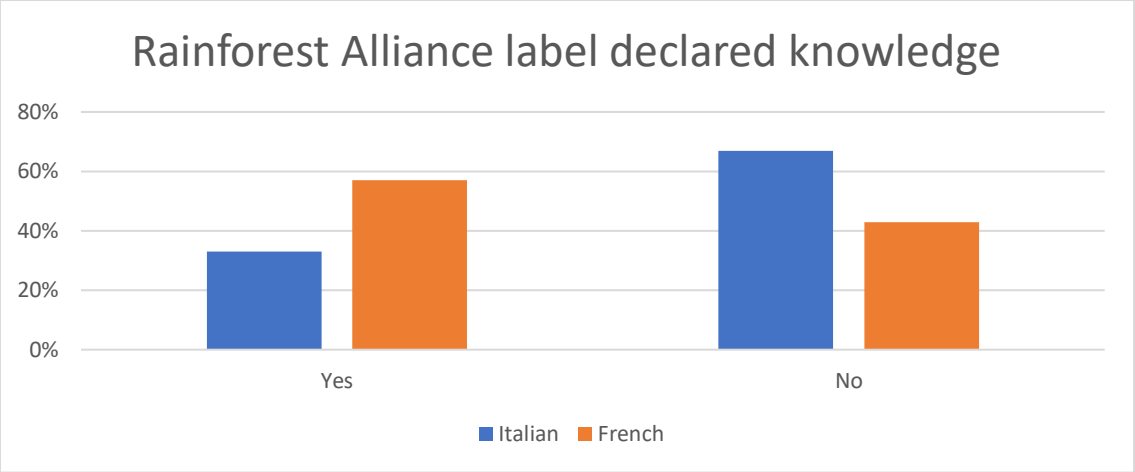


Figure 15: Personal representation of the results obtained from the question "Have you never seen this label?" (RA)

Furthermore, only the 33% of the Italian sample have recognised this label. This asymmetry could be reconducted to various factors, such as the usage frequency of this ecolabel in these two countries.

A Chi-square test was performed in order to see whether there is an association between the two variables: sample's nationality and declared knowledge.

The proposed hypothesises about this test are:

- H0: There is no association between respondents' country of origin and the RA eco-label knowledge;
- H1: There is association between respondents' country of origin and the RA eco-label knowledge.

The results of this research highlight an association between the variable; thus, it is possible to reject the null hypothesis. $\chi 2$ (1)=9.429, p=.002

Subsequently, it was also done a t-test analysis between the respondents' country of origin and the Rainforest Alliance label perceived appeal. The first step of our analysis is the Levene's test with the following hypothesises:

- H0: $\sigma 2=\sigma 2$
- H1: $\sigma 2\neq\sigma 2$

The analysis failed on rejecting the status quo, so the variances are presumed to be equal. M_{IT} = 4.80 (SD = 1.39); M_{FR} = 4.95 (SD =1.23); F=1.977 p=.162

The second step of the t-test analysis is related to the t-value when the variances that are equal. The two-hypothesises stated are:

- H0: There is no mean difference between the French and the Italian RA ecolabel appeal.
- H1: There is a mean between the French and the Italian RA ecolabel appeal.

The test does not reject the null hypothesis, so there is not any relevant statistically difference between the Italian and the French samples. M_{IT} = 4.80 (SD = 1.39); M_{FR} = 4.95 (SD =1.23); t(163)=-0.734 p=.464

3.1.2.6 Programme for the Endorsement of Forest Certification schemes - Results

The sixth block of questions is about the *Programme for the Endorsement of Forest Certification Schemes* label, also known as PEFC. In 2019, the eco-friendly mark has certified a total amount of 177 million of hectares in Europe, which are the 37% of the total PEFC certified areas. Moreover, in Europe there are also the 81% of the total Chain of Custody (CoC) awarded worldwide. The CoC demonstrates that every stage of the supply chain is carefully monitored through independent audits, in order to ensure that unsustainable sources are excluded. France is the first nation of the world for CoC certifications, and Italy is the fourth one. (PEFC, 2019)

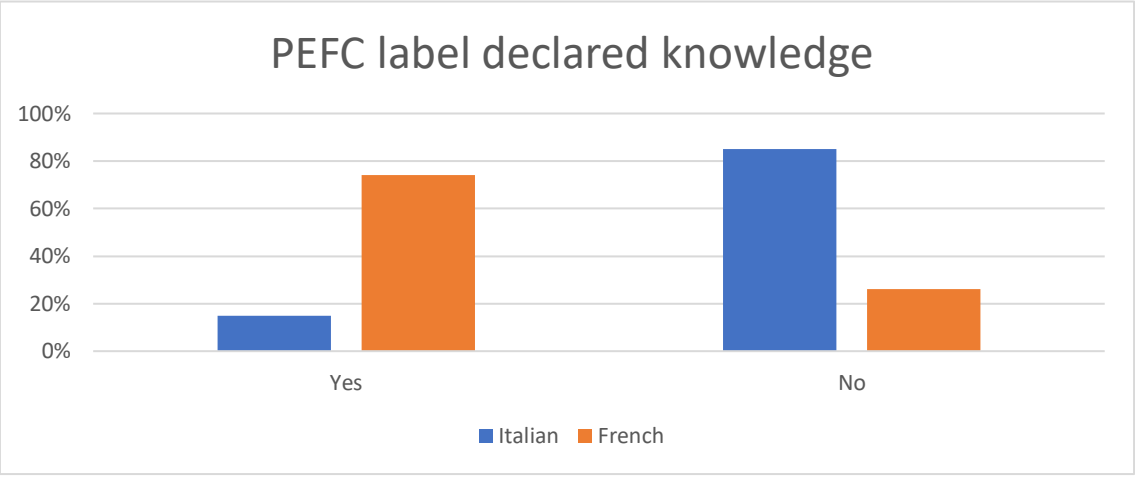


Figure 16: Personal representation of the results obtained from the question "Have you never seen this label?" (PEFC)

As it is shown in the figure 16, this is another case in which the French sample recognise labels more than the Italian sample. In fact, only the 15% of the Italian respondents has declared to have seen the PEFC label.

The first stage of the study was composed by the Chi-square analysis, with the objective to observe if there is a relationship between the nationality and the label knowledge. The hypothesises are:

- H0: There is no association between respondents' country of origin and the PEFC eco-label knowledge.
- H1: There is association between respondents' country of origin and the PEFC eco-label knowledge.

The evidence from the test allows the current research to reject the null hypothesis. $\chi 2$ (1)=58.023, p=.000 Thus, it is possible to affirm that the two variables Nationality and PEFC label knowledge are associated (i.e., being Italian or French make significant difference in terms of mark knowledge).

The second stage of our research is focused on the research of a meaningful mean difference between the two samples eco-label appeal. Firstly, the sample variances were analysed through the Levene's test using the next hypothesises:

- H0: $\sigma 2=\sigma 2$
- H1: $\sigma 2\neq\sigma 2$

The study failed on rejecting the status quo, because the variances are assumed to be the same between the two samples. M_{IT} = 3.91 (SD = 1.44); M_{FR} = 4.44 (SD =1.36); F=0.270 p=.869 Secondly, the research considered t-test values for the variances assumed to be equal with the following hypothesises:

- H0: There is no mean difference between the French and the Italian PEFC ecolabel appeal.
- H1: There is a mean between the French and the Italian PEFC ecolabel appeal.

From the results obtained by the t-test emerge that there is a significant mean difference of 0.527 points between the Italian and the French samples on the Programme for the Endorsement of Forest Certification schemes mark appeal. M_{IT} = 3.91 (SD = 1.44); M_{FR} = 4.44 (SD =1.36); t(163)=-2.411 p=.017

3.1.2.7 Marine Stewardship Council - Results

The seventh block of questions is about the *Marine Stewardship Council* eco-mark (MSC), which is tackling the problem of unsustainable fishing and safeguard fish stocks for the future. The MSC aims is to convert the origin of the 20% of global marine catches in certified fisheries or have started a sustainability pathway with the 2020, supporting the productivity and resilience of global marine ecosystems. (MSC, 2020)

The figure 17 illustrates the percentual frequency of those subjects who have recalled the label thanks to the Marine Stewardship Council visual stimulus. The 43% of the Italian sample has recognized the label, and just the 27% of the French subject has done the same.

The result obtained by the MSC label could be motivated by the different alimentary habits in the two countries.

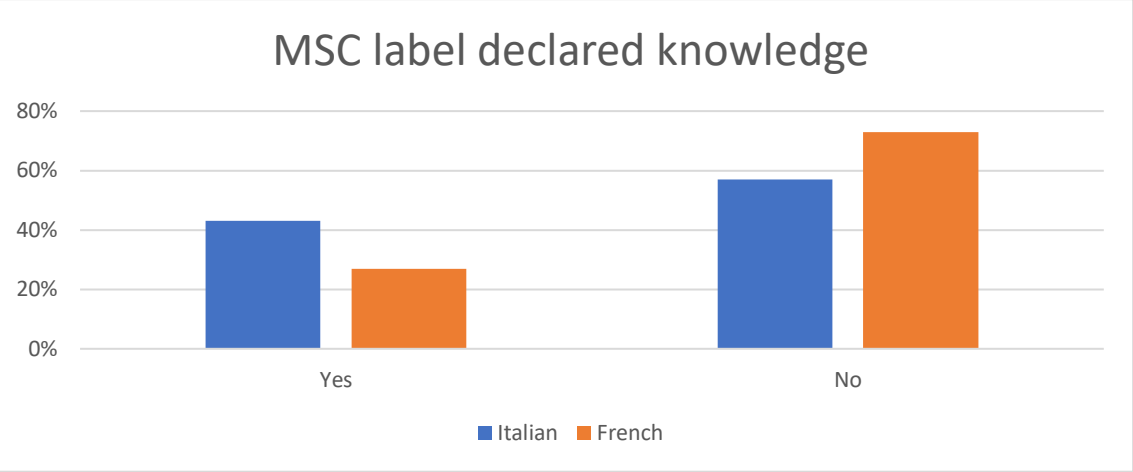


Figure 17: Personal representation of the results obtained from the question "Have you never seen this label?" (MSC)

Firstly, a Chi-square was performed with the purpose of understanding if there is a relationship between the variables. The hypothesises stated are:

- H0: There is no association between respondents' country of origin and the WFTO eco-label knowledge.
- H1: There is association between respondents' country of origin and the WFTO eco-label knowledge.

The research found that there is an association between the two variables considered, so it is possible to reject the null hypothesis. ($\chi 2$ (1)=4.533, p=.033)

Secondly, a t-test analysis was operated with the goal to see whether there is a mean difference between the two sample in relation to the label perceived appeal. The Levene's hypothesises are:

- H0: $\sigma 2=\sigma 2$
- H1: $\sigma 2\neq\sigma 2$

The results of the test arise the failure on rejecting the hypothesis 0, therefore the variances are assumed the same for this study. (M_{IT} = 4.21 (SD = 1.64); M_{FR} = 3.76 (SD =1.445); F=1,460 p=.229) Afterward, the t-test result was analysed with equal variances in relation to the hypothesises:

- H0: There is no mean difference between the French and the Italian MSC ecolabel appeal.
- H1: There is a mean between the French and the Italian MSC ecolabel appeal.

The study cannot reject the null hypothesis because there is a mean difference at a descriptive level, and it is not possible to extend the results to the population. M_{IT} = 4.21 (SD = 1.64); M_{FR} = 3.76 (SD =1.445); t(163)=1.863 p=.064

3.1.2.8 World Fair Trade Organization – Results

The eight block of questions was related to the *World Fair Trade Organization* label, also called WFTO. This certification asses if the whole company business, such as products, ingredients or supply chain, is set up and behave to ensure they put people and planet first. (World Fair Trade Organization, 2020)

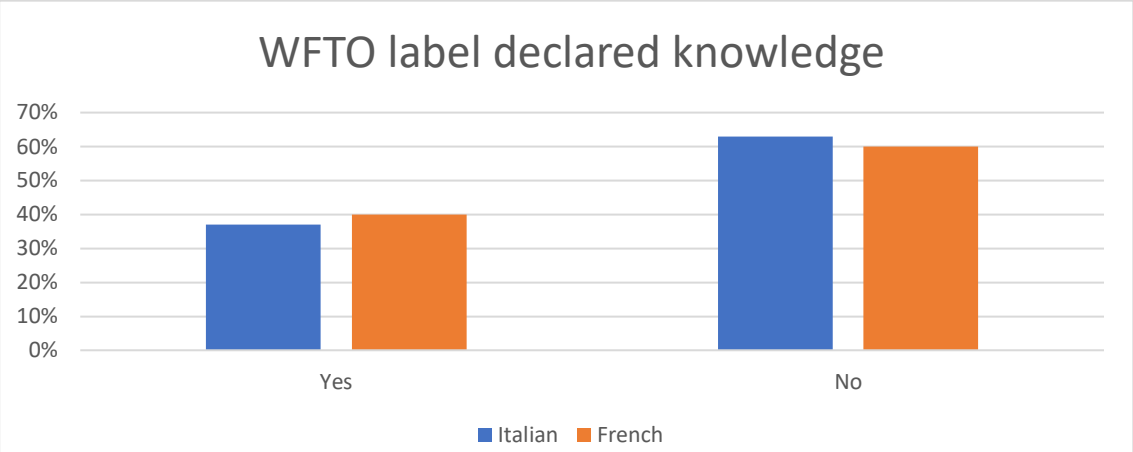


Figure 18: Personal representation of the results obtained from the question "Have you never seen this label?" (WFTO)

The 37% of the Italian subjects recognised the label, and the 40% of the French one knows the label too.

A Chi-square test was conducted in order to detect if there are any associations between nationality and WFTO label knowledge. The hypothesis stated are:

- H0: There is no association between respondents' country of origin and the WFTO eco-label knowledge.
- H1: There is association between respondents' country of origin and the WFTO eco-label knowledge.

The study failed on rejecting the null hypothesis, thus the respondents' country of origin and the WTFO mark are independent. ($\chi 2$ (1)=0.205, p=.650)

Subsequently, it was researched if there is a significant mean difference between the samples' nationality and the WTFO appeal. The Levene's hypothesises are:

- H0: $\sigma 2=\sigma 2$
- H1: $\sigma 2\neq\sigma 2$

The research cannot reject the null hypothesis, so the variances are assumed to be equivalent. M_{IT} = 4.70 (SD = 1.47); M_{FR} = 4.69 (SD =1.42); F=0,796 p=.059 Observing the results of the t-test related to the equal variances assumption, the hypothesises stated are:

- H0: There is no mean difference between the French and the Italian WFTO ecolabel appeal.
- H1: There is a mean between the French and the Italian WFTO ecolabel appeal.

The results highlight the impossibility to reject the status quo, therefore there is not a statistical mean difference between the two variables on the WFTO mark appeal. M_{IT} = 4.70 (SD = 1.47); M_{FR} = 4.69 (SD =1.42); t(163)=0.059 p=.953

3.1.2.9 Aquaculture Stewardship Council – Results

The ninth block of questions is dedicated to the Aquaculture Stewardship Council label, also known as ASC. The label works with retailers, aquaculture producers, scientists and seafood processors to control, promote and make aquaculture processes as sustainable as possible. (Aquaculture Stewardship Council, 2019).

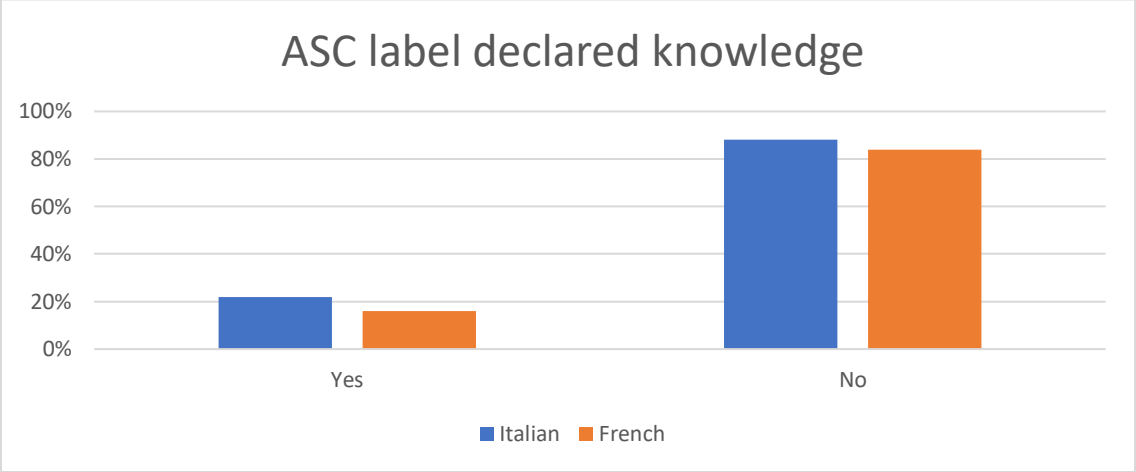


Figure 19: Personal representation of the results obtained from the question "Have you never seen this label?" (ASC)

It is possible to observe that the majority of both the samples have declared to not recognise the Aquaculture Stewardship Council label.

The first study conducted on the sample was a Chi-square analysis between the samples' country of origin and the declared label recognition. The hypothesises stated are:

- H0: There is no association between respondents' country of origin and the ASC eco-label knowledge.
- H1: There is association between respondents' country of origin and the ASC eco-label knowledge.

The research failed on rejecting the null hypothesis, so there is no relationship between nationality and ASC label knowledge. ($\chi 2$ (1)=0.814, p=.367)

The second study conducted was a t-test between the two subject groups and the mean ASC label appeal. The Levene's test hypothesises are:

- H0: $\sigma 2=\sigma 2$
- H1: $\sigma 2\neq\sigma 2$

The research failed on rejecting the null hypothesis, thus the sample variances are assumed to be equivalent. (M_{IT} = 3.94 (SD = 1.47); M_{FR} = 3.73 (SD =1.44); F=0,065 p=.800)

Then, the t-test hypothesises are:

- H0: There is no mean difference between the French and the Italian ASC ecolabel appeal.
- H1: There is a mean between the French and the Italian ASC ecolabel appeal.

There is not any significant difference between the two average ASC mark appeal, because the results highlight the failure on rejecting the null hypothesis. (M_{IT} = 3.94 (SD = 1.47); M_{FR} = 3.73 (SD =1.44); t(163)=0.933 p=.352)

3.1.2.10 Environmental concern – Results

The second phase of the preliminary study is focused on the research of a correlation or mean difference of the subjects' country of origin and the environmental concern felt by them. The items used to measure the environmental concern are three Likert scales from 1(Totally disagree) to 7 (Totally agree) in which it is asked to indicate in which extent the respondents agree with the following affirmations: "*The Corporate Social Responsibility is important to me*", "*The corporate environmental responsibility is important to me*", and "*In my opinion, it is important that generally the companies maintain high ethical standards".*

Before to do the statistical analyses, it was calculated an average environmental concern variable, called "Mean_ envConc". The mean value was obtained from the addition of the three items and then, dived by the amount of variable considered in the mathematical calculation.

The first part of this analysis is focus on seeking to understand if there are any correlations among the mean variables' values. The hypothesises stated are the following one:

- H0: There is no correlation between respondents' country of origin and the perceived environmental concern.
- H1: There is association between respondents' country of origin and the perceived environmental concern.

From the correlation table emerges that there is not a significant correlation between the subjects' nationality and the average environmental concern.

Therefore, it's possible to affirm that nationality of the respondents and the environmental concern are not statistically correlated, and the study failed on rejecting the H0 hypothesis (i.e., being French or Italian not make difference to the environmental concern). (ρ_{env1}=-0.032 p=.679)

The second phase of this part of research focused its attention on the hypothesized statistically significant differences between the two country samples and the average environmental concern. First of all, it was analysed whether the samples' variances are equivalent or not.

The Levene's hypothesises are:

- H0: σ2=σ2
- H1: σ2≠σ2

From the Levene's test result emerges that the variances are presumed to be equal, because the test failed on rejecting the status quo. So, the t-test values considered for the second phase of the exam are those one related to the equal variances' section. M_{IT} = 6.12 (SD = 0.99); M_{FR} = 6.06 (SD =0.86); F=1.253 p=.265

The hypothesises stated for the second phase of the t-test are:

- H0: There is no mean difference between the French and the Italian respondents in terms of environmental concern.
- H1: There is a mean difference between the French and the Italian respondents in terms of environmental concern.

The result of the t-test highlights the failure on rejecting the hypothesis 0, thus there is not a statistically significant mean difference between the subjects' country of origin and the environmental concern. M_{IT} = 6.12 (SD = 0.99); M_{FR} = 6.06 (SD =0.86); t(163)=0.415 p=.679

3.1.3 General discussion

In order to answer to the two research questions stated in the paragraph 3.1.1, a preliminary study was conducted on the knowledge of ecolabels between two samples of respondents.

First of all, it was analyzed whether there is a relationship between the two variables considered: the respondents' country of origin and the declared knowledge of eco-friendly labels.

Furthermore, this study was done in order to find an eco-mark that can influence the consumers' judgement in terms of aesthetical appeal.

Observing the Table 2 it is possible to find all the results obtained by the study for each label for the Chi-square analyses and the t-tests.

From the reported results emerge that:

- The Organic Eu has a significant relationship with the nationality, but there is not a relevant mean difference on the label appeal between the two groups.
- The results related to the Forest Stewardship Council mark highlight that there is not an association between the country of origin and the label knowledge, and there is not significant average difference between the samples on the mark appeal.
- From the results related to the RSPO emerge that there is not an association with the respondents' nationality, and there is not a meaningful mean difference on label appeal.
- The Fairtrade logo results highlight that there is a relationship with the Italian and French nationality, and there is a significant difference mean label appeal between the two group of subjects.
- From the results registered by the Rainforest Alliance label is possible to conclude that the logo and the subjects' origin are associated and there is not a relevant mean difference between the two samples.
- The Programme for the Endorsement of Forest Certification Schemes label knowledge has a significant relationship with the respondents' nationality, and there is a meaningful mean difference between the two groups of subjects on the label appeal.
- From the results of the MSC logo emerge that there is an association between the logo knowledge and the nationality. Moreover, it is emerged that there is not a statistical average difference on the label appeal between the two groups.
- The results of the World Fair Trade Organization label evidence the independence between the logo recognition and the respondents' origin. Furthermore, there is not a statistical mean difference between the group of interviewed on the logo appeal.
- The study on the ASC label has registered no relationship between the mark affirmed knowledge and the samples' country of origin. From the results of the t-test do not emerge a relevant mean difference between the respondents' groups on the label's appeal.

Label name	Organic Eu	FSC	RSPO	FT	RA	PEFC	MSC	WFTO	ASC
χ^2 p-value	0.000	0.350	0.743	0.000	0.002	0.000	0.033	0.650	0.367
T-test p-value	0.073	0.32	0.26	0.009	0.464	0.017	0.064	0.953	0.352

Table 2: Personal representation of the results obtained from the question "Have you never seen this label?"

A correlation test was operated between the emerges between respondent's nation of origin and the perceived environmental concern. It was found that there is no correlation because the values obtained are not statistically significant.

In addition, the t-test results evidence that there are no mean differences for environmental concern between French and Italian respondents.

These tests have disconfirmed what it was supposed in the second research question in the Paragraph 3.1.

These results could be justified by the fact that the difference between the Italian and the French in terms of Hofstede individualism is not huge. (Hofstede Insight, 2020) Moreover, the I-Gens "Communaholic", dialoguer and realistic traits, as described by a McKinsey research (Francis, T., & Hoefel, F., 2020), can have potentially led to an increasing and standardized awareness and sensibility on the climate change among the two countries.

3.2 Main study: experimental study on the impact of the eco-label presence on FMCGs' products. The role played by the emotions, the colours, the visual and the conceptual complexity on consumer outputs.

The purpose of the main study is to discover how the emotions, the ecolabels' colour and the consumers' generation of belonging can modify the willingness to buy, the willingness to pay, the share of voice, the ecolabel attitude, the perceived quality and the perceived attributes. Moreover, the research aims to find a statistically significant gap in terms of consumer responses between the first view of the product with an ecolabel on pack and the second view of the same product with a zoom on the ecolabel and a brief description of its benefits on the environment. The results awaited are to determine those characteristics of an ecolabel which can influence the consumer outputs on the basis of the colour, of the visual and the conceptual complexity. The reason why the study wants to understand more about these aspects is explained by the fact that, as stated in the previous paragraphs, the ecolabels are an important tool for the companies, for the governments and for all the entities involved in the supply of goods whose production have an impact on the planet. In fact, through these environmental-friendly labels is possible to sensibilize the consumers on a better choice for them and for the planet.

3.2.1. Methods

The study was conducted through an online survey with the aims to explore the areas of interest before mentioned. The respondents were randomly assigned to one of the four experimental groups with a questionnaire in Italian for the purpose of avoiding any miscomprehension by them.

After the survey introduction, the subjects have seen one of the four visual stimuli showed below. Then, they had to answers to five questions related to the dependent variables.

Figure 20: Personal representation of the visual stimulus shown during the questionnaire

Subsequently, the flow of the questionnaire induced the respondents to watch the same visual stimulus they had previously seen with a zoom focused on the ecolabel and a brief description

of its meaning. The description was: *"The company produces yoghurt certified by the following ecolabel. The (ecolabel name) label is a mark of environmental excellence that is awarded to products and services that meet high environmental standards throughout their life cycle: from the extraction of raw materials to production, distribution and disposal."* After that, there were again the same five questions related to the dependent variables.

Figure 21: Personal representation of the visual stimulus shown during the questionnaire

Then, the subjects had the occasion to watch only the ecolabel they have seen, because this visualization was followed by some questions related to the mediators.
Lastly, they answered to some demographical questions.
The first part of the survey was related to the labels and the dependent variables. It was composed by five different questions that were shown after the two visual stimuli. These scales used are:

- To measure the willingness to buy for a product it was used a pre-validated Likert scale from 1 to 7 with the following items (Dodds, et all,1991):
    - The likelihood of purchasing this product is --- (very high vs very low)
    - The probability that I would consider buying the product is (very high vs very low)
    - My willingness to buy the product is (very high vs very low)
- The consumer willingness to pay was measured through a slider from 0 to 5 euros and a question in which it was asked: "Considering a 5€ budget how much would you willing to pay for the product you have seen previously?"
- The share of voice of the products was measured thanks to the pre-validated 7-points likert scale (Gelbrich, Katja, 2011):
    - I would recommend this yogurt to my friends. (I completely disagree vs I completely agree)
    - If my friends were looking for a yogurt, I would tell them to try this yogurt. (I completely disagree vs I completely agree)
    - I would advise my friends to buy yogurt from this brand. (I completely disagree vs I completely agree)

- The 7points likert scale used to obtain the respondents' perceived quality was composed by (Dodds, et all,1991):
    - "The likelihood that the product would be reliable is high" (I completely disagree vs I completely agree)
    - "This product should be of very good quality" (I completely disagree vs I completely agree)
    - "The likelihood that this product is dependable is high" (I completely disagree vs I completely agree)
    - "This product would seem to be durable" (I completely disagree vs I completely agree)
- The perceived product quality was obtained through a 7-points semantic differential pairs scale with the following comparisons (Keaveney, S. M., et all, 2012):
    - Negative/positive
    - Unfavourable/favourable
    - Bad/good
    - Dislike/like

Then, the respondents had the opportunity to see the environmental-friendly labels in order to answer to the various questions related to the mediators and moderators.

Figure 22: Personal representation of the third visual stimulus shown during the questionnaire

The questions related to the moderators and mediators' measurement were:

- The perceptual complexity was recorded though two 7-point items (Miceli, G., et all, 2014):
    - "To what extent do you find this logo interesting?": (1 = not at all, 7 = a lot;)
    - "This logo features graphical elements that attract your attention" (1 = I completely disagree, 7 = I completely agree)
- The conceptual complexity was measured thanks to two 7-point items (Miceli, G., et all, 2014):
    - "To what extent this logo is easy to interpret?" (1 = not at all, 7 = a lot)
    - "To what extent this logo conveys a clear meaning?" (1 = not at all, 7 = a lot)

- The authentic proud was registered thanks to a 7-point Likert-type items in which was asked to indicate to what extent do the respondents feel (Tracy, J. L., & Robins, R. W., 2007):
    - Accomplished (I completely disagree vs I completely agree),
    - confident (I completely disagree vs I completely agree),
    - fulfilled (I completely disagree vs I completely agree),
    - productive (I completely disagree vs I completely agree),
    - self-worth (I completely disagree vs I completely agree),
    - and successful (I completely disagree vs I completely agree)
- The environmental concern felt by the subjects was measured through a 7-point multi-items likert scale (Haws, K. L., Winterich, K. P., & Naylor, R. W., 2014).:
    - It is important to me that the products I use do not harm the environment (I completely disagree vs I completely agree),
    - I consider the potential environmental impact of my actions when making many of my decisions (I completely disagree vs I completely agree),
    - My purchase habits are affected by my concern for our environment (I completely disagree vs I completely agree),
    - I am concerned about wasting the resources of our planet (I completely disagree vs I completely agree),
    - I would describe myself as environmentally responsible (I completely disagree vs I completely agree),
    - I am willing to be inconvenience in order to take actions that are more environmentally friendly (I completely disagree vs I completely agree),
- Lastly, it was asked to the respondents to answer to some questions related to their ecolabel attitudes thanks to a 7-point multi-items likert scale (D'Souza, C., et all, 2007):
    - I find ecolabels difficult to understand (I completely disagree vs I completely agree),
    - I believe that ecolabels are accurate (I completely disagree vs I completely agree),
    - I am satisfied with the ecolabels (I completely disagree vs I completely agree),
    - The quality of products with ecolabels is as good as that of products without an ecolabel (I completely disagree vs I completely agree),

- The quality of green products is as good as that of alternative products (I completely disagree vs I completely agree).

The participants were recruited through a panel of respondents gently supplied by Luiss Guido Carli University and implemented with a snowball sampling method. The subjects interviewed are born in Italy between the 2003 and the 1931. The total amount of subjects who have completed the online questionnaire were five hundred and eight people ($AV_{age} = 47{,}33$; Standard Deviation $(SD_{age}) = 17.10$).

From the demographic analysis also emerges that the 58% of the sample were woman and the 55% of the total sample have obtained only a high school diploma.

In the following tables is possible to better understand the main sample's characteristics:

Gender	Frequency	Percentage
Man	213	41,7%
Woman	298	58,3%

Table 3: Personal representation of the gender distribution among the survey's respondents

Geographical area of origin	Frequency	Percentage
North-east	93	18,2%
North-west	123	24,1%
Centre	131	25,6%
South and island	164	32,1%

Table 4: Personal representation of the geographical area of origin distribution among the survey's respondents

Level of education	Frequency	Percentage
High school diploma	279	55,22%
Bachelor's degree	80	15,8%
Master's degree	117	23,2%
PHD	9	1,8%
Post-Graduate course	14	2,8%
MBA	6	1,2%

Table 5: Personal representation of the level of education distribution among the survey's respondents

3.2.2. Manipulation checks – Results

There were collected 704 responses but only 508 were considered eligible to be considered as complete and valid for the analysis. According to the following table, the four randomized manipulations were equally exposed to the subjects:

Manipulation	Frequency	Percentage
WFTO label	137	25,3%
ICEA label	134	24,7%
SOIL label	134	24,7%
EU label	137	25,3%

Table 6: Personal representation of the conditions' exposure of the respondents

There were done two t-test analyses with the aim to observe if there is a statistically significant difference among the manipulation on the basis of the two variables of the study: the conceptual and the visual fluency.

The first t-test analysis was focused on understanding if there is a significant mean difference between the high visual complexity conditions (EU label and SOIL one) vs the low visual complexity conditions (the WFTO and ICEA labels) on the basis of the average visual fluency. The hypotheses of the Levene's test for equal variances assumptions are:

- H0: $\sigma 2 = \sigma 2$
- H1: $\sigma 2 \neq \sigma 2$

The research cannot reject the null hypothesis, so the variances are assumed to be equivalent. $AV_{High\ Visual\ Complexity}$ = 4.48 (SD = 1.62); $AV_{Low\ Visual\ Complexity}$ = 4.77 (SD =1.48); F=2,262 p=.133 Observing the results of the t-test related to the equal variances assumption, the hypothesises stated are:

- H0: There is not mean difference between the high visual complexity logos and the low visual complexity ones in terms of ecolabel visual fluency.
- H1: There is a mean difference between the high visual complexity logos and the low visual complexity ones in terms of ecolabel visual fluency.

The results highlight the possibility to reject the status quo, hence there is a statistical mean difference between the two variables. ($AV_{High\ Visual\ Complexity}$ = 4.48 (SD = 1.62); $AV_{Low\ Visual\ Complexity}$ = 4.77 (SD =1.48); t(517)=-2.101 p=.036)

The second manipulation check was focused on the research of a meaningful mean difference between the high conceptual complexity group (SOIL and WFTO labels) and the low conceptual complexity ones (EU and ICEA logos) on the basis of the conceptual fluency. Firstly, the sample variances were analysed through the Levene's test using the next hypothesises:

- H0: σ2=σ2
- H1: σ2≠σ2

The study failed on rejecting the status quo because the variances are assumed to be different. $AV_{High\ Conceptual\ Complexity}$ = 4.25 (SD = 1.80); $AV_{Low\ Conceptual\ Complexity}$ = 4.50 (SD =1.67); F=2.605 p=.107 Secondly, the research considered the t-test values for the variances assumed to be different with the subsequently hypothesises:

- H0: There is not mean difference between the high conceptual complexity logos and the low conceptual complexity ones in terms of ecolabel conceptual fluency.
- H1: There is a mean difference between the high conceptual complexity logos and the low conceptual complexity ones in terms of ecolabel conceptual fluency.

From the results obtained by the t-test emerge that there is a marginally significant mean difference. $AV_{High\ Conceptual\ Complexity}$ = 4.25 (SD = 1.80); $AV_{Low\ Conceptual\ Complexity}$ = 4.50 (SD =1.67); t(517)=-1.611 p=.108

After that, there were conducted several Cronbach's alpha analyses in order to check the reliability of the scales used to measure the dependent variables and the mediators that there are in the survey.

The results obtained are the following one:

- Willingness to Buy (Cronbach's alpha = 0.965)
- Share of Voice (Cronbach's alpha = 0.975)
- Perceived quality (Cronbach's alpha = 0.967)
- Perceived attributes (Cronbach's alpha = 0.947)
- Proud (Cronbach's alpha = 0.960)
- Environmental Concern (Cronbach's alpha = 0.947)
- Ecolabel Attitude (Cronbach's alpha with the first item eliminated = 0.840)

It is possible to affirm that all the scales used in the test have an optimal level of reliability, because all of them have a Cronbach's alpha that is higher than 0.8 points.
In order to use all these scales into the following analyses, it was calculated their average values and thy were transferred to the new items:

- Average Willingness to Buy;
- Average Share of Voice;
- Average Perceived quality;
- Average Perceived attributes;
- Average Proud;
- Average Environmental Concern;
- Average Ecolabel Attitude.

Lastly, it was also useful to analyse if the first visual stimuli in the survey flow and the second ones with the zoom on the ecolabel are perceived as different on the basis of the dependent variable.
A paired sample t-test was performed between the two product visualizations with the following hypotheses:

- H1a: Average Willingness to Buy in the first stimulus is equal to the Average Willingness to Buy in the second one.
- H1b: Average Willingness to Buy in the first stimulus is different to the Average Willingness to Buy in the second one.
- H2a: Willingness to Pay in the first stimulus is equal to the Willingness to pay in the second one.
- H2b: Willingness to Pay in the first stimulus is different to the Willingness to Pay in the second one.
- H3a: Average Share of Voice in the first stimulus is equal to the Average Share of Voice in the second one.
- H3b: Average Share of Voice in the first stimulus is different to the Average Share of Voice in the second one.
- H4a: Average Perceived Quality in the first stimulus is equal to the Average Perceived Quality in the second one.
- H4b: Average Perceived Quality in the first stimulus is different to the Average Perceived Quality in the second one.
- H5a: Average Perceived Attributes in the first stimulus is equal to the Average Perceived Attributes in the second one.

- H5b: Average Perceived Attributes in the first stimulus is different to the Average Perceived Attributes in the second one.

The results obtained by the test are the following ones:

		Mean	Standard Deviation	Mean Standard Error
Pair 1	WTB1	3.78	1.58	0.06
	WTB2	4.32	1.6	0.06
Pair 2	WTP1	1.49	0.95	0.04
	WTP2	1.68	1.02	0.04
Pair 3	SoV1	3.67	1.58	0.06
	SoV2	4.26	1.6	0.06
Pair 4	PATT1	4.45	1.47	0.06
	PATT2	4.99	1.52	0.06
Pair 5	PerQ1	4.06	1.48	0.06
	PerQ2	4.74	1.49	0.06

Table 7: Dependent variables' mean values

		Paired differences							
		Mean	Standard Deviation	Mean standard error	95% confidence interval of difference		t	gl	Sign. (two tails)
					Lower	Upper			
Pair 1	AV_WTB1 - AV_WTB2	-0,54206	1,03604	0,04513	-0,63072	-0,4534	-12,011	526	0
Pair 2	AV_SoV1 - AV_SoV2	-0,59288	0,98365	0,04297	-0,67729	-0,50846	-13,797	523	0
Pair 3	AV_PerQ1 - AV_PerQ2	-0,67414	1,09812	0,04797	-0,76838	-0,5799	-14,053	523	0
Pair 4	AV_PerATT1 - AV_PerATT2	-0,53394	0,99142	0,04335	-0,6191	-0,44877	-12,316	522	0
Pair 5	AV_WTP1 - AV_WTP2	-0,19282	0,51483	0,02249	-0,23701	-0,14864	-8,574	523	0

Table 8: Dependent variables' statistical differences

From the results represented in the tables above it is possible to understand that all the variables have obtained significant different values between the two visual stimuli.

Thus, it is possible to reject all the null hypotheses previously cited for all the dependent variables.

3.2.3. Visual and Conceptual complexity analysis – Results

The hypotheses that are discussed and tested in this paragraph are the following one:

H2a: *"Product using Low Visual Complexity logos (vs High Visual Complexity) will generate more favourable consumer responses, as: willingness to buy, willingness to pay, share of voice, perceived quality and perceived attributes."*

H2b: *"Ecolabel Conceptual Complexity will moderate the relationship between the visual complexity and the consumer responses. Specifically, when the label has a low conceptual complexity, a Low visual complexity ecolabel (vs a High Visual Complexity one) leads to higher consumer outputs."*

To test these hypotheses, the visual complexity experimental condition was coded into a binary variable, which is classified with 0 the low visual complexity ecolabels and with 1 those labels with a high degree of visual complexity.

Moreover, the conceptual complexity variable was coded as well as the visual one into a binary variable in which the 0 was assigned to the labels with a low degree of conceptual complexity, and the 1 was allocated to the labels with a high degree of conceptual complexity.

The first analysis to be conducted has involved the willingness to buy after the first visualization of the stimulus.

Descriptive statistics				
VComplexity	CComplexity	Mean	Standard Deviation	N
0	0	3,7989	1,46064	126
	1	3,8635	1,63102	127
	Total	3,8314	1,54578	253
1	0	3,7183	1,55481	129
	1	3,828	1,6922	126
	Total	3,7725	1,62187	255
Total	0	3,7582	1,50659	255
	1	3,8458	1,65856	253
	Total	3,8018	1,58314	508

Table 9: Personal representation of the descriptive statistics

At a descriptive level is possible to affirm that the condition with low visual complexity and high degree of conceptual complexity has reached the highest mean among all the conditions.

Then, there was the analyses of the Levene's test equality of error variances with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

From the results emerge that is not possible to reject the null hypothesis: F (3,504) = 0.236; p=.871 So, the test assumption is verified, and it is possible to continue with the study.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	446,837a	6	74,473	45,287	0	0,352	271,721	1
Intercept	0,005	1	0,005	0,003	0,958	0	0,003	0,05
VComplexity	0,567	1	0,567	0,345	0,557	0,001	0,345	0,09
CComplexity	1,463	1	1,463	0,89	0,346	0,002	0,89	0,156
AV_EnvConc	47,492	1	47,492	28,88	0	0,055	28,88	1
AV_Ecoatt	159,467	1	159,467	96,971	0	0,162	96,971	1
Generations	1,314	1	1,314	0,799	0,372	0,002	0,799	0,145
VComplexity * CComplexity	1,318	1	1,318	0,802	0,371	0,002	0,802	0,145
Error	823,881	501	1,644					
Total	8613,333	508						
Total corrected	1270,718	507						

Table 10: Personal representation of the two way ANOVA

Observing the table of results, it is possible to conclude that the model is correct, F (6, 501) = 45.287, p=.000, but only the environmental concern and the ecolabel attitude variables have obtained significant values. F_EnvConc (1,501)=28.88, p<.001; F_EcoAtt (1,501)=96,971, p=.000 In conclusion, is possible to affirm that is not possible to reject the null hypotheses, except for the 2 covariates.

The second analysis was related to the willingness to buy after the second visualization of the of the product. The results of this analysis are the following one:

Descriptive statistics				
VComplexity	CComplexity	Mean	Standard Deviation	N
0	0	4,4101	1,50387	126
	1	4,3333	1,60686	127
	Total	4,3715	1,55381	253
1	0	4,2558	1,62634	129
	1	4,3571	1,65526	126
	Total	4,3059	1,63824	255
Total	0	4,332	1,56585	255
	1	4,3452	1,62795	253
	Total	4,3386	1,59551	508

Table 11: Personal representation of the descriptive statistics

Thanks to the table above it is possible to understand that, at a descriptive level, the condition with low visual complexity and a low conceptual complexity has the highest mean among all the conditions. Subsequently, the Levene's was conducted with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

It is not possible to reject the null hypothesis. F (3,504) = 0.317; p=.813 The test assumption is verified, and it is possible to continue with the study.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	573,698a	6	95,616	66,816	0	0,445	400,894	1
Intercept	0,007	1	0,007	0,005	0,944	0	0,005	0,051
VComplexity	0,656	1	0,656	0,458	0,499	0,001	0,458	0,104
CComplexity	0,204	1	0,204	0,142	0,706	0	0,142	0,066
AV_EnvConc	114,093	1	114,093	79,727	0	0,137	79,727	1
AV_Ecoatt	144,231	1	144,231	100,787	0	0,167	100,787	1
Generations	0,402	1	0,402	0,281	0,596	0,001	0,281	0,083
VComplexity * CComplexity	3,71	1	3,71	2,592	0,108	0,005	2,592	0,362
Error	716,954	501	1,431					
Total	10852,89	508						
Total corrected	1290,653	507						

Table 12: Personal representation of the two way ANOVA

The table of results above shows that the model is correct. F (6, 501) = 66.816, p =.000 Moreover, there is a marginally significant interaction effect between the two main variables. F(1,501) = 2.592, p=.108

So, it is possible to conclude that the ecolabels with both low conceptual and visual complexity have a statistically higher mean than the other conditions. The environmental concern and the ecolabel attitude variables have also statistically significant values. F_EnvConc (1,501) = 79.727, p=.000; F_EcoAtt (1,501) = 100.787, p=.000.

The third analysis involved the share of voice after the first visual stimulus. The results are:

Descriptive statistics				
VComplexity	CComplexity	Mean	Standard Deviation	N
0	0	3,627	1,51179	126
	1	3,8451	1,64472	127
	Total	3,7365	1,58057	253
1	0	3,584	1,5729	129
	1	3,7063	1,61251	126
	Total	3,6444	1,59064	255
Total	0	3,6052	1,54012	255
	1	3,776	1,62701	253
	Total	3,6903	1,58473	508

Table 13: Personal representation of the descriptive statistics

From the table above, it is possible to understand that the manipulation with low visual complexity and a high level of visual complexity has obtained the highest mean at a descriptive level. Therefore, the equality of error variances Levene's test was conducted with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

It is not possible to reject the null hypothesis, because the p-value is higher than 0.05. F (3,504) = 0.350; p=.789 The study assumption is verified, and it is possible to continue with the analysis.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	473,122a	6	78,854	49,373	0	0,372	296,237	1
Intercept	1,917	1	1,917	1,2	0,274	0,002	1,2	0,194
VComplexity	0,224	1	0,224	0,14	0,708	0	0,14	0,066
CComplexity	4,772	1	4,772	2,988	0,085	0,006	2,988	0,407
AV_EnvConc	63,015	1	63,015	39,456	0	0,073	39,456	1
AV_Ecoatt	139,562	1	139,562	87,385	0	0,149	87,385	1
Generations	8,393	1	8,393	5,255	0,022	0,01	5,255	0,629
VComplexity * CComplexity	0,083	1	0,083	0,052	0,82	0	0,052	0,056
Error	800,15	501	1,597					
Total	8191,333	508						
Total corrected	1273,272	507						

Table 14: Personal representation of the two way ANOVA

The table above illustrate the results and it is possible to affirm that the model fit is valid. F (6, 501)=49.373, p =.000. There is a marginally significant interaction effect between the two main variables. F(1,501)=0.052, p=.820 The environmental concern, the ecolabel attitude, and the generation variables registered significant values. F_EnvConc (1,501)=79.727, p=.000; F_EcoAtt(1,501)=100.787, p=.000 ,F_Generations(1,501)= 5.255, p=.022

The fourth analysis was related to the variation of share of voice after the second visual stimulus and it has obtained the following results:

Descriptive statistics				
VComplexity	CComplexity	Mean	Standard Deviation	N
0	0	4,3413	1,45661	126
	1	4,4383	1,62362	127
	Total	4,39	1,54042	253
1	0	4,124	1,70226	129
	1	4,2593	1,56738	126
	Total	4,1908	1,63519	255
Total	0	4,2314	1,58627	255
	1	4,3491	1,59522	253
	Total	4,29	1,59026	508

Table 15: Personal representation of the descriptive statistics

The manipulation with low visual complexity and a high level of conceptual complexity has obtained the highest mean among the conditions. Then, the Levene's test was exercised with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

From the results emerge that is not possible to reject the null hypothesis: F (3,504) = 1.290; p=.277 The assumption of the test is verified, and it is possible to proceed with the study.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	585,762a	6	97,627	70,235	0	0,457	421,408	1
Intercept	0,127	1	0,127	0,091	0,763	0	0,091	0,06
VComplexity	0,425	1	0,425	0,306	0,58	0,001	0,306	0,086
CComplexity	2,598	1	2,598	1,869	0,172	0,004	1,869	0,276
AV_EnvConc	101,159	1	101,159	72,776	0	0,127	72,776	1

AV_Ecoatt	159,898	1	159,898	115,033	0	0,187	115,033	1
Generations	0,003	1	0,003	0,002	0,961	0	0,002	0,05
VComplexity * CComplexity	1,354	1	1,354	0,974	0,324	0,002	0,974	0,166
Error	696,396	501	1,39					
Total	10631,56	508						
Total corrected	1282,158	507						

Table 16: Personal representation of the two way ANOVA

Thanks to the table above is possible to understand that the model is correct, F (6, 501) = 70.235, p =.000. Among all the variables analysed, only the environmental concern and the ecolabel attitude variables have obtained significant values. F_EnvConc (1,501)=72.776, p=.000; F_EcoAtt (1,501)=115.033, p=.000.

In conclusion, it is possible to affirm that is not possible to reject the null hypotheses, except for the 2 covariates.

The fifth analysis has involved the perceived quality after the first observation of the visual stimulus, and it has obtained the following results:

Descriptive statistics				
VComplexity	CComplexity	Mean	Standard Deviation	N
0	0	4,131	1,44108	126
	1	4,128	1,39332	127
	Total	4,1294	1,41449	253
1	0	4,1066	1,51386	129
	1	3,9623	1,58116	126
	Total	4,0353	1,54612	255
Total	0	4,1186	1,47549	255
	1	4,0455	1,48918	253
	Total	4,0822	1,48131	508

Table 17: Personal representation of the descriptive statistics

The table above illustrates the mean values obtained by the manipulations at a descriptive level. The manipulation with low visual complexity and a low degree of conceptual complexity has reached the highest mean among the conditions. Therefore, the Levene's test was done with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

Also in this case, it is not possible to reject the null hypothesis: F (3,504) = 0.479; p=.697

So, the assumption of the test is verified, and it is possible to continue with the analysis.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	371,542a	6	61,924	41,869	0	0,334	251,216	1
Intercept	9,208	1	9,208	6,226	0,013	0,012	6,226	0,702
VComplexity	0,059	1	0,059	0,04	0,841	0	0,04	0,055
CComplexity	0,357	1	0,357	0,241	0,624	0	0,241	0,078
AV_EnvConc	49,696	1	49,696	33,602	0	0,063	33,602	1
AV_Ecoatt	113,126	1	113,126	76,489	0	0,132	76,489	1
Generations	3,876	1	3,876	2,621	0,106	0,005	2,621	0,366
VComplexity * CComplexity	0,002	1	0,002	0,001	0,973	0	0,001	0,05
Error	740,965	501	1,479					
Total	9577,938	508						
Total corrected	1112,506	507						

Table 18: Personal representation of the two way ANOVA

From the study emerges that the model is correct. F (6, 501) = 41.869, p =.000 The environmental concern, the ecolabel attitude, and the generation variables have obtained statistically significant values. F_EnvConc (1,501) = 33,602, p=.000; F_EcoAtt (1,501) = 76,489, p=.000; F_Generations (1,501) = 2.621, p=.106.

The sixth analysis was linked to the mean values of perceived quality after the second observation of the visual stimulus, and it has obtained the following results:

Descriptive statistics				
VComplexity	CComplexity	Mean	Standard Deviation	N
0	0	4,8571	1,36507	126
	1	4,9232	1,50347	127
	Total	4,8903	1,43375	253
1	0	4,6764	1,51439	129
	1	4,5873	1,55252	126
	Total	4,6324	1,53097	255
Total	0	4,7657	1,44255	255
	1	4,7559	1,53432	253
	Total	4,7608	1,4875	508

Table 19: Personal representation of the descriptive statistics

At a descriptive level it is possible to affirm that the condition with low conceptual complexity and a high visual complexity is the highest mean among the conditions. Then, the Levene's test of equality of error variances was done with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

From the results emerge that is not possible to reject the null hypothesis. F (3,504) = 0.811; p=.488 Thus, the test assumption is verified, and it is possible to continue with the study.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	545,772a	6	90,962	79,112	0	0,487	474,673	1
Intercept	12,926	1	12,926	11,242	0,001	0,022	11,242	0,917
VComplexity	2,219	1	2,219	1,93	0,165	0,004	1,93	0,284
CComplexity	0,021	1	0,021	0,019	0,891	0	0,019	0,052
AV_EnvConc	96,935	1	96,935	84,307	0	0,144	84,307	1
AV_Ecoatt	150,216	1	150,216	130,647	0	0,207	130,647	1
Generations	7,357	1	7,357	6,399	0,012	0,013	6,399	0,714
VComplexity * CComplexity	0,008	1	0,008	0,007	0,933	0	0,007	0,051
Error	576,043	501	1,15					
Total	12635,88	508						
Total corrected	1121,815	507						

Table 20: Personal representation of the two way ANOVA

Observing the table of results, it is possible to conclude that the model is correct. F (6, 501) = 79.112, p =.000 Only the environmental concern, the ecolabel attitude, and the generation variables have obtained significant values. F_EnvConc (1,501) = 84.307, p=.000; F_EcoAtt (1,501) = 130.647, p=.000; F_Generations (1,501) = 6.399, p=.012. In conclusion, it is possible to refuse the hypothesis 0 for the 3 covariates.

The seventh analysis involved the perceived attributes after the first visual stimulus. The obtained results are the following one:

Descriptive statistics				
VComplexity	CComplexity	Mean	Standard Deviation	N
0	0	4,5575	1,42062	126
	1	4,5906	1,53131	127
	Total	4,5741	1,47438	253
1	0	4,3984	1,42925	128
	1	4,3214	1,53748	126
	Total	4,3602	1,48149	254
Total	0	4,4774	1,42439	254
	1	4,4565	1,53726	253
	Total	4,467	1,48036	507

Table 21: Personal representation of the descriptive statistics

At a descriptive level, it is possible to see that the condition with a low visual complexity and a high level of conceptual complexity has reached the highest mean among the

manipulations.

Subsequently, the Levene's test was conducted with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

From the results emerge that is not possible to reject the null hypothesis: F (3,503) = 0.247; p=.863 Thus, the test assumption is verified, and it is possible to continue with the study.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	345,363a	6	57,561	37,694	0	0,311	226,165	1
Intercept	33,313	1	33,313	21,815	0	0,042	21,815	0,997
VComplexity	1,144	1	1,144	0,749	0,387	0,001	0,749	0,139
CComplexity	0,008	1	0,008	0,005	0,942	0	0,005	0,051
AV_EnvConc	41,971	1	41,971	27,485	0	0,052	27,485	0,999
AV_Ecoatt	106,929	1	106,929	70,024	0	0,123	70,024	1
Generations	5,798	1	5,798	3,797	0,052	0,008	3,797	0,494
VComplexity * CComplexity	0,002	1	0,002	0,001	0,974	0	0,001	0,05
Error	763,521	500	1,527					
Total	11225,44	507						
Total corrected	1108,884	506						

Table 22: Personal representation of the two way ANOVA

The model is valid, F (6, 500) = 37.694, p =.000. The environmental concern, the ecolabel attitude, and the generation were the only variables which have obtained statistically significant values. F_EnvConc (1,500) = 27.485, p=.000; F_EcoAtt (1,500) = 70.024, p=.000; F_Generations (1,500) = 3.797, p=.052. It is possible to conclude that is not possible to reject the null hypothesis for the 3 covariates variables.

The eight analysis was focused on the mean perceived attributes consequently to the second visual stimulus.

Descriptive statistics				
VComplexity	CComplexity	Mean	Standard Deviation	N
0	0	5,0972	1,4064	126
	1	5,1732	1,53255	127
	Total	5,1354	1,46866	253
1	0	4,9593	1,54515	129
	1	4,8234	1,57005	126
	Total	4,8922	1,55593	255
Total	0	5,0275	1,47693	255
	1	4,999	1,55815	253
	Total	5,0133	1,51649	508

Table 23: Personal representation of the descriptive statistics

At a descriptive level, the condition with low visual complexity and high conceptual complexity have got the highest mean among all the manipulations of the study. Consequently, the equality of error variances Levene's test was done with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

From the results came out that is not possible to reject the null hypothesis: F (3,504) = 0.245; p=.865 Thus, the assumption of the test is checked, and it is possible to go on with the study.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	487,027a	6	81,171	59,897	0	0,418	359,382	1
Intercept	33,186	1	33,186	24,489	0	0,047	24,489	0,999
VComplexity	1,844	1	1,844	1,36	0,244	0,003	1,36	0,214
CComplexity	0,004	1	0,004	0,003	0,956	0	0,003	0,05
AV_EnvConc	89,673	1	89,673	66,17	0	0,117	66,17	1
AV_Ecoatt	128,411	1	128,411	94,755	0	0,159	94,755	1
Generations	1,764	1	1,764	1,302	0,254	0,003	1,302	0,207
VComplexity * CComplexity	0,099	1	0,099	0,073	0,787	0	0,073	0,058
Error	678,945	501	1,355					
Total	13933,56	508						
Total corrected	1165,973	507						

Table 24: Personal representation of the two way ANOVA

From the table of results emerges that the model is correct, F (6, 501) = 59.897, p =.000. The environmental concern and the ecolabel attitude variables have got statistically significant values. F_EnvConc (1,501) = 66,170, p=.000; F_EcoAtt (1,501) = 94,755, p=.000. In this analysis it is possible to refuse the hypothesis 0 for the 2 covariates variables.

The ninth analysis includes the average willingness to pay resulting from the first display of the stimulus and it has obtained the following results:

Descriptive statistics				
VComplexity	CComplexity	Mean	Standard Deviation	N
0	0	1,5485	0,96928	126
	1	1,4024	0,95271	127
	Total	1,4752	0,96188	253
1	0	1,568	0,92966	129
	1	1,4351	0,9562	126
	Total	1,5023	0,94336	255
Total	0	1,5584	0,94762	255
	1	1,4187	0,95269	253
	Total	1,4888	0,95178	508

Table 25: Personal representation of the descriptive statistics

The condition with high visual complexity and a low degree of conceptual complexity has reached the highest mean value. Subsequently, the Levene's test was done with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

From the results emerge that is not possible to reject the null hypothesis: F (3,504) = 0.192; p=.902 Thus, the test assumption is verified, and it is possible to continue with the study.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	34,658a	6	5,776	6,815	0	0,075	40,892	1
Intercept	10,753	1	10,753	12,687	0	0,025	12,687	0,945
VComplexity	0,349	1	0,349	0,412	0,521	0,001	0,412	0,098
CComplexity	2,403	1	2,403	2,836	0,093	0,006	2,836	0,39
AV_EnvConc	0,421	1	0,421	0,497	0,481	0,001	0,497	0,108
AV_Ecoatt	19,006	1	19,006	22,425	0	0,043	22,425	0,997
Generations	1,528	1	1,528	1,803	0,18	0,004	1,803	0,268
VComplexity * CComplexity	0,15	1	0,15	0,176	0,675	0	0,176	0,07
Error	424,628	501	0,848					
Total	1585,28	508						

Total corrected	459,286	507						

Table 26: Personal representation of the two way ANOVA

Observing the table of results above it is possible to conclude that the model is correct. F(6,501)=6.815, p=.000. Furthermore, the conceptual complexity has registered a marginally significant value. F_CCompl (1,501) = 2.836 p=.093. So, we can conclude that the logos with low conceptual complexity have a higher statistically significant mean willingness to pay than the high conceptual complexity ecolabel. Only the ecolabel attitude variables have obtained significant values. F_EcoAtt (1,501) = 22.425, p=.000. In conclusion, it is possible to affirm that is not possible to reject the null hypotheses related to the main and the moderation effects. Conversely is possible to refuse the hypothesis 0 for the ecolabel attitude.

The last analysis conducted was related to the willingness to pay after the second observation of the visual stimulus and it has obtained the following results:

Descriptive statistics				
VComplexity	CComplexity	Mean	Standard Deviation	N
0	0	4,5575	1,42062	126
	1	4,5906	1,53131	127
	Total	4,5741	1,47438	253
1	0	4,3984	1,42925	128
	1	4,3214	1,53748	126
	Total	4,3602	1,48149	254
Total	0	4,4774	1,42439	254
	1	4,4565	1,53726	253
	Total	4,467	1,48036	507

Table 27: Personal representation of the descriptive statistics

At a descriptive level is possible to affirm that the condition with low visual complexity and a high degree of conceptual complexity has reached the highest mean among all the conditions considered.

Then, the Levene's test was done with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

From the results emerge that is not possible to reject the null hypothesis: F (3,504) = 0.316; p=.814 Thus, the assumption of the test is verified, and it is possible to continue with the study.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	60,996a	6	10,166	10,824	0	0,115	64,941	1
Intercept	11,119	1	11,119	11,838	0,001	0,023	11,838	0,93
VComplexity	0,006	1	0,006	0,006	0,938	0	0,006	0,051
CComplexity	1,106	1	1,106	1,177	0,278	0,002	1,177	0,191
AV_EnvConc	2,569	1	2,569	2,735	0,099	0,005	2,735	0,379
AV_Ecoatt	26,083	1	26,083	27,77	0	0,053	27,77	1
Generations	12,907	1	12,907	13,742	0	0,027	13,742	0,959
VComplexity * CComplexity	0,237	1	0,237	0,252	0,616	0,001	0,252	0,079
Error	470,565	501	0,939					
Total	1971,664	508						
Total corrected	531,561	507						

Table 28: Personal representation of the two way ANOVA

Observing the table of results, it is possible to conclude that the model is correct, F (6, 501) = 10.824, p=.000. Only the environmental concern, the ecolabel attitude, and the generation variables have obtained significant values. F_EnvConc (1,501) = 2.735, p=.099; F_EcoAtt (1,501) = 27.77, p=.000; F_Generations (1,501) =13.742, p=.000.

In conclusion, is possible to affirm that is not possible to reject the null hypothesis related to the main and the moderation effects. Conversely, it is possible to refuse the hypothesis 0 for the 3 covariates.

3.2.4. Colours, generations, and consumer responses – Results

In this paragraph are analysed and discussed the following hypotheses:

H3a: *The consumer responses to a product will be more positive when the consumer is belonging to a young generation (Z generation and Millennials) than an older one (X generation and Baby Boomers).*

H3b: *Ecolabel colour will moderate the relationship between the generation of belonging and the consumer responses. Specifically, when the label is multicolour, a young generation of belonging (vs an older one) leads to higher consumer outputs.*

In order to test the hypotheses stated, the generation of belonging condition was coded into a variable in which: the respondents who are born between the 2015 and the 1981 were code with 0, and the subjects who are born between the 1980 and the 1926 were code with 1.

Furthermore, the colour variable was coded into 3 main conditions: the first one was the EU green ecolabel, and it was coded with 1, the second label is the WFTO multicolour label which was coded with 2, and the SOIL white one with the number 3.

The ICEA label was excluded by the analysis because it was not classifiable in one of the three colour conditions previously cited.

Therefore, the distribution of frequency of the respondents among the condition is:

		Classification	N
Generations	0	Other	245
	1	Millennial	137
Colors	1	verde	129
	2	Multicolor	127
	3	Bianco	126

Table 29: Personal representation of the descriptive statistics

Additionally, the environmental concern, the ecolabel attitude, the proudness, and the guiltiness were added to the study as covariates. As in the previously analysis, there were conducted Two-way ANOVA analyses.

The first analysis has involved the willingness to buy after the first visualization of the stimulus and it has obtained the following results.

Descriptive statistics				
Generations	Colours	Mean	Standard Deviation	N
Other	Green	3,8519	1,60208	81
	Multicolor	3,9563	1,63117	84
	White	4,0875	1,75724	80
	Total	3,9646	1,65999	245
Millennial	Green	3,4931	1,46025	48
	Multicolor	3,6822	1,63454	43
	White	3,3768	1,48508	46
	Total	3,5134	1,51895	137
Total	Green	3,7183	1,55481	129
	Multicolor	3,8635	1,63102	127
	White	3,828	1,6922	126
	Total	3,8028	1,62335	382

Table 30: Personal representation of the descriptive statistics

At a descriptive level is possible to affirm that the respondents who have seen the SOIL label and are from the "other" condition have obtained the highest mean among all the conditions considered. Then, the Levene's test was analysed with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

From the results emerge that is not possible to reject the null hypothesis: F (5,376) = 1.314, p=.257 So, the test assumption is verified, and it is possible to continue with the study.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	506,095a	9	56,233	42,01	0	0,504	378,094	1
Intercept	1,416	1	1,416	1,058	0,304	0,003	1,058	0,177
Generations	0,131	1	0,131	0,098	0,755	0	0,098	0,061
Colours	1,08	2	0,54	0,404	0,668	0,002	0,807	0,115
Generations * Colours	2,578	2	1,289	0,963	0,383	0,005	1,926	0,217
AV_Guilty	1,196	1	1,196	0,893	0,345	0,002	0,893	0,156
AV_Proud	110,983	1	110,983	82,913	0	0,182	82,913	1
AV_EnvConc	12,403	1	12,403	9,266	0,003	0,024	9,266	0,859
AV_Ecoatt	16,04	1	16,04	11,983	0,001	0,031	11,983	0,932
Error	497,937	372	1,339					
Total	6528,222	382						
Total corrected	1004,033	381						

Table 31: Personal representation of the two way ANOVA

Observing the table of results, it is possible to conclude that the model is correct, F(9,372)=42.01, p=.000. The environmental concern, the ecolabel attitude and the

proudness variables were the only variables which have obtained significant values. F_EnvConc (1,372)=82.913, p=.000; F_EcoAtt (1,372)=11.983, p=.001; . F_Proud (1,372)=9.226, p=.003

The second analysis was related to the willingness to buy after the second visualization of the of the product with the zoom on the product. The results of this analysis are the following one:

Descriptive statistics				
Generations	Colours	Mean	Standard Deviation	N
Other	Green	4,3663	1,70832	81
	Multicolor	4,2738	1,72714	84
	White	4,5708	1,71384	80
	Total	4,4014	1,71405	245
Millennial	Green	4,0694	1,4763	48
	Multicolor	4,4496	1,3528	43
	White	3,9855	1,49395	46
	Total	4,1606	1,44795	137
Total	Green	4,2558	1,62634	129
	Multicolor	4,3333	1,60686	127
	White	4,3571	1,65526	126
	Total	4,315	1,62582	382

Table 32: Personal representation of the descriptive statistics

Thanks to the table above it is possible to understand that, at a descriptive level, the subjects from the "other" group have the highest mean among the conditions. Subsequently, the Levene's test was done with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

It is not possible to reject the null hypothesis. F(5,376)=1.069; p=.377 The test assumption is verified, and it is possible to continue with the study.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	616,281a	9	68,476	65,179	0	0,612	586,614	1
Intercept	0,494	1	0,494	0,47	0,493	0,001	0,47	0,105
Generations	3,308	1	3,308	3,149	0,077	0,008	3,149	0,425
Colours	1,752	2	0,876	0,834	0,435	0,004	1,668	0,193
Generations * Colours	6,978	2	3,489	3,321	0,037	0,018	6,642	0,627
AV_Guilty	1,337	1	1,337	1,273	0,26	0,003	1,273	0,203
AV_Proud	127,475	1	127,475	121,338	0	0,246	121,338	1
AV_EnvConc	24,07	1	24,07	22,911	0	0,058	22,911	0,998

AV_Ecoatt	20,778	1	20,778	19,778	0	0,05	19,778	0,993
Error	390,813	372	1,051					
Total	8119,667	382						
Total corrected	1007,094	381						

Table 33: Personal representation of the two way ANOVA

The table of results above shows that the model is correct. F (9, 372) = 65.179, p=.000 There is a marginally significant main effect between the generation of belonging and the willingness to buy. F(1,372) =3.149, p=.077 There is also a significant interaction effect between the two independent variables. Therefore, it is possible to conclude that the highest willingness to buy is perceived by the "others" group. It is also possible to affirm that the condition represented by the young sample and the multicolour ecolabel has reached the highest average willingness to buy. Moreover, the people who are belonging to the X and baby boomer's generations have a statistically higher mean willingness to buy than the millennials and the Z generations. The environmental concern and the ecolabel attitude variables have also statistically significant values. F_EnvConc (1,372)=22.911, p=.000; F_EcoAtt (1,372)=19.778, p=.000; F_Proud (1,372)=121.338, p=.000

The third analysis involved the willingness to pay after the first visual stimulus. The results are:

Descriptive statistics				
Generations	Colours	Mean	Standard Deviation	N
Other	Green	1,5863	1,0098	81
	Multicolor	1,3668	1,01865	84
	White	1,461	1,03336	80
	Total	1,4701	1,0204	245
Millennial	Green	1,5371	0,78519	48
	Multicolor	1,4721	0,81539	43
	White	1,39	0,81354	46
	Total	1,4673	0,8007	137
Total	Green	1,568	0,92966	129
	Multicolor	1,4024	0,95271	127
	White	1,4351	0,9562	126
	Total	1,4691	0,9464	382

Table 34: Personal representation of the descriptive statistics

From the table above, it is possible to understand that the respondents from the "other" group have obtained the highest mean willingness to pay at a descriptive level. Therefore, the equality of error variances Levene's test was performed with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

It is not possible to reject the null hypothesis, because the p-value is higher than .05. F (5,376) = 1.136; p=.341 The study assumption is verified, and it is possible to continue with the analysis.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	54,899a	9	6,1	7,924	0	0,161	71,32	1
Intercept	2,914	1	2,914	3,786	0,052	0,01	3,786	0,492
Generations	1,319	1	1,319	1,713	0,191	0,005	1,713	0,257
Colours	2,496	2	1,248	1,621	0,199	0,009	3,242	0,342
Generations * Colours	0,542	2	0,271	0,352	0,703	0,002	0,704	0,106
AV_Guilty	1,748	1	1,748	2,271	0,133	0,006	2,271	0,324
AV_Proud	18,976	1	18,976	24,652	0	0,062	24,652	0,999
AV_EnvConc	0,773	1	0,773	1,004	0,317	0,003	1,004	0,17
AV_Ecoatt	1,853	1	1,853	2,407	0,122	0,006	2,407	0,34
Error	286,35	372	0,77					
Total	1165,714	382						
Total corrected	341,25	381						

Table 35: Personal representation of the two way ANOVA

The table above illustrates the results, and it is possible to affirm that the model fit is valid. F (9, 372) = 7.924, p =.000 Only the proudness variable has obtained a significant value. F_Proud (1,372) =24.652, p=.000

The fourth analysis was related to the variation of willingness to pay after the second visual stimulus, and it has obtained the following results:

Descriptive statistics				
Generations	Colours	Mean	Standard Deviation	N
Other	Green	1,6549	0,9401	81
	Multicolor	1,5168	1,0635	84
	White	1,5734	1,01641	80
	Total	1,5809	1,0061	245
Millennial	Green	1,8231	1,05827	48
	Multicolor	1,8886	1,08303	43
	White	1,7241	1,07311	46
	Total	1,8104	1,06528	137
Total	Green	1,7175	0,98502	129
	Multicolor	1,6427	1,08039	127
	White	1,6284	1,03575	126
	Total	1,6632	1,03222	382

Table 36: Personal representation of the descriptive statistics

The subjects who are born between the 2015 and the 1981 and have seen the multicolour label, reached the highest mean willingness to pay among all the conditions. Then, the Levene's test of equality of error variances was exercised with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

From the results emerge that is not possible to reject the null hypothesis: F (5,376) = 0.692, p=.630 The assumption of the test is verified, and it is possible to proceed with the study.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	85,779	9	9,531	11,074	0	0,211	99,665	1
Intercept	2,294	1	2,294	2,665	0,103	0,007	2,665	0,37
Generations	12,456	1	12,456	14,472	0	0,037	14,472	0,967
Colours	0,609	2	0,305	0,354	0,702	0,002	0,708	0,107
Generations * Colours	0,633	2	0,317	0,368	0,692	0,002	0,736	0,109
AV_Guilty	0,101	1	0,101	0,117	0,732	0	0,117	0,063
AV_Proud	30,827	1	30,827	35,817	0	0,088	35,817	1
AV_EnvConc	0,406	1	0,406	0,472	0,493	0,001	0,472	0,105
AV_Ecoatt	2,501	1	2,501	2,906	0,089	0,008	2,906	0,398
Error	320,171	372	0,861					
Total	1462,71	382						
Total corrected	405,95	381						

Table 37: Personal representation of the two way ANOVA

Thanks to the table above is possible to understand that the model is correct, F (9, 372) = 11.074, p=.000 The generation of belonging has a statistically significant value. F_Gen (1,372)=14.472, p=.000. Thus, the Millennials and the Z-gens have a higher willingness to pay than the other generations. Moreover, only the proudness and the ecolabel attitude variables have obtained significant values. F_Proud (1,372)=35.817, p=.000; F_EcoAtt (1,372)=2.906, p=.089

The fifth analysis to be conducted has involved the share of voice after the first observation of the visual stimulus and it obtained the following results:

Descriptive statistics				
Generations	Colours	Mean	Standard Deviation	N
Other	Green	3,7737	1,64048	81
	Multicolor	3,9762	1,72763	84
	White	4	1,65353	80
	Total	3,917	1,67128	245
Millennial	Green	3,2639	1,4108	48
	Multicolor	3,5891	1,45449	43
	White	3,1957	1,41522	46
	Total	3,3431	1,42569	137
Total	Green	3,584	1,5729	129
	Multicolor	3,8451	1,64472	127
	White	3,7063	1,61251	126
	Total	3,7112	1,60945	382

Table 38: Personal representation of the descriptive statistics

The table above illustrates the mean values obtained by the conditions at a descriptive level. The respondents from "other" group who have seen the white label have reached the highest mean among the conditions. Therefore, the Levene's test of equality of error variances was done with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

Also in this case, it is not possible to reject the null hypothesis: F (5,376) = 1.064; p=.380 So, the assumption of the test is verified, and it is possible to continue with the analysis.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	516,242a	9	57,36	45,335	0	0,523	408,019	1
Intercept	3,78	1	3,78	2,988	0,085	0,008	2,988	0,407
Generations	1,963	1	1,963	1,552	0,214	0,004	1,552	0,237
Colours	1,125	2	0,562	0,444	0,642	0,002	0,889	0,122
Generations * Colours	2,474	2	1,237	0,978	0,377	0,005	1,956	0,22
AV_Guilty	2,348	1	2,348	1,856	0,174	0,005	1,856	0,274
AV_Proud	104,829	1	104,829	82,854	0	0,182	82,854	1
AV_EnvConc	19,048	1	19,048	15,055	0	0,039	15,055	0,972
AV_Ecoatt	12,248	1	12,248	9,68	0,002	0,025	9,68	0,874
Error	470,669	372	1,265					
Total	6248,111	382						
Total corrected	986,91	381						

Table 39: Personal representation of the two way ANOVA

From the study emerges that the model is correct, F(9,372) = 45.335, p=.000 The proudness, the environmental concern and the ecolabel attitude variables obtained are statistically significant values. F_Proud (1,372) = 45.335, p=.000; F_EnvConc (1,372) = 82.854, p=0.000; F_EcoAtt (1,372) = 15.055, p=.002.

The sixth analysis was linked to the mean values of share of voice after the second observation of the visual stimulus and it obtained the following results:

Descriptive statistics				
Generations	Colours	Mean	Standard Deviation	N
Other	Green	4,2387	1,74263	81
	Multicolor	4,3968	1,77101	84
	White	4,4667	1,65659	80
	Total	4,3673	1,7205	245
Millennial	Green	3,9306	1,63148	48
	Multicolor	4,5194	1,30385	43
	White	3,8986	1,34048	46
	Total	4,1046	1,45564	137
Total	Green	4,124	1,70226	129
	Multicolor	4,4383	1,62362	127
	White	4,2593	1,56738	126
	Total	4,2731	1,6334	382

Table 40: Personal representation of the descriptive statistics

At a descriptive level is possible to affirm that the subjects from the "millennial" group who have seen the multicolour label obtained the highest mean. Then, the Levene's test of equality of error variances was analysed with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

From the results emerge that is not possible to reject the null hypothesis: F (5,376) = 1.759; p=.120 Thus, the test assumption is verified, and it is possible to continue with the study.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	630,787a	9	70,087	67,595	0	0,621	608,354	1
Intercept	1,262	1	1,262	1,217	0,271	0,003	1,217	0,196
Generations	2,959	1	2,959	2,853	0,092	0,008	2,853	0,392
Colours	3,618	2	1,809	1,745	0,176	0,009	3,49	0,365
Generations * Colours	5,689	2	2,844	2,743	0,066	0,015	5,487	0,54
AV_Guilty	1,187	1	1,187	1,145	0,285	0,003	1,145	0,187
AV_Proud	128,984	1	128,984	124,397	0	0,251	124,397	1
AV_EnvConc	26,545	1	26,545	25,601	0	0,064	25,601	0,999

AV_Ecoatt	19,669	1	19,669	18,969	0	0,049	18,969	0,991
Error	385,718	372	1,037					
Total	7991,667	382						
Total corrected	1016,504	381						

Table 41: Personal representation of the two way ANOVA

Observing the table of results, it is possible to conclude that the model is correct. F (9,372) =67.595, p=.000 From the analysis emerges that there is a marginally significant main effect between the generation and the share of voice. F_Gen (1,372) = 2.853, p=.092. Thus, the subjects who are born before the 1981 have the highest share of voice. Moreover, there is also a marginally significant interaction effect between the two independent variables. F(2,372)=2.743, p=.066. The people from the "Millennials" group who have seen the WFTO label have obtained the highest mean value. Lastly, the proudness, the environmental concern, and the ecolabel attitude have obtained significant values too. F_Proud(1,372)= 124.397, p=.000, F_EnvConc (1,372)=25.601, p=.000; F_EcoAtt(1,372)=18.969, p=.000.

The seventh analysis involved the perceived quality after the first visual stimulus. The results obtained are the following one:

Descriptive statistics				
Generations	Colours	Mean	Standard Deviation	N
Other	Green	4,179	1,60236	81
	Multicolor	4,2679	1,46072	84
	White	4,2281	1,58573	80
	Total	4,2255	1,54373	245
Millennial	Green	3,9844	1,35898	48
	Multicolor	3,8547	1,22138	43
	White	3,5	1,47855	46
	Total	3,781	1,36576	137
Total	Green	4,1066	1,51386	129
	Multicolor	4,128	1,39332	127
	White	3,9623	1,58116	126
	Total	4,0661	1,49585	382

Table 42: Personal representation of the descriptive statistics

At a descriptive level, it is possible to see that the condition composed by the subjects from the "other" group who have seen the multicolour label have reached the highest mean. Subsequently, the Levene's test of equality of error variances was conducted with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

From the results emerge that is not possible to reject the null hypothesis: F (5,376) = 1.343, p=.245 Thus, the test assumption is verified, and it is possible to continue with the study.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	388,953a	9	43,217	34,681	0	0,456	312,126	1
Intercept	7,059	1	7,059	5,665	0,018	0,015	5,665	0,661
Generations	0,934	1	0,934	0,75	0,387	0,002	0,75	0,139
Colours	1,579	2	0,79	0,634	0,531	0,003	1,267	0,156
Generations * Colours	3,781	2	1,891	1,517	0,221	0,008	3,035	0,322
AV_Guilty	0,434	1	0,434	0,348	0,555	0,001	0,348	0,091
AV_Proud	86,242	1	86,242	69,207	0	0,157	69,207	1
AV_EnvConc	11,535	1	11,535	9,257	0,003	0,024	9,257	0,859
AV_Ecoatt	10,919	1	10,919	8,762	0,003	0,023	8,762	0,84
Error	463,565	372	1,246					
Total	7168,188	382						
Total corrected	852,518	381						

Table 43: Personal representation of the two way ANOVA

The model is valid, F (9,372) = 34.681, p=.000. The proudness, the environmental concern and the ecolabel attitude were the only variables which have obtained statistically significant values. F_Proud (1,372) = 69.207, p=.000. F_EnvConc (1,372) = 9.257, p=.003; F_EcoAtt (1,372) = 8.762, p=.003.

The eight analysis was focused on the mean perceived quality consequently to the second visual stimulus.

Descriptive statistics				
Generations	Colours	Mean	Standard Deviation	N
Other	Green	4,7377	1,54662	81
	Multicolor	4,7887	1,58803	84
	White	4,7156	1,63271	80
	Total	4,748	1,58308	245
Millennial	Green	4,5729	1,46861	48
	Multicolor	5,186	1,30029	43
	White	4,3641	1,39115	46
	Total	4,6953	1,42351	137
Total	Green	4,6764	1,51439	129
	Multicolor	4,9232	1,50347	127
	White	4,5873	1,55252	126
	Total	4,7291	1,52609	382

Table 44: Personal representation of the descriptive statistics

At a descriptive level, the respondents from the "millennials" group who have observed the multicolour label have got the highest mean in comparison with the other conditions. Consequently, the Levene's test of equality of error variances was done with the following hypotheses:

- H0: The error variances are equal

- H1: The error variances are different

From the results emerge that is not possible to reject the null hypothesis: F(5,376)=1.628, p=.152 Thus, the assumption of the test is checked, and it is possible to go on with the study.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	550,093a	9	61,121	67,421	0	0,62	606,792	1
Intercept	7,213	1	7,213	7,957	0,005	0,021	7,957	0,803
Generations	8,742	1	8,742	9,643	0,002	0,025	9,643	0,872
Colours	4,435	2	2,217	2,446	0,088	0,013	4,892	0,491
Generations * Colours	6,878	2	3,439	3,794	0,023	0,02	7,587	0,689
AV_Guilty	17,827	1	17,827	19,665	0	0,05	19,665	0,993
AV_Proud	68,715	1	68,715	75,798	0	0,169	75,798	1
AV_EnvConc	26,934	1	26,934	29,71	0	0,074	29,71	1
AV_Ecoatt	42,811	1	42,811	47,224	0	0,113	47,224	1
Error	337,24	372	0,907					
Total	9430,375	382						
Total corrected	887,332	381						

Table 45: Personal representation of the two way ANOVA

From the table of results emerges that the model is correct. F (9,372) = 67.421, p=.000. There is a significant main effect between the generation and the perceived quality. F(1,372)=9.643, p=.002. Thus, the subjects who are born before the 1981 have a higher mean than the other generations. There is also an interaction effect between the generation and the colour of the label. F(2,372)=3.794, p=.023. The respondents form the "millennials" group and have seen the multicolour label received the highest mean among all the conditions considered in the test.

Lastly, all the covariates have obtained statistically significant values. F_Guilt (1,372)=19.665, p=.000; F_Proud (1,372) =75.798, p=.000; F_EnvConc (1,372) =29.71, p=.000; F_Ecoatt (1,372) =47.224, p=.000.

The ninth analysis includes the average perceived attributes resulting from the first display of the stimulus and obtained the following results:

Descriptive statistics				
Generations	Colours	Mean	Standard Deviation	N
Other	Green	4,4691	1,42159	81
	Multicolor	4,7798	1,55976	84
	White	4,5375	1,56307	80
	Total	4,598	1,51634	245
Millennial	Green	4,2766	1,44954	47
	Multicolor	4,2209	1,41968	43
	White	3,9457	1,4317	46
	Total	4,1471	1,43096	136
Total	Green	4,3984	1,42925	128
	Multicolor	4,5906	1,53131	127
	White	4,3214	1,53748	126
	Total	4,437	1,50021	381

Table 46: Personal representation of the descriptive statistics

The people who are born before the 1981 and have seen the WFTO label have reached the highest mean value among the conditions. Subsequently, the Levene's test of equality of error variances was done with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

From the results emerge that is not possible to reject the null hypothesis: F(3,375)=1.368; p=.236 Thus, the test assumption is verified, and it is possible to continue with the study.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	400,496a	9	44,5	36,305	0	0,468	326,744	1
Intercept	18,395	1	18,395	15,008	0	0,039	15,008	0,972
Generations	0,356	1	0,356	0,29	0,59	0,001	0,29	0,084
Colours	0,868	2	0,434	0,354	0,702	0,002	0,708	0,107
Generations * Colours	3,465	2	1,732	1,413	0,245	0,008	2,827	0,303
AV_Guilty	1,493	1	1,493	1,218	0,27	0,003	1,218	0,196
AV_Proud	112,381	1	112,381	91,686	0	0,198	91,686	1
AV_EnvConc	7,673	1	7,673	6,26	0,013	0,017	6,26	0,704
AV_Ecoatt	4,992	1	4,992	4,073	0,044	0,011	4,073	0,521
Error	454,742	371	1,226					
Total	8356	381						
Total corrected	855,238	380						

Table 47: Personal representation of the two way ANOVA

Observing the table of results above it is possible to conclude that the model is correct. F(9,371)=36.305, p=.000 Only the proudness, the environmental concern and the ecolabel attitude variables have obtained significant values. F_Proud(1,372)=91.686, p=.000 F_EnvConc(1,372)=6.26, p=.013, F_EcoAtt(1,372)=4.073, p=.044.

Last analysis conducted was related to the perceived attributes after the second observation of the visual stimulus and it obtained the following results:

Descriptive statistics				
Generations	Colours	Mean	Standard Deviation	N
Other	Green	5,0556	1,47849	81
	Multicolor	5,0923	1,65957	84
	White	4,9625	1,58618	80
	Total	5,0378	1,57199	245
Millennial	Green	4,7969	1,65483	48
	Multicolor	5,3314	1,25086	43
	White	4,5815	1,52848	46
	Total	4,8923	1,51639	137
Total	Green	4,9593	1,54515	129
	Multicolor	5,1732	1,53255	127
	White	4,8234	1,57005	126
	Total	4,9856	1,55186	382

Table 48: Personal representation of the descriptive statistics

At a descriptive level is possible to affirm that the condition composed by respondents who are born after 1980 and have seen the WFTO label has reached the highest mean among the groups of the test. Then, the Levene's test of equality of error variances was analysed with the following hypotheses:

- H0: The error variances are equal
- H1: The error variances are different

From the results emerge that is not possible to reject the null hypothesis: F (5,376) = 1.485; p=.194 Thus, the test assumption is verified, and it is possible to continue with the study.

Origin	Sum of squares - type III	gl	Quadratic mean	F	Sign.	Partial Eta square	Non-centrality parameter	Observed power
Correct Model	540,519a	9	60,058	59,257	0	0,589	533,313	1
Intercept	16,415	1	16,415	16,196	0	0,042	16,196	0,98
Generations	5,887	1	5,887	5,809	0,016	0,015	5,809	0,671
Colours	3,133	2	1,567	1,546	0,215	0,008	3,091	0,328
Generations * Colours	4,515	2	2,258	2,228	0,109	0,012	4,455	0,453
AV_Guilty	3,287	1	3,287	3,243	0,073	0,009	3,243	0,435
AV_Proud	119,471	1	119,471	117,878	0	0,241	117,878	1
AV_EnvConc	22,477	1	22,477	22,177	0	0,056	22,177	0,997
AV_Ecoatt	13,824	1	13,824	13,639	0	0,035	13,639	0,958
Error	377,026	372	1,014					
Total	10412,63	382						
Total corrected	917,546	381						

Table 49: Personal representation of the two way ANOVA

Observing the table of results, it is possible to conclude that the model is correct. $F(9,372)=59.257$, $p=.000$ There is a statistically significant main effect. $F(1,372)=5.809$, $p=.016$ Thus, the subjects from the "other" group have obtained the highest mean value. Moreover, there is a marginal statistically interaction effect between the independent variables. $F(2,372)=2.228$, $p=.109$ The respondents from the "millennials" group who have seen the WFTO label obtained the highest mean. The guiltiness, the proudness, the environmental concern, and the ecolabel attitude have statistically significant values. F_Guilt $(1,372) = 3.243$, $p=.073$; F_Proud $(1,372) = 117.878$, $p=.000$; F_EnvConc $(1,372) =22.177$, $p=.000$; F_Generations$(1,372)=13.639$, $p=.000$.

3.2.4. Mediation analysis of the proudness, the environmental concern and the ecolabel attitude in relation to the generation and the consumer outputs – Results

As it was discussed in the review of the results in the previous paragraph, the environmental concern, the proudness and the ecolabel attitude generally covariates the relationship between the generation of belonging and the consumer output.

Thus, the current research aims to understand if there is a mediation effect among the variables that have been taken into consideration.

In particular, the hypotheses that are discussed and tested in this paragraph are the following one:

H4a: *"Consumer responses will be affected by the generation of belonging."*
H4b*: "The environmental concern, the proudness and the ecolabel attitude will mediate the effect of the generation of belonging on consumer responses."*

In order to verify the hypotheses previously cited, the respondent's generation of belonging were split into four main conditions identified as:

- The Z generation people were coded with 0, and they are those people born between the 2015 and the 1996;
- The Millennials were coded with 1, and they are those subjects born between the 1995 and the 1981;
- The X generation respondents were coded with 2, and they are those one who are born between the 1980 and the 1966;
- The Baby boomers were coded with 3, and they are born before the 1966;

The distribution of frequency of the respondents among the generations' clusters is the following one:

Generations	N	Percentage
0	97	19,1
1	80	15,7
2	169	33,3
3	162	31,9
Total	508	100

Table 50: Personal representation of the descriptive statistics

As in the previous test, the ecolabel attitude, the proudness and the environmental concern variables were calculated as mean values. The hypotheses were tested through the model 4 of the Hayes Process version 3.4.

The first study has considered the mediation effect hypothesized above in relationship with the willingness to buy after the first visualization of the ecolabels.

As it is possible to see from the first output of the mediation analysis reported below, the effects of the independent variable on all the mediators considered are statistically significant. Proud (b=0.2042, t(506)=3.42, p<.001); EnvConc (b=0,1681, t(506)=3.09, p<.001); EcoAtt (b=0,1559, t(506)=2.97, p=.003)

```
OUTCOME VARIABLE:
 AV_Proud

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1503       ,0226     2,1580    11,7002     1,0000   506,0000       ,0007

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,9338       ,1246    31,5590       ,0000     3,6889     4,1787
Gen2          ,2042       ,0597     3,4206       ,0007      ,0869      ,3215


OUTCOME VARIABLE:
 AV_EnvCo

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1362       ,0185     1,7894     9,5618     1,0000   506,0000       ,0021

Model
              coeff         se          t          p       LLCI       ULCI
constant     4,7523       ,1135    41,8676       ,0000     4,5293     4,9753
Gen2          ,1681       ,0544     3,0922       ,0021      ,0613      ,2749


OUTCOME VARIABLE:
 AV_Ecoat

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1309       ,0171     1,6695     8,8150     1,0000   506,0000       ,0031

Model
              coeff         se          t          p       LLCI       ULCI
constant     4,2304       ,1096    38,5854       ,0000     4,0150     4,4458
Gen2          ,1559       ,0525     2,9690       ,0031      ,0527      ,2591
```

Figure 23: Results of the mediation analysis

Then, it was taken into consideration the relationship between the mediator and the generation of belonging on the willingness to buy after the first visualization. The results from the test reported below show that the independent variable is not statistically significant. It means that it is not a predictor of the willingness to buy. Gen (b=0.017, t(503)=0.36,

p=.716) It is possible to conclude that this is a pure mediation model, because the generation variable regressed on the dependent one is not statistically relevant.

On the other hands, the relationship between the mediators and the dependent variable is significant. Proud (b=0.5210, t(503)= 11.106, p<.001); EnvConc (b=0.1086, t(503)=2.273, p=.023) EcoAtt (b=0,2358, t(503)=4.412, p<.001)

Moreover, there are significant mediation effects, because the confidence interval for all the mediators analysed does not contain 0, and the indirect effect of X on Y significantly greater than 0. Ind_proud (b=0.1064, 95% CI[0.0474; 0.1745]); Ind_EnvConc (b=0.0183, 95% CI[0.0019; 0.0404]); Ind_EcoAtt (b=0.0368, 95% CI[0.0098; 0.0716])

```
OUTCOME VARIABLE:
 AV_WTB1

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,6910       ,4774     1,3202   114,8875     4,0000   503,0000       ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant    -,0792       ,2218      -,3572       ,7211     -,5149       ,3565
Gen2         ,0172       ,0474       ,3636       ,7163     -,0758       ,1103
AV_Proud     ,5210       ,0469     11,1062       ,0000      ,4288       ,6132
AV_EnvCo     ,1086       ,0478      2,2736       ,0234      ,0148       ,2025
AV_Ecoat     ,2358       ,0534      4,4120       ,0000      ,1308       ,3407


************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 AV_WTB1

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1233       ,0152     2,4731     7,8117     1,0000   506,0000       ,0054

Model
             coeff         se          t          p       LLCI       ULCI
constant    3,4839       ,1334    26,1082       ,0000     3,2218     3,7461
Gen2         ,1787       ,0639     2,7949       ,0054      ,0531      ,3042

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI       c_ps       c_cs
      ,1787       ,0639     2,7949       ,0054      ,0531      ,3042      ,1128      ,1233

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c'_ps      c'_cs
      ,0172       ,0474      ,3636       ,7163     -,0758       ,1103      ,0109      ,0119

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
TOTAL         ,1614       ,0443      ,0752      ,2502
AV_Proud      ,1064       ,0322      ,0474      ,1745
AV_EnvCo      ,0183       ,0099      ,0019      ,0404
AV_Ecoat      ,0368       ,0156      ,0098      ,0716
```

Figure 24: Results of the mediation analysis

This analysis is focused on the mediation effects between the willingness to buy after the second visualization of the label stimulus and the generation of belongings. The first output of the second mediation analysis shows that the effects of the independent variable on the three mediators considered in the analysis are statistically significant. Proud (b=0.2042, t(506)= 3.42, p<.001); EnvConc (b=0.1681, t(506)=3.09, p=.002); EcoAtt (b=0.1559, t(506)=2.97, p=.003)

```
**************************************************************************
OUTCOME VARIABLE:
 AV_Proud

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1503      ,0226     2,1580    11,7002     1,0000   506,0000      ,0007

Model
             coeff         se          t          p       LLCI       ULCI
constant    3,9338      ,1246    31,5590      ,0000     3,6889     4,1787
Gen2         ,2042      ,0597     3,4206      ,0007      ,0869      ,3215

**************************************************************************
OUTCOME VARIABLE:
 AV_EnvCo

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1362      ,0185     1,7894     9,5618     1,0000   506,0000      ,0021

Model
             coeff         se          t          p       LLCI       ULCI
constant    4,7523      ,1135    41,8676      ,0000     4,5293     4,9753
Gen2         ,1681      ,0544     3,0922      ,0021      ,0613      ,2749

**************************************************************************
OUTCOME VARIABLE:
 AV_Ecoat

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1309      ,0171     1,6695     8,8150     1,0000   506,0000      ,0031

Model
             coeff         se          t          p       LLCI       ULCI
constant    4,2304      ,1096    38,5854      ,0000     4,0150     4,4458
Gen2         ,1559      ,0525     2,9690      ,0031      ,0527      ,2591
```

Figure 25: Results of the mediation analysis

Secondly, it was considered the effect of the mediators and the independent variable on the willingness to buy after the second visualization. The results of the test below represent the presence of a partial mediation relationship because the influence of the independent variable on the willingness to buy is statistically significant. Gen (b=-0.1169, t(503)=-2.73, p=.006). Moreover, also in this case the mediators significantly affect the independent variable. Proud (b=0.5376, t(503)=12.65, p<.001); EnvConc (b=0.2603, t(503)=6.01, p<.001; EcoAtt (b=0.2023, t(503)=4.18, p<.001)

Moreover, there is a significant mediation effect, because the confidence interval for all the mediators analysed do not contain 0. The indirect effect of X on Y significantly greater than 0. Ind_proud (b=0.1098, 95% CI[0.0477; 0.1801]); Ind_EnvConc (b=0.0438, 95% CI[0.0139; 0.0792]); Ind_EcoAtt (b=0.0315; 95% CI[0.0077; 0.0618])

```
**************************************************************************
OUTCOME VARIABLE:
 AV_WTB2

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,7602      ,5780     1,0829   172,2159     4,0000   503,0000      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant      ,0099      ,2009      ,0494      ,9606     -,3847      ,4045
Gen2         -,1169      ,0429    -2,7266      ,0066     -,2012     -,0327
AV_Proud      ,5376      ,0425    12,6534      ,0000      ,4541      ,6211
AV_EnvCo      ,2603      ,0433     6,0148      ,0000      ,1753      ,3453
AV_Ecoat      ,2023      ,0484     4,1793      ,0000      ,1072      ,2973
************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 AV_WTB2

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,0467      ,0022     2,5451     1,1047     1,0000   506,0000      ,2937

Model
              coeff         se          t          p       LLCI       ULCI
constant     4,2173      ,1354    31,1537      ,0000     3,9513     4,4833
Gen2          ,0682      ,0648     1,0511      ,2937     -,0592      ,1956

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI       c_ps       c_cs
      ,0682      ,0648     1,0511      ,2937     -,0592      ,1956      ,0427      ,0467

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c'_ps      c'_cs
     -,1169      ,0429    -2,7266      ,0066     -,2012     -,0327     -,0733     -,0801

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
TOTAL         ,1851      ,0499      ,0898      ,2822
AV_Proud      ,1098      ,0336      ,0477      ,1801
AV_EnvCo      ,0438      ,0168      ,0139      ,0792
AV_Ecoat      ,0315      ,0142      ,0077      ,0618
```

Figure 26: Results of the mediation analysis

The third analysis is focused on the mediation relationship between the willingness to pay due to the first visual stimulus of the labels and the generation of belongings.

The image below shows the first output of the mediation analysis. Thanks to these results it is possible to affirm that the independent variable statistically affects all the mediators considered. Proud (b=0.2042, t(506)=3.42, p<.001); EnvConc (b=0,1681, t(506)=3.09, p=.002); EcoAtt (b=0.1559, t(506)=2.96, p=.003)

```
**************************************************************************
OUTCOME VARIABLE:
 AV_Proud

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1503      ,0226     2,1580    11,7002     1,0000   506,0000      ,0007

Model
             coeff         se          t          p       LLCI       ULCI
constant    3,9338      ,1246    31,5590      ,0000     3,6889     4,1787
Gen2         ,2042      ,0597     3,4206      ,0007      ,0869      ,3215

**************************************************************************
OUTCOME VARIABLE:
 AV_EnvCo

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1362      ,0185     1,7894     9,5618     1,0000   506,0000      ,0021

Model
             coeff         se          t          p       LLCI       ULCI
constant    4,7523      ,1135    41,8676      ,0000     4,5293     4,9753
Gen2         ,1681      ,0544     3,0922      ,0021      ,0613      ,2749

**************************************************************************
OUTCOME VARIABLE:
 AV_Ecoat

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1309      ,0171     1,6695     8,8150     1,0000   506,0000      ,0031

Model
             coeff         se          t          p       LLCI       ULCI
constant    4,2304      ,1096    38,5854      ,0000     4,0150     4,4458
Gen2         ,1559      ,0525     2,9690      ,0031      ,0527      ,2591
```

Figure 27: Results of the mediation analysis

Thanks to the results represented below it is possible to understand that the independent variable does not significantly influence the willingness to pay. Gen (b=-0.0673, t(503)=-1.82, p=.069) Furthermore, the environmental concern and the ecolabel attitude regressed on the dependent variable are not statistically relevant. EnvConc (b=-0.0344, t(503)=0.92, p=.355); EcoAtt (b=0.0690, t(503)=1.66, p=.098) Only the proudness variable has a statistically significant influence on the dependent variable. Proud (b=0.1995, t(503)=5.45, p<.000)

There is not any mediation relationship among these variables and the dependent one, because also the total effect model it is not statistically significant. Gen (b=-0.0215, t(506)=-0.55, p=.578)

```
OUTCOME VARIABLE:
 WTP1_1

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,3485       ,1215       ,8022    17,3851     4,0000   503,0000       ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant      ,6139       ,1729     3,5513       ,0004      ,2743      ,9536
Gen2         -,0673       ,0369    -1,8218       ,0691     -,1398      ,0053
AV_Proud      ,1995       ,0366     5,4549       ,0000      ,1276      ,2713
AV_EnvCo     -,0344       ,0372     -,9242       ,3558     -,1076      ,0388
AV_Ecoat      ,0690       ,0417     1,6573       ,0981     -,0128      ,1509
**************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 WTP1_1

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,0247       ,0006       ,9071       ,3094     1,0000   506,0000       ,5783

Model
             coeff         se          t          p       LLCI       ULCI
constant     1,5271       ,0808    18,8960       ,0000     1,3683     1,6859
Gen2         -,0215       ,0387     -,5563       ,5783     -,0976      ,0545
```

Figure 28: Results of the mediation analysis

The fourth study conducted is focused on the mediation analysis between the willingness to pay after the second visualization of the stimulus and the generation of belongings.

The results represented below illustrate that the independent variable has a statistically significant impact on the mediators involved in this analysis. Proud (b=0.2042, t(506)=3.42, p<.001); EnvConc (b=0,1681, t(506)=3.09, p=.002); EcoAtt (b=0.1559, t(506)=2.96, p=.003)

```
**************************************************************************
OUTCOME VARIABLE:
 AV_Proud

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1503       ,0226     2,1580    11,7002     1,0000   506,0000       ,0007

Model
             coeff         se          t          p       LLCI       ULCI
constant     3,9338       ,1246    31,5590       ,0000     3,6889     4,1787
Gen2          ,2042       ,0597     3,4206       ,0007      ,0869      ,3215

**************************************************************************
OUTCOME VARIABLE:
 AV_EnvCo

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1362       ,0185     1,7894     9,5618     1,0000   506,0000       ,0021

Model
             coeff         se          t          p       LLCI       ULCI
constant     4,7523       ,1135    41,8676       ,0000     4,5293     4,9753
Gen2          ,1681       ,0544     3,0922       ,0021      ,0613      ,2749
```

```
**************************************************************************
OUTCOME VARIABLE:
 AV_Ecoat

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1309      ,0171     1,6695     8,8150     1,0000   506,0000      ,0031

Model
              coeff         se          t          p       LLCI       ULCI
constant     4,2304      ,1096    38,5854      ,0000     4,0150     4,4458
Gen2          ,1559      ,0525     2,9690      ,0031      ,0527      ,2591
```

Figure 29: Results of the mediation analysis

Secondly, the image below shows that both the generation of belonging, and the proudness variables have a statistically significant effect on the willingness to pay. Gen (b=-0.1765, t(503)=-4.60, p<.001); Proud (b=0.2385, t(503)=6.28, p<.001) Conversely, the environmental concern and the ecolabel attitude have not significant effect on the dependent variable. Thus, they do not mediate the relationship between the generation of belonging and the willingness to pay. EnvConc (b=-0.0067, t(503)=-0.17, p=.862); EcoAtt (b=0.0790, t(503)=1.82, p=.069)

In conclusion, it is possible to conclude that there is a partial mediation relationship, because the total effect model is statistically significant, and the proudness confidence interval does not contain the 0. Gen (b=-0.1166, t(506)=-2.82, p=.050); Ind_Proud (b=0.0487, 95% CI [0.0198; 0.0843])

```
**************************************************************************
OUTCOME VARIABLE:
 WTP2_1

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,4253      ,1809      ,8656    27,7694     4,0000   503,0000      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant      ,6508      ,1796     3,6237      ,0003      ,2979     1,0036
Gen2         -,1765      ,0383    -4,6040      ,0000     -,2519     -,1012
AV_Proud      ,2385      ,0380     6,2790      ,0000      ,1639      ,3132
AV_EnvCo     -,0067      ,0387     -,1732      ,8625     -,0827      ,0693
AV_Ecoat      ,0790      ,0433     1,8251      ,0686     -,0060      ,1640
```

```
************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 WTP2_1

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1245       ,0155     1,0342     7,9631     1,0000   506,0000       ,0050

Model
             coeff         se          t          p       LLCI       ULCI
constant     1,8913       ,0863    21,9167       ,0000     1,7217     2,0608
Gen2         -,1166       ,0413    -2,8219       ,0050     -,1979     -,0354

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI       c_ps       c_cs
     -,1166       ,0413    -2,8219       ,0050     -,1979     -,0354     -,1139     -,1245

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c'_ps      c'_cs
     -,1765       ,0383    -4,6040       ,0000     -,2519     -,1012     -,1724     -,1884

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
TOTAL         ,0599       ,0185       ,0258       ,0978
AV_Proud      ,0487       ,0167       ,0198       ,0843
AV_EnvCo     -,0011       ,0071      -,0158       ,0131
AV_Ecoat      ,0123       ,0088      -,0021       ,0322
```

Figure 30: Results of the mediation analysis

The fifth analysis involves the mediation relationship between the share of voice after the first visualization of the stimulus and the generation of belongings. The output of the results represented below show that the independent variable significantly influences the three mediators considered in the analysis. Proud (b=0.2042, t(506)= 3.42, p<.001); EnvConc (b=0.1681, t(506)=3.09, p=.002); EcoAtt (b=0.1559, t(506)=2.97, p=.003)

```
**************************************************************************
OUTCOME VARIABLE:
 AV_Proud

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1503       ,0226     2,1580    11,7002     1,0000   506,0000       ,0007

Model
             coeff         se          t          p       LLCI       ULCI
constant     3,9338       ,1246    31,5590       ,0000     3,6889     4,1787
Gen2          ,2042       ,0597     3,4206       ,0007      ,0869      ,3215
```

```
**************************************************************************
OUTCOME VARIABLE:
 AV_EnvCo

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1362      ,0185     1,7894     9,5618     1,0000   506,0000      ,0021

Model
             coeff         se          t          p       LLCI       ULCI
constant     4,7523      ,1135    41,8676      ,0000     4,5293     4,9753
Gen2          ,1681      ,0544     3,0922      ,0021      ,0613      ,2749

**************************************************************************
OUTCOME VARIABLE:
 AV_Ecoat

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1309      ,0171     1,6695     8,8150     1,0000   506,0000      ,0031

Model
             coeff         se          t          p       LLCI       ULCI
constant     4,2304      ,1096    38,5854      ,0000     4,0150     4,4458
Gen2          ,1559      ,0525     2,9690      ,0031      ,0527      ,2591
```

Figure 31: Results of the mediation analysis

Subsequently, it was analysed if the mediators and the independent variable statistically influence the dependent variable. The results represented show a partial mediation, because the influence of the generation of belonging on the share of voice is statistically significant. Gen (b=0.1033, t(503)=2.23, p=.026). Moreover, even in this analysis, all the mediators significantly influence the independent variable. Proud (b=0.5236, t(503)=11.39, p<.001); EnvConc (b=0.5236, t(503)=3.11, p=.002; EcoAtt (b=0.2037, t(503)=3.89, p<.001)

Furthermore, even the total effect model is statistically significant. Gen (b=0.2665, t(506)=4.20, p<.000)

Lastly, the indirect effect is significant, because the 95% of confidence interval of the three mediators do not contain 0 and their beta are significantly higher than 0. Ind_proud (b=0.1069, 95% CI[0.0433; 0.1764]); Ind_EnvConc (b=0.0245, 95% CI[0.0050; 0492]); Ind_EcoAtt (b=0.0318; 95% CI[0.0068; 0.0660])

```
OUTCOME VARIABLE:
 AV_SoV1

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,7066      ,4992     1,2676   125,3632     4,0000   503,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant     -,3985      ,2173    -1,8339      ,0673     -,8255      ,0284
Gen2          ,1033      ,0464     2,2256      ,0265      ,0121      ,1944
AV_Proud      ,5236      ,0460    11,3911      ,0000      ,4333      ,6139
AV_EnvCo      ,1459      ,0468     3,1157      ,0019      ,0539      ,2378
AV_Ecoat      ,2037      ,0524     3,8892      ,0001      ,1008      ,3065

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 AV_SoV1

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1837      ,0338     2,4314    17,6809     1,0000   506,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant     3,2161      ,1323    24,3067      ,0000     2,9561     3,4760
Gen2          ,2665      ,0634     4,2049      ,0000      ,1420      ,3910

*************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y ***************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI       c_ps       c_cs
      ,2665      ,0634     4,2049      ,0000      ,1420      ,3910      ,1682      ,1837

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c'_ps      c'_cs
      ,1033      ,0464     2,2256      ,0265      ,0121      ,1944      ,0652      ,0712

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
TOTAL         ,1632      ,0447      ,0767      ,2523
AV_Proud      ,1069      ,0336      ,0433      ,1764
AV_EnvCo      ,0245      ,0116      ,0050      ,0492
AV_Ecoat      ,0318      ,0151      ,0068      ,0660
```

Figure 32: Results of the mediation analysis

The sixth study has considered the mediation effect of the proudness, the environmental concern and the ecolabel attitude on the relationship between the respondents' generation of belonging and the share of voice after the second visualization of the ecolabel's stimulus.

As it is possible to see from the first results, the independent variable statistically influences all the mediators considered. Proud (b=0.2042, t(506)=3.42, p<.001); EnvConc (b=0,1681, t(506)=3.09, p<.001); EcoAtt (b=0,1559, t(506)=2.97, p=.003)

```
OUTCOME VARIABLE:
 AV_Proud

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1503      ,0226     2,1580    11,7002     1,0000   506,0000      ,0007

Model
             coeff         se          t          p       LLCI       ULCI
constant    3,9338      ,1246    31,5590      ,0000     3,6889     4,1787
Gen2         ,2042      ,0597     3,4206      ,0007      ,0869      ,3215

**************************************************************************
OUTCOME VARIABLE:
 AV_EnvCo

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1362      ,0185     1,7894     9,5618     1,0000   506,0000      ,0021

Model
             coeff         se          t          p       LLCI       ULCI
constant    4,7523      ,1135    41,8676      ,0000     4,5293     4,9753
Gen2         ,1681      ,0544     3,0922      ,0021      ,0613      ,2749

**************************************************************************
OUTCOME VARIABLE:
 AV_Ecoat

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1309      ,0171     1,6695     8,8150     1,0000   506,0000      ,0031

Model
             coeff         se          t          p       LLCI       ULCI
constant    4,2304      ,1096    38,5854      ,0000     4,0150     4,4458
Gen2         ,1559      ,0525     2,9690      ,0031      ,0527      ,2591
```

Figure 33: Results of the mediation analysis

The results below illustrate that the independent variable does not significantly influence the share of voice. Gen (b=-0.8658, t(503)=-1.56, p=.118) Furthermore, the proudness, the environmental concern and the ecolabel attitude regressed on the dependent variable are statistically relevant. Proud (b=0.5438, t(503)=13.06, p<.001); EnvConc (b=0.2314, t(503)=5.46, p<.001); EcoAtt (b=0.2282, t(503)=4.81, p<.001)

In addition, the total effect model is not statistically significant, hence there is not a mediation relationship. Gen (b=0.1197, t(506)=1.86, p=.064)

```
OUTCOME VARIABLE:
 AV_SoV2

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,7695      ,5921     1,0397   182,5574     4,0000   503,0000      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     -,1273      ,1968     -,6468      ,5181     -,5140      ,2594
Gen2         -,0658      ,0420    -1,5658      ,1180     -,1484      ,0168
AV_Proud      ,5438      ,0416    13,0617      ,0000      ,4620      ,6256
AV_EnvCo      ,2314      ,0424     5,4582      ,0000      ,1481      ,3147
AV_Ecoat      ,2282      ,0474     4,8120      ,0000      ,1350      ,3214

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 AV_SoV2

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,0823      ,0068     2,5168     3,4487     1,0000   506,0000      ,0639

Model
              coeff         se          t          p       LLCI       ULCI
constant     4,0769      ,1346    30,2862      ,0000     3,8125     4,3414
Gen2          ,1197      ,0645     1,8571      ,0639     -,0069      ,2464
```

Figure 34: Results of the mediation analysis

The seventh analysis aims to study the mediation effect of the proudness, the environmental concern and of the ecolabel attitude on the relation between the subjects' generation of belonging and the perceived quality of the products after the first display of the ecolabels' stimulus.

As it is possible to see from the first results, the independent variable statistically affects all the mediators previously cited. Proud (b=0.2042, t(506)=3.42, p<.001); EnvConc (b=0,1681, t(506)=3.09, p<.001); EcoAtt (b=0,1559, t(506)=2.97, p=.003)

```
OUTCOME VARIABLE:
 AV_Proud

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1503      ,0226     2,1580    11,7002     1,0000   506,0000      ,0007

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,9338      ,1246    31,5590      ,0000     3,6889     4,1787
Gen2          ,2042      ,0597     3,4206      ,0007      ,0869      ,3215
```

```
**************************************************************************
OUTCOME VARIABLE:
 AV_EnvCo

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1362       ,0185     1,7894     9,5618     1,0000   506,0000       ,0021

Model
             coeff         se          t          p       LLCI       ULCI
constant     4,7523       ,1135    41,8676      ,0000     4,5293     4,9753
Gen2          ,1681       ,0544     3,0922      ,0021      ,0613      ,2749

**************************************************************************
OUTCOME VARIABLE:
 AV_Ecoat

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1309       ,0171     1,6695     8,8150     1,0000   506,0000       ,0031

Model
             coeff         se          t          p       LLCI       ULCI
constant     4,2304       ,1096    38,5854      ,0000     4,0150     4,4458
Gen2          ,1559       ,0525     2,9690      ,0031      ,0527      ,2591
```

Figure 35: Results of the mediation analysis

The results of the test show that the independent variable in not statistically significant, which means that it is not a predictor of the perceived quality. Gen (b=0.0655, t(503)=1.43, p=.153) On the other hands, the relationship between the mediators and the dependent variable is significant. Proud (b=0.4467, t(503)=9.85, p<.001); EnvConc (b=0.1381, t(503)=2.99, p=.003) EcoAtt (b=0.1963, t(503)=3.801, p<.001)

Therefore, it is possible to affirm that this is a pure mediation model, because the total effect model is statistically significant, and the mediators' indirect effects are positive, and their confidence intervals do not contain 0. Gen (b=0.2106, t(506)=3.54, p<.001).

Ind_proud (b=0.0912, 95% CI[0.0366; 0.1533]); Ind_EnvConc (b=0.0232, 95% CI[0.0039; 0.0492]); Ind_EcoAtt (b=0.0306, 95% CI[0.0061; 0.0651])

```
OUTCOME VARIABLE:
 AV_PerQ1

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,6653       ,4426     1,2328    99,8561     4,0000   503,0000       ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant      ,4635       ,2143     2,1628      ,0310      ,0425      ,8846
Gen2          ,0655       ,0458     1,4314      ,1529     -,0244      ,1554
AV_Proud      ,4467       ,0453     9,8543      ,0000      ,3577      ,5358
AV_EnvCo      ,1381       ,0462     2,9908      ,0029      ,0474      ,2288
AV_Ecoat      ,1963       ,0516     3,8014      ,0002      ,0948      ,2978
```

```
************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 AV_PerQ1

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1553       ,0241     2,1456    12,5080     1,0000   506,0000       ,0004

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,7075       ,1243    29,8289       ,0000     3,4633     3,9517
Gen2          ,2106       ,0595     3,5367       ,0004      ,0936      ,3275

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI       c_ps       c_cs
      ,2106       ,0595     3,5367       ,0004      ,0936      ,3275       ,1421       ,1553

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c'_ps      c'_cs
      ,0655       ,0458     1,4314       ,1529     -,0244      ,1554       ,0442       ,0483

Indirect effect(s) of X on Y:
             Effect     BootSE   BootLLCI   BootULCI
TOTAL         ,1451       ,0398      ,0683      ,2245
AV_Proud      ,0912       ,0298      ,0366      ,1533
AV_EnvCo      ,0232       ,0116      ,0039      ,0492
AV Ecoat      ,0306       ,0153      ,0061      ,0651
```

Figure 36: Results of the mediation analysis

The eight-analysis conducted was focused on the mediation effect between the perceived quality after the second visualization of the label stimulus and the generation of belongings. The results below show that the impact of the independent variable on the three mediators considered in the analysis is statistically significant. Proud (b=0.2042, t(506)= 3.42, p<.001); EnvConc (b=0.1681, t(506)=3.09, p=.002); EcoAtt (b=0.1559, t(506)=2.97, p=.003)

```
**************************************************************************
OUTCOME VARIABLE:
 AV_Proud

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1503       ,0226     2,1580    11,7002     1,0000   506,0000       ,0007

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,9338       ,1246    31,5590       ,0000     3,6889     4,1787
Gen2          ,2042       ,0597     3,4206       ,0007      ,0869      ,3215

**************************************************************************
OUTCOME VARIABLE:
 AV_EnvCo

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1362       ,0185     1,7894     9,5618     1,0000   506,0000       ,0021

Model
              coeff         se          t          p       LLCI       ULCI
constant     4,7523       ,1135    41,8676       ,0000     4,5293     4,9753
Gen2          ,1681       ,0544     3,0922       ,0021      ,0613      ,2749
```

```
**************************************************************************
OUTCOME VARIABLE:
 AV_Ecoat

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1309       ,0171     1,6695     8,8150     1,0000   506,0000       ,0031

Model
             coeff         se          t          p       LLCI       ULCI
constant    4,2304       ,1096    38,5854       ,0000    4,0150     4,4458
Gen2         ,1559       ,0525     2,9690       ,0031     ,0527      ,2591
```

Figure 37: Results of the mediation analysis

Furthermore, from the results of the analysis there is the presence of a partial mediation effect, because the influence of the independent variable on the willingness to buy is statistically significant. Gen (b=-0.1613, t(503)=-4.01, p<.001). Moreover, even in this study the mediators significantly impact the dependent variable. Proud (b=0.4001, t(503)=10.04, p<.001); EnvConc (b=0.2699, t(503)=6.65, p<.001; EcoAtt (b=0.2907, t(503)=6.40, p<.001)

The beta of the indirect effects are positive and the confidence intervals of all the mediators analysed do not contain 0. Ind_proud (b=0.0817, 95% CI[0.0335; 0.1368]); Ind_EnvConc (b=0.0454, 95% CI[0.0143; 0.0819]); Ind_EcoAtt (b=0.0453; 95% CI[0.0131; 0.0860])

```
OUTCOME VARIABLE:
 AV_PerQ2

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,7571       ,5733       ,9517   168,9268     4,0000   503,0000       ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant     ,6551       ,1883     3,4791       ,0005     ,2852     1,0251
Gen2        -,1613       ,0402    -4,0121       ,0001    -,2403     -,0823
AV_Proud     ,4001       ,0398    10,0450       ,0000     ,3218      ,4784
AV_EnvCo     ,2699       ,0406     6,6522       ,0000     ,1902      ,3496
AV_Ecoat     ,2907       ,0454     6,4061       ,0000     ,2015      ,3798

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 AV_PerQ2

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,0081       ,0001     2,2169       ,0336     1,0000   506,0000       ,8547

Model
             coeff         se          t          p       LLCI       ULCI
constant    4,7411       ,1263    37,5265       ,0000    4,4929     4,9893
Gen2         ,0111       ,0605      ,1832       ,8547    -,1078      ,1300
```

```
************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI       c_ps       c_cs
      ,0111      ,0605      ,1832      ,8547     -,1078      ,1300      ,0075      ,0081

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c'_ps      c'_cs
     -,1613      ,0402    -4,0121      ,0001     -,2403     -,0823     -,1084     -,1185

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
TOTAL         ,1724      ,0472      ,0800      ,2647
AV_Proud      ,0817      ,0264      ,0335      ,1368
AV_EnvCo      ,0454      ,0175      ,0143      ,0819
AV_Ecoat      ,0453      ,0186      ,0131      ,0860
```

Figure 38: Results of the mediation analysis

The nineth study is focused on the analysis of the mediation effect of the mediators on the relation between the respondent's' generation of belonging and the perceived attributes after the first visualization of the ecolabelled product. The results displayed below show that the independent variable statistically influence all the mediators considered in this analysis. Proud (b=0.2042, t(506)=3.42, p<.001); EnvConc (b=0,1681, t(506)=3.09, p<.001); EcoAtt (b=0,1559, t(506)=2.97, p=.003)

```
OUTCOME VARIABLE:
 AV_Proud

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1571      ,0247     2,1435    12,7825     1,0000   505,0000      ,0004

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,9116      ,1247    31,3728      ,0000     3,6666     4,1565
Gen2          ,2133      ,0597     3,5753      ,0004      ,0961      ,3305

************************************************************************
OUTCOME VARIABLE:
 AV_EnvCo

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1415      ,0200     1,7829    10,3173     1,0000   505,0000      ,0014

Model
              coeff         se          t          p       LLCI       ULCI
constant     4,7360      ,1137    41,6496      ,0000     4,5126     4,9594
Gen2          ,1748      ,0544     3,2121      ,0014      ,0679      ,2817

************************************************************************
OUTCOME VARIABLE:
 AV_Ecoat

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1379      ,0190     1,6575     9,7858     1,0000   505,0000      ,0019

Model
              coeff         se          t          p       LLCI       ULCI
constant     4,2103      ,1096    38,4019      ,0000     3,9949     4,4257
Gen2          ,1641      ,0525     3,1282      ,0019      ,0610      ,2672
```

Figure 39: Results of the mediation analysis

Observing the results reported in the image below, the independent variable is not statistically significant, which means that the perceived attributes are not predicted by the generation of belonging. Gen (b=0.0655, t(502)=1.46, p=.144).

Conversely, the relation between the three mediators and the dependent variable is significant. Proud (b=0.5147, t(502)=11.47, p<.001); EnvConc (b=0.0966, t(502)=2.11, p=.035) EcoAtt (b=0.1525, t(502)=2.98, p=.003)

Therefore, there is a pure mediation model because the total effect model is statistically significant. Gen (b=0.2182, t(505)=3.66, p<.001).

The indirect effect of proudness and ecolabel attitude are positive, and their confidence intervals do not contain 0, whereas the environmental concern indirect effect is not significant. Ind_proud (b=0.1098, 95% CI[0.0494; 0.1802]); Ind_EnvConc (b=0.0169, 95% CI[-0.0027; 0.0401]); Ind_EcoAtt (b=0.0250, 95% CI[0.0025; 0.0555])

```
OUTCOME VARIABLE:
 AV_PerAT

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,6736      ,4538     1,2065   104,2708     4,0000   502,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant      ,9651      ,2123     4,5464      ,0000      ,5480     1,3822
Gen2          ,0665      ,0455     1,4622      ,1443     -,0228      ,1558
AV_Proud      ,5147      ,0449    11,4703      ,0000      ,4266      ,6029
AV_EnvCo      ,0966      ,0457     2,1146      ,0350      ,0068      ,1863
AV_Ecoat      ,1525      ,0511     2,9821      ,0030      ,0520      ,2529

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 AV_PerAT

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1608      ,0258     2,1391    13,3983     1,0000   505,0000      ,0003

Model
             coeff         se          t          p       LLCI       ULCI
constant     4,0780      ,1246    32,7411      ,0000     3,8333     4,3227
Gen2          ,2182      ,0596     3,6604      ,0003      ,1011      ,3353

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI       c_ps       c_cs
      ,2182      ,0596     3,6604      ,0003      ,1011      ,3353      ,1474      ,1608

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c'_ps      c'_cs
      ,0665      ,0455     1,4622      ,1443     -,0228      ,1558      ,0449      ,0490

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
TOTAL         ,1517      ,0402      ,0749      ,2344
AV_Proud      ,1098      ,0335      ,0494      ,1802
AV_EnvCo      ,0169      ,0110     -,0027      ,0401
AV_Ecoat      ,0250      ,0137      ,0025      ,0555
```

Figure 40: Results of the mediation analysis

The tenth analysis involved the mediation effect between the perceived attributes subsequently the second display of the label and the generation of belonging. The results showed in the image below represent that the impact of the independent variable on the mediators previously cited is statistically significant. Proud (b=0.2042, t(506)= 3.42, p<.001); EnvConc (b=0.1681, t(506)=3.09, p=.002); EcoAtt (b=0.1559, t(506)=2.97, p=.003)

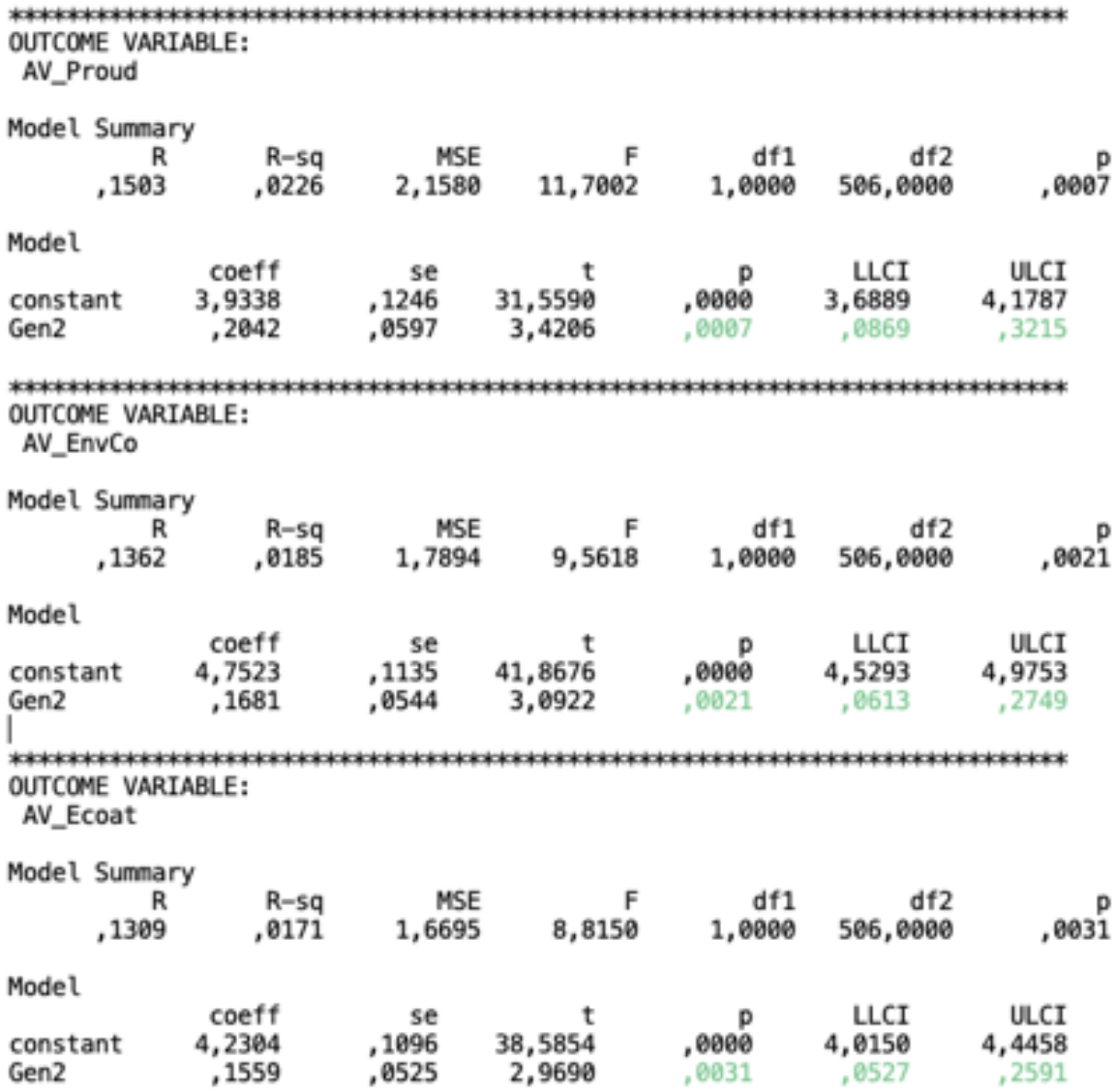


Figure 41: Results of the mediation analysis

Moreover, the result of the analysis represents a partial mediation effect because the independent variable statistically influences the perceived attributes. Gen (b=-0.1321, t(503)=-3.17, p=.002). Moreover, in this analysis the mediators significantly affect the dependent variable. Proud (b=0.5199, t(503)=12.59, p<.001); EnvConc (b=0.2181, t(503)=5.18, p<.001; EcoAtt (b=0.1908, t(503)=4.05, p<.001)

Furthermore, there is significant mediation relation, because the beta of the mediators are positive, and their confidence intervals do not contain 0. Ind_proud (b=0.1062, 95%

CI[0.0456; 0.1746]); Ind_EnvConc (b=0.0367, 95% CI[0.0101; 0.0709]); Ind_EcoAtt (b=0.0298; 95% CI[0.0057; 0.0618])

```
OUTCOME VARIABLE:
 AV_PerAT

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,7473      ,5584     1,0236   159,0290     4,0000   503,0000      ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant     1,0524      ,1953     5,3892      ,0000      ,6687     1,4361
Gen2         -,1321      ,0417    -3,1692      ,0016     -,2141     -,0502
AV_Proud      ,5199      ,0413    12,5862      ,0000      ,4387      ,6011
AV_EnvCo      ,2181      ,0421     5,1837      ,0000      ,1354      ,3007
AV_Ecoat      ,1908      ,0471     4,0558      ,0001      ,0984      ,2833

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 AV_PerAT

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,0291      ,0008     2,3023      ,4303     1,0000   506,0000      ,5121

Model
             coeff         se          t          p       LLCI       ULCI
constant     4,9413      ,1288    38,3784      ,0000     4,6883     5,1942
Gen2          ,0405      ,0617      ,6560      ,5121     -,0807      ,1616

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI       c_ps       c_cs
      ,0405      ,0617      ,6560      ,5121     -,0807      ,1616      ,0267      ,0291

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c'_ps      c'_cs
     -,1321      ,0417    -3,1692      ,0016     -,2141     -,0502     -,0871     -,0952

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
TOTAL         ,1726      ,0471      ,0811      ,2663
AV_Proud      ,1062      ,0327      ,0456      ,1746
AV_EnvCo      ,0367      ,0157      ,0101      ,0709
AV_Ecoat      ,0298      ,0143      ,0057      ,0618
```

Figure 42: Results of the mediation analysis

3.2.5. General discussion

Thanks to the review of the main study's results, it is possible to better understand some of the logics that lie behind the consumer responses. Those mechanisms related to the visual and conceptual complexities, to the colour psychology and to the emotional responses of green products have shown to be actively involved in the consumer outputs.

Moreover, it was demonstrated that the generation of belongings have a crucial role on the ecolabel perception under different point of views.

The study was conducted on a sample composed by five hundred and eight respondents who have seen one of the four different ecolabels: the World Fair Trade Organization logo, the EU ecolabel, the Soil eco-mark, or the ICEA label.

The subjects were randomly exposed to one of the previously cited environmental-friendly logos and they answered to various questions linked to the dependent variables and to the mediators after the first and the second visualization of the stimulus.

The first interesting results obtained by this analysis is represented by the fact that the hypotheses stated for this analysis were not significant when it was taken into consideration the first visualization of the stimulus. In order to understand if there is a statistically significant difference between the two visualizations, it was taken into consideration for analysis a within-subject paired sample t-test. From the analysis is resulted that all the dependent variables considered (i.e., the willingness to buy, the willingness to pay, the share of voice, the perceived quality, and the perceived attribute) have a meaningful mean difference.

Specifically, when it is displayed to the consumers an ecolabelled product with a focus on the eco-logo and a brief communication describing its meanings, all the consumer reaction are on average higher than a simple visualization of an ecolabelled product.

Another interesting result that it is emerged from the study is represented by the impact of the environmental concern, the ecolabel attitude, and the generation of belonging on the various dependent variables.

In fact, reviewing the results of the study, it is possible to highlight that these factors covariate in relation to the dependent variables in all the conditions displayed.

Furthermore, it was demonstrated that both the hypotheses stated in relation to the visual and conceptual complexity were confirmed only when the analysis was focused on the willingness to buy after the second visualization of the stimulus.

Secondly, an analysis about the moderation relationship was performed between the generation of belongings and the colour of the ecolabel in relation to the dependent variables.

The first interesting results obtained by this analysis is represented by the fact that the hypotheses stated for this analysis were not significant when it was taken into consideration the first visualization of the stimulus.

Conversely, when it was analysed the results of the second visual stimulus, there were found significant main effects in all the analyses. Specifically, when it was considered the willingness to pay, the subjects from belonging to the young generations have showed a higher mean value than the other generations. In the other analyses, the people who are born before the 1981 have shown a higher average consumer response than the young generations.

Only when the dependent variables considered in the analysis were the share of voice, the perceived quality and the perceived attributes in relation to the second visual stimulus, it was found an interaction effect. In all these cases, the multicolour World Fair Trade Organization label, when it was displayed to a respondent from a young generation, have obtained a statistically higher mean value than the other conditions.

Lastly, a mediation analysis was conducted in relation to the generation of belonging and the consumer responses. Thanks to this analysis it is possible to highlight that all the results related to the willingness to buy, the perceived quality and the perceived attributes consequently the first visual stimulus are positive pure mediations. Only when it is considered the share of voice there was a positive partial mediation, whereas when the dependent variable was the willingness to pay, there was not any significant value.

The results obtained by the analysis of the mediation relationship after the second visualization of the labels highlight that:

- In relation to the willingness to buy, the perceived quality and the perceived attributes, there is a partial mediation with all the mediators considered. Specifically, the generation variable has a negative effect, and the mediators have a positive impact.

- In relation to the willingness to pay, only the proudness variable has a positive and significant effect. Even in this case, the generation of belonging have a negative effect on the relationship.
- Regarding the share of voice, it was not found any statistically significant values.

4 Conclusions and recommendations

4.1. Summary analyses

The increasing attention toward the environment is generating a continuous evolution of the laws, of the industrial self-regulations and a growing demand for green products.

From the beginning of this thesis, the main characteristics of the Z-generation have been outlined, together with their concern for the environment. As a matter of a fact, they will be the consumer of the future and their proactive approach toward problems that affect the social and environmental themes are fundamentals points of reflection for any company. In order to maximize the consumers outputs and to match their demand for sustainable products, the businesses and the social actors have to understand how to communicate with this new generation, starting with the products that are present in the daily life as the FMCG's products.

From the literature review it emerges that ecolabels have a structural problem of information asymmetry, because certifications entities and companies are not expansively and sufficiently explaining the meaning and the long-term benefits.

This perceived disequilibrium felt by the consumers turns into a lack of trust and a loss of value for those products which should reduce the company's footprint with a consequently reduction of the green investments.

Therefore, the understanding of how to increase the consciousness and the purchase of these products is very important, because thanks to the creation of the bridge between the consumers and the green products there will be the possibility to establish a sustainable consumption and an increase of expenditure on the green technologies.

The first step of the research was related to the understanding of the relationship between the consumers' country of origin, the environmental concern, the ecolabels knowledge, and the differences in terms of aesthetical appeal.

The only labels that are correlated with the country of origin and that differ in terms of aesthetic appeal are the Fair-Trade ecolabel and the Programme for the Endorsement of Forest Certification schemes logo.

All the other labels have not obtained significant values for both the hypotheses stated. Moreover, the t-test results highlight that there are no significant differences between the French and the Italian samples in terms of environmental concern. This result could be explained by the fact that the collectivism index of the two populations do not have a remarkable difference.

The second study has focused its attention on testing those graphical and perceptual elements that can influence the consumer responses in relation to four experimental conditions, which are:

- The World Fair Trade Organization logo;
- The ICEA eco-mark;
- The EU ecolabel;
- The SOIL label.

These conditions were randomly exposed to the five hundred and eight subjects that were mainly contacted thanks to the Luiss Guido Carli University's panel.
The respondents have seen two times the products' visual stimulus: the first visualization was composed by a yogurt with one of the ecolabels on pack, whereas the second stimulus was the same product with a zoom on the label and a brief explanation of its meaning.
The first analysis conducted was within a subject paired sample t-test. The analysis has demonstrated that when the consumer's attention is focused on the ecolabel and on its meaning, all the variables have a statistically significant higher mean value than when the subjects are merely exposed to an ecolabelled product.
In particular, the second stimuli have obtained a 0.67 points higher perceived quality and a 0.19 incremental willingness to pay in comparison with the first visualization of the ecolabels.
The second analysis was focused on the role played by the conceptual and the visual complexity in relation with the consumer outputs with the following hypotheses:

H2a: *"Product using Low Visual Complexity logos (vs High Visual Complexity) will generate more favourable consumer responses, as: willingness to buy, willingness to pay, share of voice, perceived quality and perceived attributes."*

H2b: *"Ecolabel Conceptual Complexity will moderate the relationship between the visual complexity and the consumer responses. Specifically, when the label has a low conceptual complexity, a Low visual complexity ecolabel (vs a High Visual Complexity one) leads to higher consumer outputs."*

The current research has demonstrated that the willingness to buy a product when it is displayed a low conceptual and visual complexity ecolabel with a focus on it and a brief explanation of its benefits can generate a statistically significant moderation effect.

Furthermore, it was found that the share of voice for a product with a low visual complexity and a high conceptual complexity had the highest average values among all conditions. Even the willingness to pay for a label with a low conceptual complexity on the packaging is also higher than that with high conceptual complexity.

The second analysis was related to the moderation relationship between the generation of belongings and the ecolabel colour in relation to the dependent variables considered in this study.

The three ecolabels selected for this analysis are:

- The EU ecolabel, because it was representing the green colour;
- The WFTO label, which represent the multicolour labels;
- The SOIL logo, because it was a white label.

The respondents who have seen the ICEA label were excluded by this analysis, because it is not classifiable within one of these categories. The hypotheses stated for this analysis was:

H3a: *The consumer responses to a product will be more positive when the consumer is belonging to a young generation (Z generation and Millennials) than an older one (X generation and Baby Boomers).*

H3b: *Ecolabel colour will moderate the relationship between the generation of belonging and the consumer responses. Specifically, when the label is multicolour, a young generation of belonging (vs an older one) leads to higher consumer outputs.*

From the results of the analysis has emerged that when the product is displayed to the consumers, the environmental concern, the proudness, and the ecolabel attitude are the only variables which have a significant impact on the dependent variables.

Conversely, when the ecolabelled product displayed has a brief description and the consumer attention is focused on the ecolabel, the hypothesis H3a is confirmed for the willingness to pay. For the other dependent variables, the main effect is represented by the fact that the old generations have higher mean values than the young one.

Moreover, the hypothesis H3b was tested and validated when the share of voice, the perceived quality and the perceived attributes' studies were conducted. Therefore, it is possible to conclude that generally the people who are born before the 1981 have a higher consumer response than the young one in relation to a product with a focus on the ecolabel and a short description of its long-term benefits. On the other hand, when the young consumer has seen the multicolour label, they have obtained the highest mean values in terms of share of voice, perceived quality and perceived attributes.

The last analysis conducted on the dataset was done in order to test if the environmental concern, the proudness, and the ecolabel attitude mediate the relationship between the generation of belonging and the consumer outputs.

The hypotheses stated for this analysis are:

H4a: *"Consumer responses will be affected by the generation of belonging."*

H4b*: "The environmental concern, the proudness and the ecolabel attitude will mediate the effect of the generation of belonging on consumer responses."*

From the study results emerge that the product's perceived attributes, perceived quality, and willingness to buy after the exposure of the first stimulus have registered a positive pure mediation.

Only the share of voice had a partial mediation effect in consequence of the first visual stimulus. Specifically, the generation of belonging and the mediators had a positive influence on the dependent variable, whereas the willingness to pay have not a significant mediation effect.

However, from the results of the second visual stimulus it emerged that all the dependent variables, excluding the share of voice, have a partial mediation relationship in which the generation has a negative effect, and the mediators have a positive one. In addition, in the willingness to pay analysis, the mediation relationship is statistically significant only for the proudness variables.

4.2. Managerial implications

Thanks to this study it is possible to optimise the value of a Fast Moving Consumer Good's product by implementing the considerations outlined in the previous paragraph.

This study, compared to other work in the same field, provides a more integrated view of the different visual and perceptual components.

Specifically, the study showed that it is crucial to adopt an educational approach on the implementation of the ecolabel on the product packaging during a TV advertisement or in an e-commerce display.

It explained why it is important to have an informative approach to the product communication strategy:

- Various scientific articles show that there is an information asymmetry between consumers and the long-term benefits of the ecolabel, which generates a lack of trust in customers;
- The results obtained from the paired t-test show that when there is a focus on the ecolabel and there is a brief explanation of its benefits, there is a significantly higher perception of the products than when the product is simply displayed. In particular, when there was a focus on the ecolabel, the willingness to pay was on average 0.19 cents higher than when the product was simply displayed.

In support of this, it is fair to mention that when focusing on an ecolabel that has a low visual and conceptual complexity, there is a higher average willingness to buy than in the other conditions.

This leads us to conclude that an ecolabel like the ICEA one has a stronger visual impact in the consumer's perceptual sphere and is able to generate a higher propensity to buy. Therefore, if we base the choice of which ecolabel to use on the basis of graphic and conceptual complexity, we should aim for a logo that is simple and clear.

This could be due to the aforementioned lack of consumer confidence in these labels. In fact, a clear and direct message can certainly decrease the information asymmetry and, consequently, induce more positive responses in consumers.

Furthermore, the study shows that if a company wants to attract a younger target group in order to develop the potential market for the label, the results show that the multi-coloured label performed significantly better in terms of share of voice, perceived quality and perceived attribute among young people.

Therefore, in terms of developing the potential market and educating the segment to a more sustainable consumption, the multicolour label has a significant intrinsic power and may be the best choice in terms of brand management.

Finally, companies aiming to attract younger consumer groups to their products will be able to leverage emotional factors such as pride, attitude towards consuming eco-labelled products and concern for the environment to increase all consumer outcomes when focusing on the eco-label.

Therefore, a communication that emphasises these aspects, combined with a brief explanation of the label and its long-term benefits could be the new key to success in overcoming the lack of confidence in consuming ecolabelled products.

The socio-environmental implications of the study on communicative activity related to brand management can contribute to the stimulation of the circle of environmental sustainability and reduction of market pollution.

Indeed, through the stimulation of purchases and profit margins generated by ecolabelled products, a higher volume of investment in corporate and product sustainability can be generated more quickly.

4.2. Limitations and future research scopes

The study presents some limitations and leave space to further research and improvements.

The first limitation is represented by the sample of the preliminary study, because the number of subjects reached was not conspicuous and the collection of the interviews was done through the snowball method.

Moreover, the reason why the preliminary study did not show relevant results in terms of environmental concern can be reconducted by the fact that the Italian and French collectivism index were slightly different.

For a future research, it would be interesting to conduct a study on the ecolabel perception between countries which are completely different in terms of collectivism through a quantitative and qualitative research.

Even the main study is affected by some limitations and its area of interests can surely be expanded and improved.

First of all, four hundred interviews of the study were collected thanks to a Luiss Guido Carli university panel, whereas the other one hundred and eight subjects have been contacted through a snowball sampling method.

The difference between the two collection methods could have partially played a role in the results obtained by the study. Thus, for the future research it would be interesting to repeat the study with a unique method of sampling.

Secondly, for a future research it would be interesting to analyse the differences between the respondents who have seen the visual stimulus with or without a zoom on the ecolabel and a brief explanation of its long-term benefits through a between subjects' analysis.

Thirdly, there were more than two hundred interviews which were eliminated from the data set, because the majority of them were incomplete. An explanation for this huge need of purification of the data can be explained by the collection method and/or by the conspicuous number of questions exposed to the respondents.

Therefore, the current research actively contributes to the ecolabel communication strategy for a more conscious brand management decision making and the future research should focus more on the different ways to communicate the ecolabels and its meanings.

Specifically, it would be interesting to understand:

- How the communication channel can facilitate the ecolabel mission and long-term benefit (i.e., tv advertisement, e-commerce native advertisement, in-store activities and more);
- Which are the most effective communication styles in order to stimulate the consumer trust toward the ecolabels and the products, such as a message focus on the proudness, on the environmental concern, or concentrated on the consumers ecolabel attitude.
- If there is a different ecolabel's lack of trust among the generations and among different countries.
- Which is the communication strategy that can optimize the consumers responses toward the ecolabelled product in a cross-national and cross-generational analysis on different categories of Fast Moving Consumer Goods.

Bibliography

1. Allais, M. (1953). Le Comportement de l'Homme Rationnel devant le Risque: Critique des Postulats et Axiomes de l'Ecole Americaine. Econometrica, 21(4), 503. https://doi.org/10.2307/1907921
2. Allport, G. W. (1985). The historical background of social psychology. In G. Lindzey & E. Aronson (Eds.), Handbook of social psychology (3rd ed., Vol. 1, pp. 1-46). New York: Random House
3. Amnesty International. (2019, December 10). Climate change ranks highest as vital issue of our time - Generation Z survey. https://www.amnesty.org/en/latest/news/2019/12/climate-change-ranks-highest-as-vital-issue-of-our-time/
4. Ansari, M. Y., & Siddiqui, D. A. (2019). Effects of Culture on Green Purchase Intention, the Mediating Role of New Ecological Paradigm, Environmental Collective Efficacy and Environmental Knowledge. International Journal of Industrial Marketing, 5(1), 1. https://doi.org/10.5296/ijim.v5i1.16002
5. Antonetti, P., & Maklan, S. (2014). Exploring Postconsumption Guilt and Pride in the Context of Sustainability. Psychology & Marketing, 31(9), 717–735. https://doi.org/10.1002/mar.20730
6. Aquaculture Stewardship Council. (2019, April 5). About the ASC. https://www.asc-aqua.org/what-we-do/about-us/about-the-asc/
7. Ariely, D., & Levav, J. (2000). Sequential Choice in Group Settings: Taking the Road Less Traveled and Less Enjoyed. Journal of Consumer Research, 27(3), 279–290. https://doi.org/10.1086/317585
8. Arora, S. (2019). "Devising e-commerce and green e-commerce sustainability" – International Journal of Engineering Development and Research, Vol.7, Issue 2. ISSN :2321-9939
9. Asch, S. E. (1955). Opinions and Social Pressure. Scientific American, 193(5), 31–35. https://doi.org/10.1038/scientificamerican1155-31
10. Atkinson, L., & Rosenthal, S. (2014). Signaling the Green Sell: The Influence of Eco-Label Source, Argument Specificity, and Product Involvement on Consumer Trust. Journal of Advertising, 43(1), 33–45. https://doi.org/10.1080/00913367.2013.834803
11. Banovic, M., Reinders, M. J., Claret, A., Guerrero, L., & Krystallis, A. (2019). A cross-cultural perspective on impact of health and nutrition claims, country-of-origin and eco-label on consumer choice of new aquaculture products. Food Research International, 123, 36–47. https://doi.org/10.1016/j.foodres.2019.04.031
12. Berlyne, D. E. (1970). Novelty, complexity, and hedonic value. Perception & Psychophysics, 8(5), 279–286. https://doi.org/10.3758/bf03212593
13. Berlyne, D.E. (1970). Novelty, complexity and hedonic value. Perception and Psychophysics, 8, 279-286
14. Blaxton, T.A. (1989). Investigating dissociations among memory recognition memory: Applications to dementia and amnesia. Journal of Experimental Psychology. Learning, Memory, and Cognition, 15(4), 657-668.
15. Budac, A. (2015). NEXT GENERATIONS OF CONSUMERS – CHALLENGES AND OPPORTUNITIES FOR BRANDS. Bulletin of Taras Shevchenko National University of Kyiv Economics, 171, 6–10. https://doi.org/10.17721/1728-2667.2015/171-6/1
16. Cai, Z., Xie, Y., & Aguilar, F. X. (2017). Eco-label credibility and retailer effects on green product purchasing intentions. Forest Policy and Economics, 80, 200–208. https://doi.org/10.1016/j.forpol.2017.04.001
17. Chamorro, A., & Bañegil, T. M. (2006). Green marketing philosophy: a study of Spanish firms with ecolabels. Corporate Social Responsibility and Environmental Management, 13(1), 11–24. https://doi.org/10.1002/csr.83
18. Chen, X., Alfnes, F., & Rickertsen, K. (2015). Consumer Preferences, Ecolabels, and Effects of Negative Environmental Information. AgBioForum, 18(3), 327–336.
19. Choshaly, S.H. & Tih, S. (2017), "The factors associated with the behavioural intention of eco-labelled products", Pertanika Journal of Social Sciences and Humanities, Vol. 25 No. S, pp. 195-206
20. D'Souza, C. (2004). Ecolabel programmes: a stakeholder (consumer) perspective. Corporate Communications: An International Journal, 9(3), 179–188. https://doi.org/10.1108/13563280410551105

21. D'Souza, C., Taghian, M., Lamb, P., & Peretiatko, R. (2007). Green Decisions: Demographics and Consumer Understanding of Environmental Labels. International Journal of Consumer Studies, 31(4): 371-376.
22. Dalimunte, I., Miraja, B.A., Persada, S.F., Prasetyo, Y.T., Belgiawan, P.F., Redi, A.A.N.P. 2019. Comparing generation Z's behavior intention in using digital wallet for online and in-store transaction: A unified theory of acceptance and use of technology 2 approach. Journal of Applied Economic Sciences, Volume XIV, Fall, 3(65): 660-672. DOI: https://doi.org/10.14505/jaes.v14.3(65).04
23. Directorate-General for Communication. (2017, November). Special Eurobarometer: Attitudes of European citizens towards the Environment (No. 468). https://data.europa.eu/euodp/en/data/dataset/S2156_88_1_468_ENG
24. Directorate-General for Communication. (2020, March). Special Eurobarometer: Attitudes of European citizens towards the Environment (No. 501). DOI:10.2779/902489
25. Elliot, A. J., Fairchild, M. D., & Franklin, A. (2018). Handbook of Color Psychology (Cambridge Handbooks in Psychology) (Reprint ed.). Cambridge University Press.
26. Erez M, Earley P. Culture, self-identity and work. New York: Oxford University Press; 1993.
27. Fairtrade. (2020). AN OVERVIEW OF OUR IMPACT. https://www.fairtrade.net/impact/overview
28. Francis, T., & Hoefel, F. (2020, July 7). 'True Gen': Generation Z and its implications for companies. McKinsey & Company. https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/true-gen-generation-z-and-its-implications-for-companies
29. Frijda, N. H. (1986). The emotions. New York: Cambridge University Press.
30. Frijda, N. H. (1988). The laws of emotion. American Psychologist, 43, 349–358
31. Frijda, N. H. (2007). The laws of emotion. Mahwah, NJ: Erlbaum.
32. Galarraga Gallastegui, I. (2002). The use of eco-labels: a review of the literature. European Environment, 12(6), 316–331. https://doi.org/10.1002/eet.304
33. Gayathree, P. K., & Samarasinghe, D. (2019). Green Stimuli Characteristics and Green Self-Identity Towards Ethically Minded Consumption Behavior with Special Reference to Mediating Effect of Positive and Negative Emotions. Asian Social Science, 15(7), 77. https://doi.org/10.5539/ass.v15n7p77
34. Global Ecolabelling Network. (2020, July). Annual Report 2019. https://view.publitas.com/global-ecolabelling-network/gen-annual-report-2019/page/1
35. Global Ecolabelling Network. (2020). What is Ecolabelling? | Global Ecolabelling Network. https://www.globalecolabelling.net/what-is-eco-labelling/
36. Gutierrez, A. M. J., Chiu, A. S. F., & Seva, R. (2020). A Proposed Framework on the Affective Design of Eco-Product Labels. Sustainability, 12(8), 3234. https://doi.org/10.3390/su12083234
37. Hadi, N.U., Abdullah, N. and Sentosa, I. (2016) 'Making sense of mediating analysis: a marketing perspective', Review of Integrative Business & Economics, Vol. 5, No. 2, pp.62–76.
38. Halder, P., Hansen, E. N., Kangas, J., & Laukkanen, T. (2020). What a national culture and ethics matter in consumers' green consumption values. Journal of Cleaner Production, 265, 121754. https://doi.org/10.1016/j.jclepro.2020.121754
39. Haws, K. L., Winterich, K. P., & Naylor, R. W. (2014). Seeing the world through GREEN-tinted glasses: Green consumption values and responses to environmentally friendly products. Journal of Consumer Psychology, 24(3), 336–354. https://doi.org/10.1016/j.jcps.2013.11.002
40. Henderson, P. W., & Cote, J. A. (1998). Guidelines for Selecting or Modifying Logos. Journal of Marketing, 62(2), 14–30. https://doi.org/10.1177/002224299806200202
41. Henderson, P. W., Giese, J. L., & Cote, J. A. (2004). Impression Management using Typeface Design. Journal of Marketing, 68(4), 60–72. https://doi.org/10.1509/jmkg.68.4.60.42736
42. Henderson, P.W., Cote, J.A., Leong S.M., & Schmitt B. (2003). Building Strong Brands in Asia: Selecting the Visual Components of Image to Maximize Brand Strength. International Journal of Research in Marketing, 20, 297–313.
43. Hofstede G. Culture's consequences. 2nd ed. Thousand Oaks: Sage Publications; 2001.
44. Hofstede Insight. (2020, August 12). Country Comparison [Dataset]. Hofstede Insight. https://www.hofstede-insights.com/country-comparison/france,italy/
45. Hofstede, G., & Hofstede, G. J. 2004. Cultures and Organizations: Software of the Mind (2nd ed.). McGraw-Hill.

46. Hogarth, R. M. (1981). Beyond discrete biases: Functional and dysfunctional aspects of judgmental heuristics. Psychological Bulletin, 90(2), 197–217. https://doi.org/10.1037/0033-2909.90.2.197
47. Index Mundi. (2020, August 8). Italy vs. France - Country Comparison [Dataset]. Index Mundi. https://www.indexmundi.com/factbook/compare/italy.france
48. Ingaldi, M., & Ulewicz, R. (2019). How to Make E-Commerce More Successful by Use of Kano's Model to Assess Customer Satisfaction in Terms of Sustainable Development. Sustainability, 11(18), 4830. https://doi.org/10.3390/su11184830
49. Jacobs, L., Keown, C., Worthley, R., & Ghymn, K. (1991). Cross-cultural Colour Comparisons: Global Marketers Beware! International Marketing Review, 8(3), 21–30. https://doi.org/10.1108/02651339110137279
50. Janiszewski, C., & Meyvis, T. (2001). Effects of brand logo complexity, repetition, and spacing on processing fluency and judgment. Journal of Consumer Research, 28(1), 18- 32
51. Jiang, Y., Gorn, G. J., Galli, M., & Chattopadhyay, A. (2015). Does Your Company Have the Right Logo? How and Why Circular- and Angular-Logo Shapes Influence Brand Attribute Judgments. Journal of Consumer Research, 42(5), 709–726. https://doi.org/10.1093/jcr/ucv049
52. Jiang, Y., Wang, H., Jin, S., & Delgado, M. (2019). The Promising Effect of a Green Food Label in the New Online Market. Sustainability, 11(3), 796. https://doi.org/10.3390/su11030796
53. Johnson, A. R., & Stewart, D. W. (2005). A Reappraisal of the Role of Emotion in Consumer Behavior. Review of Marketing Research, 3–34. https://doi.org/10.1108/s1548-6435(2004)0000001005
54. Johnson, A.R. and Stewart, D.W. (2005), "A Reappraisal of the Role of Emotion in Consumer Behavior", Malhotra, N.K. (Ed.) Review of Marketing Research (Review of Marketing Research, Vol. 1), Emerald Group Publishing Limited, Bingley pp. 3-34
55. Kärnä, J., Juslin, H., Ahonen, V., & Hansen, E. (2001). Green Advertising: Greenwash or a True Reflection of Marketing Strategies? Greener Management International, 33, 59–70. https://www.researchgate.net/publication/258561630_Green_Advertising_-_Greenwash_or_a_True_Reflection_of_Marketing_Strategies#fullTextFileContent
56. Kast F., Meier S., and Pomeranz D. (2012) Under-Savers Anonymous: Evidence on Self-Help Groups and Peer Pressure as a Savings Commitment Device, National Bureau of Economic Research, No. w18417; also Goette L., Huffman D., and Meier S. (2006) The Impact of Group Membership on Cooperation and Norm Enforcement: Evidence Using Random Assignment to Real Social Groups. The American Economic Review, 212–16.
57. Kaya, N., & Epps, H. H. (2004). Color-emotion associations: past experience and personal preference. AIC 2004 Color and Paints, Interim Meeting of the International Color Association, Proceedings, 31–34.
58. Keaveney, S. M., Herrmann, A., Befurt, R., & Landwehr, J. R. (2012). The Eyes Have It: How a Car's Face Influences Consumer Categorization and Evaluation of Product Line Extensions. Psychology & Marketing, 29(1), 36–51. https://doi.org/10.1002/mar.20501
59. Kenton, W. (2021). Why Fast-Moving Consumer Goods Matter. Investopedia. https://www.investopedia.com/terms/f/fastmoving-consumer-goods-fmcg.asp
60. Kenton, W.. (2020, March 12). Fast-Moving Consumer Goods (FMCG). Investopedia. https://www.investopedia.com/terms/f/fastmoving-consumer-goods-fmcg.asp
61. Kotler, P., & Armstrong, G. (2011). Principles of Marketing (14th Edition) (14th ed.). Prentice Hall. ISBN 13: 978-0-13-216712-3
62. Laky, Z. (2019, November). Environment policy: general principles and basic framework | Fact Sheets on the European Union | European Parliament. European Parliament. https://www.europarl.europa.eu/factsheets/en/sheet/71/environment-policy-general-principles-and-basic-framework#:%7E:text=European%20environment%20policy%20rests%20on,all%20areas%20of%20environment%20policy
63. Lazarus, R. S. (1991). Emotion and adaptation. New York: Oxford University Press.
64. Lazarus, Richard S. (1995). "Vexing Research Problems Inherent in Cognitive-Mediational Theories of Emotion—and some Solutions," Psychological Inquiry, 6 (3), 183–96.
65. Leng, C. Y., & Botelho, D. (2010). How does national culture impact on consumers' decision-making styles? across cultural study in Brazil, the United States and Japan. BAR - Brazilian Administration Review, 7(3), 260–275. https://doi.org/10.1590/s1807-76922010000300004

66. Lieven, T., Grohmann, B., Herrmann, A., Landwehr, J. R., & van Tilburg, M. (2015). The effect of brand design on brand gender perceptions and brand preference. European Journal of Marketing, 49(1/2), 146–169. https://doi.org/10.1108/ejm-08-2012-0456
67. Liobikienė, G. ė., Mandravickaitė, J., & Bernatonienė, J. (2016). Theory of planned behavior approach to understand the green purchasing behavior in the EU: A cross-cultural study. Ecological Economics, 125, 38–46. https://doi.org/10.1016/j.ecolecon.2016.02.008
68. Madden, T. J., Hewett, K., & Roth, M. S. (2000). Managing images in different cultures: A cross-national study of color meanings and preferences. Journal of International Marketing, 8 (4), 90–107
69. Mi, L., Qiao, L., Xu, T., Gan, X., Yang, H., Zhao, J., Qiao, Y., & Hou, J. (2020). Promoting sustainable development: The impact of differences in cultural values on residents' pro-environmental behaviors. Sustainable Development, 1–15. https://doi.org/10.1002/sd.2103
70. Miceli, G. N., Scopelliti, I., Raimondo, M. A., & Donato, C. (2014). Breaking Through Complexity: Visual and Conceptual Dimensions in Logo Evaluation across Exposures. Psychology & Marketing, 31(10), 886–899. https://doi.org/10.1002/mar.20741
71. Moors, A. (2007). Can cognitive methods be used to study the unique aspect of emotion: An appraisal theorist's answer. Cognition and Emotion, 21, 1238–1269.
72. Moors, A. (2017). Appraisal Theory of Emotion. Encyclopedia of Personality and Individual Differences, 1–9. https://doi.org/10.1007/978-3-319-28099-8_493-1
73. MSC. (2020). What does the MSC label mean | Marine Stewardship Council. https://www.msc.org/what-we-are-doing/our-approach/what-does-the-blue-msc-label-mean
74. Mufidah, I., Jiang, B., Lin, S.-C., Chin, J., Rachmaniati, Y., & Persada, S. (2018). Understanding the Consumers' Behavior Intention in Using Green Ecolabel Product through Pro-Environmental Planned Behavior Model in Developing and Developed Regions: Lessons Learned from Taiwan and Indonesia. Sustainability, 10(5), 1423. https://doi.org/10.3390/su10051423
75. Muis, K. R., Pekrun, R., Sinatra, G. M., Azevedo, R., Trevors, G., Meier, E., & Heddy, B. C. (2015). The curious case of climate change: Testing a theoretical model of epistemic beliefs, epistemic emotions, and complex learning. Learning and Instruction, 39, 168–183. https://doi.org/10.1016/j.learninstruc.2015.06.003
76. Neumann, J. V., & Morgenstern, O. (2020). Theory of Games and Economic Behavior: 60th Anniversary Commemorative Edition. Golden Keys Success.
77. NUOVI
78. Oatley, K., & Johnson-Laird, P. N. (1987). Towards a cognitive theory of emotions. Cognition and Emotion, 1, 29–50.
79. OECD. (1997). Eco-Labelling: Actual Effects of Selected Programme. https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=oc de/gd(97)105
80. Onwezen, M. C., Antonides, G., & Bartels, J. (2013). The Norm Activation Model: An exploration of the functions of anticipated pride and guilt in pro-environmental behaviour. Journal of Economic Psychology, 39, 141–153. https://doi.org/10.1016/j.joep.2013.07.005
81. Payne, J. W., Bettman, J. R., & Johnson, E. J. (1993). The Adaptive Decision Maker (1st ed.). Cambridge University Press.
82. PEFC. (2019). PEFC Global Statistics Data: December 2019. file:///Users/lucagambino1/Downloads/PEFC-Global-Statistics-Dec-19-1.pdf
83. Peloza, J., White, K., & Shang, J. (2013). Good and Guilt-Free: The Role of Self-Accountability in Influencing Preferences for Products with Ethical Attributes. Journal of Marketing, 77(1), 104–119. https://doi.org/10.1509/jm.11.0454
84. Perussia, F. (1988). Semiotic Frame: A Method for the Experimental Analysis of "Images." Psychological Reports, 63(2), 524–526. https://doi.org/10.2466/pr0.1988.63.2.524
85. Prakash, G., Choudhary, S., Kumar, A., Garza-Reyes, J. A., Khan, S. A. R., & Panda, T. K. (2019). Do altruistic and egoistic values influence consumers' attitudes and purchase intentions towards eco-friendly packaged products? An empirical investigation. Journal of Retailing and Consumer Services, 50, 163–169. https://doi.org/10.1016/j.jretconser.2019.05.011
86. Procter & Gamble. (2021, March 23). Environmental Sustainability. https://us.pg.com/environmental-sustainability/
87. Procter & Gamble. (2021). P&G History. https://us.pg.com/pg-history/

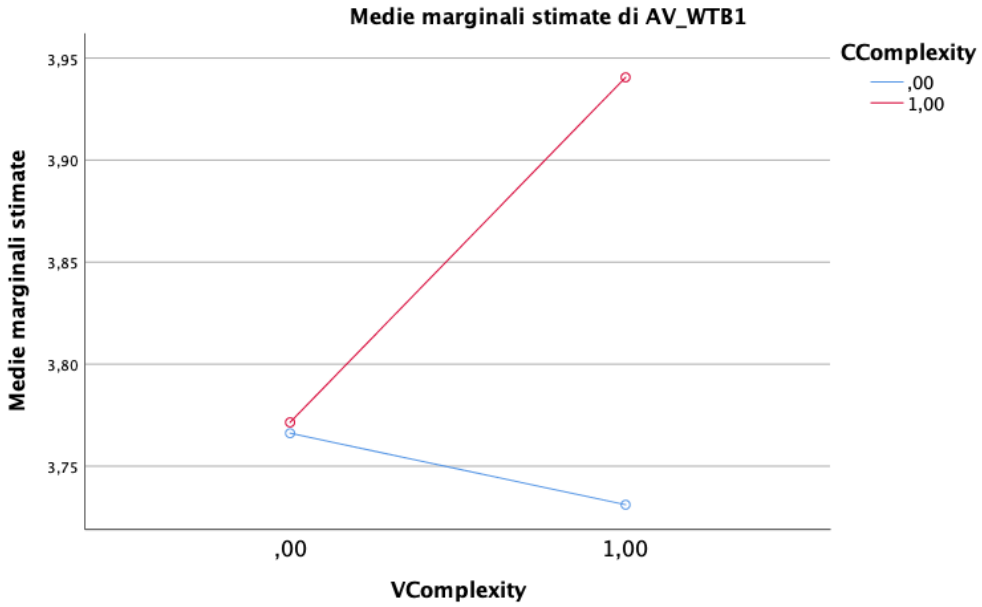
88. Rahnama, H., & Rajabpour, S. (2017). Identifying effective factors on consumers' choice behavior toward green products: the case of Tehran, the capital of Iran. Environmental Science and Pollution Research, 24(1), 911-925.
89. Rainforest Alliance. (2020). Rainforest Alliance | Home. https://www.rainforest-alliance.org/impact
90. Rex, E., & Baumann, H. (2007). Beyond ecolabels: what green marketing can learn from conventional marketing. Journal of Cleaner Production, 15(6), 567–576. https://doi.org/10.1016/j.jclepro.2006.05.013
91. Rex, E., & Baumann, H. (2007). Beyond ecolabels: what green marketing can learn from conventional marketing. Journal of Cleaner Production, 15(6), 567–576. https://doi.org/10.1016/j.jclepro.2006.05.013
92. Rihn, A., Wei, X., & Khachatryan, H. (2019). Text vs. logo: Does eco-label format influence consumers' visual attention and willingness-to-pay for fruit plants? An experimental auction approach. Journal of Behavioral and Experimental Economics, 82, 101452. https://doi.org/10.1016/j.socec.2019.101452
93. Rizkalla,N.,& Setiadi D.D. (2020). Appraising The Influence Of Theory Of Consumption Values On Environmentally-Friendly Product Purchase Intention In Indonesia. Management and Marketing Journal, University of Craiova, Faculty of Economics and Business Administration, vol. 0(1),7-25.
94. Rokka, J., & Uusitalo, L. (2008). Preference for green packaging in consumer product choices - Do consumers care? International Journal of Consumer Studies, 32(5), 516–525. https://doi.org/10.1111/j.1470-6431.2008.00710.x
95. Roseman, I. J., & Smith, C. A. (2001). "Appraisal theory: Overview, assumptions, varieties, controversies". In K. R. Scherer, A. Schorr, & T. Johnstone (Eds.), Appraisal Processes in Emotion: Theory, Methods, Research (pp. 3–19). New York, NY: Oxford University Press.
96. RSPO - Roundtable on Sustainable Palm Oil. (2020). Impact. https://rspo.org/impact
97. Scherer, K. R. (2001). Appraisal considered as a process of multilevel sequential checking. In K. R. Scherer, A. Schorr, & T. Johnstone (Eds.), Appraisal processes in emotion (pp. 92–120). New York: Oxford University Press.
98. Scherer, K. R. (2009). The dynamic architecture of emotion: Evidence for the component process model. Cognition and Emotion, 23, 1307–1351.
99. Schneider, C. R., Zaval, L., Weber, E. U., & Markowitz, E. M. (2017). The influence of anticipated pride and guilt on pro-environmental decision making. PLOS ONE, 12(11), e0188781. https://doi.org/10.1371/journal.pone.0188781
100. Schwartz S, Bilsky W. Toward a theory of the universal content and structure of values: extensions and cross-cultural replications. J Pers Soc Psychol 1990;58(5):878–91.
101. Schwartz S, Bilsky W. Toward a theory of the universal content and structure of values: extensions and cross-cultural replications. J Pers Soc Psychol 1990;58(5):878–91.
102. Schwartz, S. H. (1977). Normative Influences on Altruism. Advances in Experimental Social Psychology, 221–279. https://doi.org/10.1016/s0065-2601(08)60358-5
103. SDG Nederland. (2019, September 23). Unilever Making Sustainable Living Commonplace. https://www.sdgnederland.nl/user/unilever/#:%7E:text=The%20Unilever%20Sustainable%20Living%20Plan%20(USLP)%20is%20our%20blueprint%20for,how%20consumers%20use%20our%20brands.
104. Sekaran U. Methodological and theoretical issues and advancements in crosscultural research. J Int Bus Stud 1983;14:61–73 [Fall].
105. Simon, H. A. (1955). A Behavioral Model of Rational Choice. The Quarterly Journal of Economics, 69(1), 99. https://doi.org/10.2307/1884852
106. Simonson, I. (1989). Choice Based on Reasons: The Case of Attraction and Compromise Effects. Journal of Consumer Research, 16(2), 158. https://doi.org/10.1086/209205
107. Singh, S. (2006). Impact of color on marketing. Management Decision, 44(6), 783–789.
108. Sivakumar K, Nakata C. The stampede toward Hofstede's framework: avoiding the sample design pit in cross-cultural research. J Int Bus Stud 2001;32(3):555–74.
109. Sliburyte, L., & Skeryte, I. (2014). What We Know about Consumers' Color Perception. Procedia - Social and Behavioral Sciences, 156, 468–472. https://doi.org/10.1016/j.sbspro.2014.11.223
110. Soares, A. M., Farhangmehr, M., & Shoham, A. (2007). Hofstede's dimensions of culture in international marketing studies. Journal of Business Research, 60(3), 277–284. https://doi.org/10.1016/j.jbusres.2006.10.018

111. Soman, D. (2017). The Last Mile: Creating Social and Economic Value from Behavioral Insights (Rotman-Utp Publishing) (Reprint ed.). Rotman-UTP Publishing.
112. Song, Y., Qin, Z., & Yuan, Q. (2019). The Impact of Eco-Label on the Young Chinese Generation: The Mediation Role of Environmental Awareness and Product Attributes in Green Purchase. Sustainability, 11(4), 973–990. https://doi.org/10.3390/su11040973
113. Songa, G., Slabbinck, H., Vermeir, I., & Russo, V. (2019). How do implicit/explicit attitudes and emotional reactions to sustainable logo relate? A neurophysiological study. Food Quality and Preference, 71, 485–496. https://doi.org/10.1016/j.foodqual.2018.04.008
114. Sortheix, F. M., Parker, P. D., Lechner, C. M., & Schwartz, S. H. (2017). Changes in Young Europeans' Values During the Global Financial Crisis. Social Psychological and Personality Science, 10(1), 15–25. https://doi.org/10.1177/1948550617732610
115. Source: Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of Price, Brand, and Store Information on Buyers' Product Evaluations. Journal of Marketing Research, 28(3), 307. https://doi.org/10.2307/3172866
116. Source: Gelbrich, Katja (2011), "I Have Paid Less Than You! The Emotional and Behavioral Consequences of Advantaged Price Inequality," Journal of Retailing, 87 (2), 207-224.
117. Sprotles, G. B., & Kendal, E. L. (1986). A Methodology for Profiling Consumers' Decision-Making Styles. Journal of Consumer Affairs, 20(2), 267–279. https://doi.org/10.1111/j.1745-6606.1986.tb00382.x
118. Taufique, K. M. R., Siwar, C., Chamhuri, N., & Sarah, F. H. (2016). Integrating General Environmental Knowledge and Eco-Label Knowledge in Understanding Ecologically Conscious Consumer Behavior. Procedia Economics and Finance, 37, 39–45. https://doi.org/10.1016/s2212-5671(16)30090-9
119. Testa, F., Iraldo, F., Vaccari, A., & Ferrari, E. (2013). Why Eco-labels can be Effective Marketing Tools: Evidence from a Study on Italian Consumers. Business Strategy and the Environment, 24(4), 252–265. https://doi.org/10.1002/bse.1821
120. The Council of the European Communities. (1992, April). Council Regulation (EEC) on a Community eco-label award scheme (No. 880/92). Official Journal of the European Communities. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L:1992:099:FULL&from=EN
121. The Nestlé company history. (2021). Nestlé Global. https://www.nestle.com/aboutus/history/nestle-company-history
122. Tormala, Z. L., & Rucker, D. (2015). How Certainty Transforms Persuasion. Harvard Business Review, 1–9. https://hbr.org/2015/09/how-certainty-transforms-persuasion
123. Tracy, J. L., & Robins, R. W. (2007). The psychological structure of pride: A tale of two facets. Journal of Personality and Social Psychology, 92(3), 506–525. https://doi.org/10.1037/0022-3514.92.3.506
124. Unilever global company website | Unilever Global. (2021). Unilever Global Company Website. https://www.unilever.com/
125. Van der Lans, R., Cote, J. A., Cole, C. A., Leong, S. M., Smidts, A., Henderson, P. W., Bluemelhuber, C., Bottomley, P. A., Doyle, J. R., Fedorikhin, A., Moorthy, J., Ramaseshan, B., & Schmitt, B.H. (2009). Cross-national logo evaluation analysis: An individual-level approach, Marketing Science, 28(5), 968-985.
126. Van Tonder, E., Fullerton, S., & de Beer, L. T. (2020). Cognitive and emotional factors contributing to green customer citizenship behaviours: a moderated mediation model. Journal of Consumer Marketing, 37(6), 639–650. https://doi.org/10.1108/jcm-06-2019-3268
127. Wang, Y., Li, Y., Zhang, J., & Su, X. (2019). How impacting factors affect Chinese green purchasing behavior based on Fuzzy Cognitive Maps. Journal of Cleaner Production, 240, 118199. https://doi.org/10.1016/j.jclepro.2019.118199
128. Wexner, L. B. (1954). The degree to which colors (hues) are associated with mood-tones. Journal of Applied Psychology, 38(6), 432–435. https://doi.org/10.1037/h0062181
129. Whitfield, T. W. A., & Wiltshire, T. J. (1990). Color psychology: A critical review. Genetic, Social, and General Psychology Monographs, 116, 387–411.
130. Whitfield, T. W. A., & Wiltshire, T. J. (1990). Color psychology: A critical review. Genetic, Social, and General Psychology Monographs, 116, 387–411.
131. World Fair Trade Organization. (2020, November 11). Our Fair Trade System. https://wfto.com/our-fair-trade-system

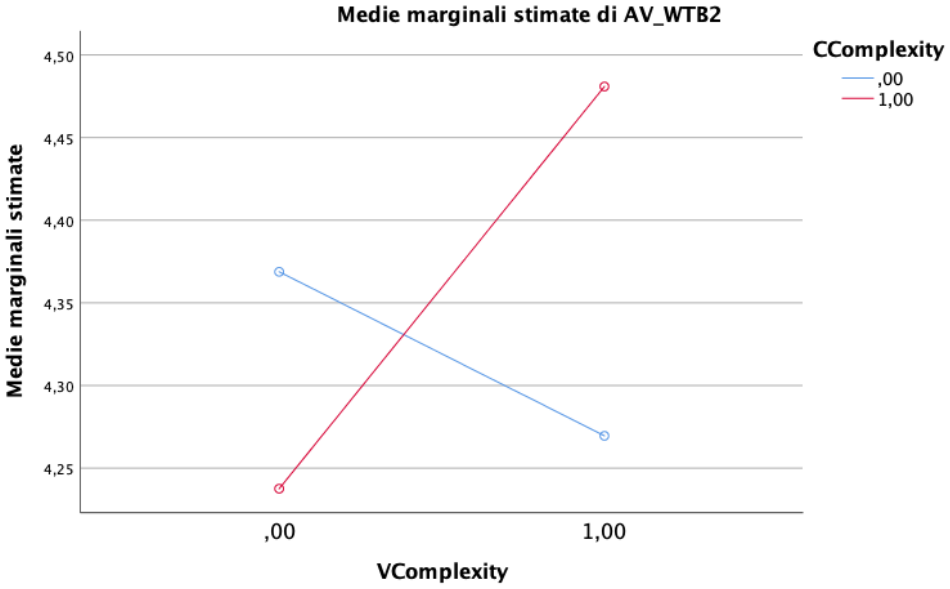
132. Young, K. (2019, November 27). The Rise of Green Consumerism: What do Brands Need to Know? GWI. https://blog.globalwebindex.com/chart-of-the-week/green-consumerism/
133. Young, W., Hwang, K., McDonald, S., & Oates, C. J. (2009). Sustainable consumption: green consumer behaviour when purchasing products. Sustainable Development, n/a. https://doi.org/10.1002/sd.394

APPENDIX

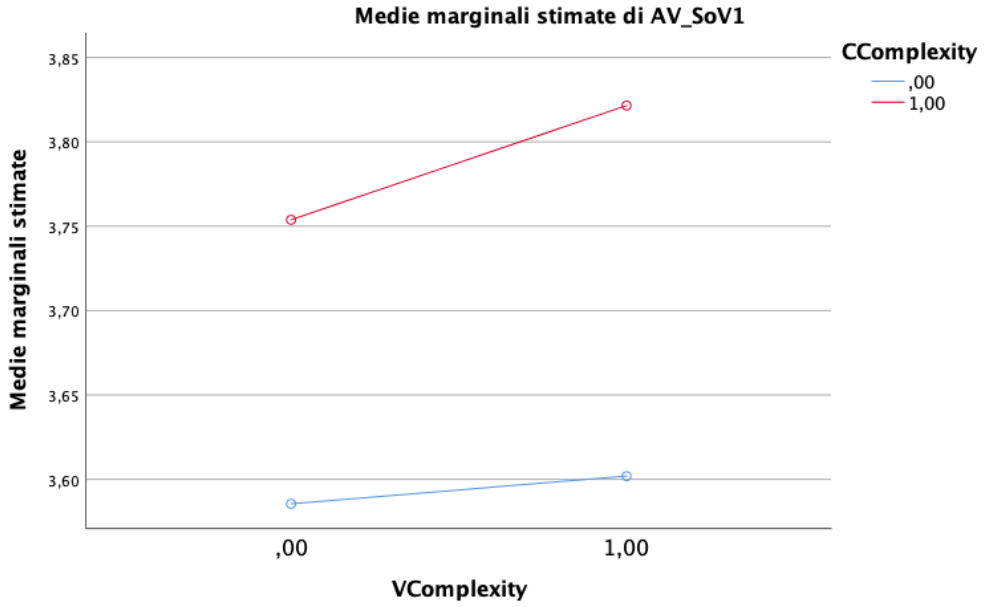
Appendix 1: Visual and conceptual complexity's moderation analyses



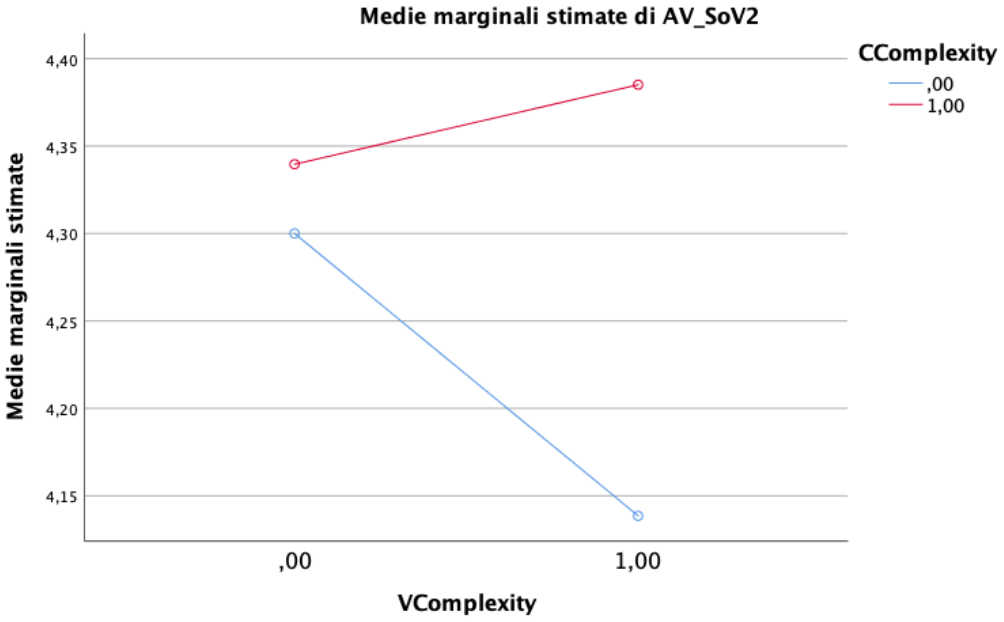
Le covariate presenti nel modello sono valutate ai seguenti valori: AV_EnvConc = 5,0515, AV_Ecoatt = 4,5079, Generations = ,6516



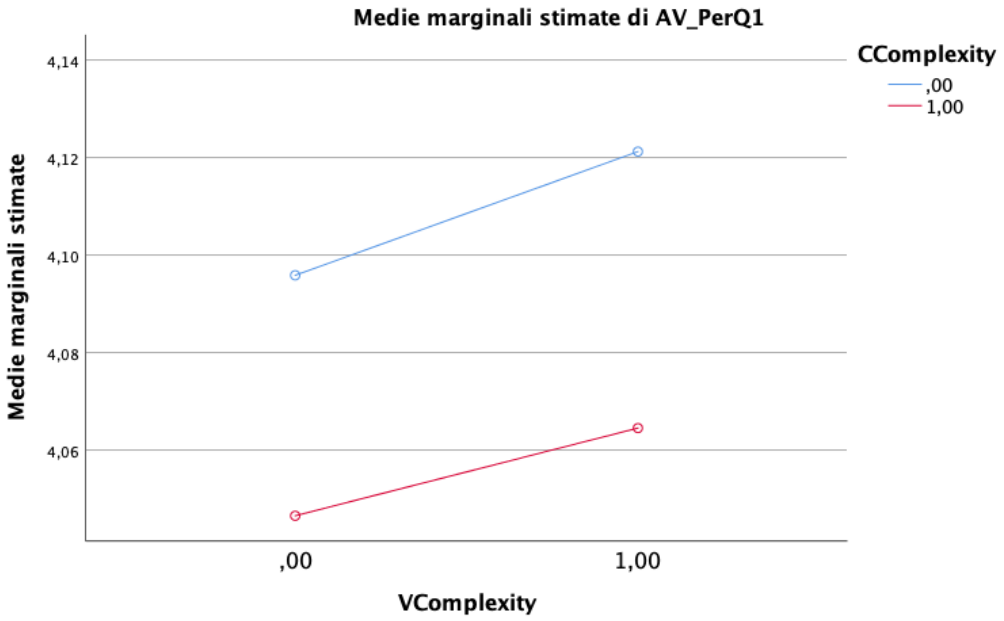
Le covariate presenti nel modello sono valutate ai seguenti valori: AV_EnvConc = 5,0515, AV_Ecoatt = 4,5079, Generations = ,6516



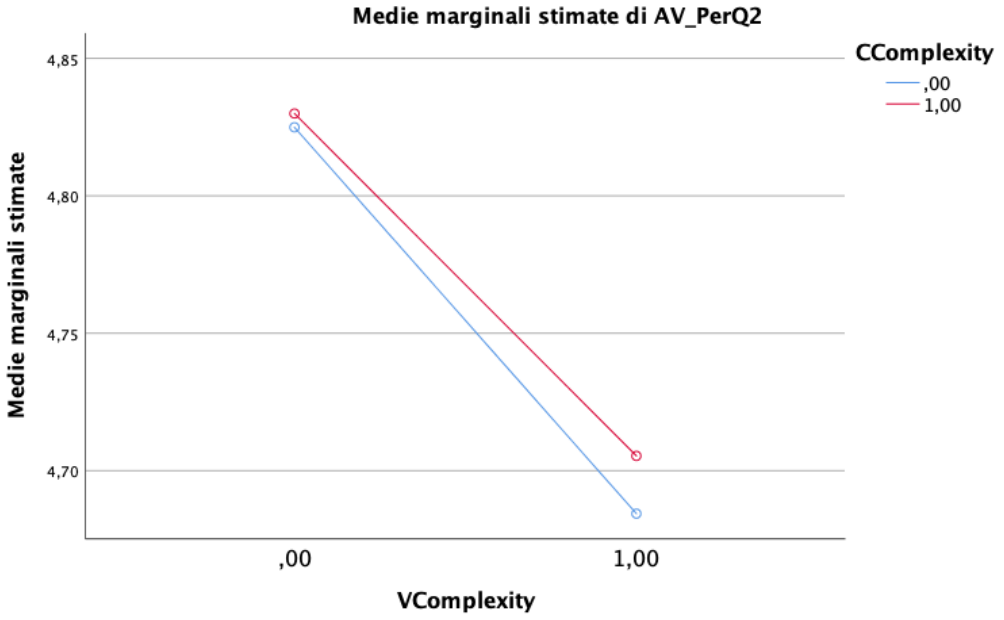
Le covariate presenti nel modello sono valutate ai seguenti valori: AV_EnvConc = 5,0515, AV_Ecoatt = 4,5079, Generations = ,6516



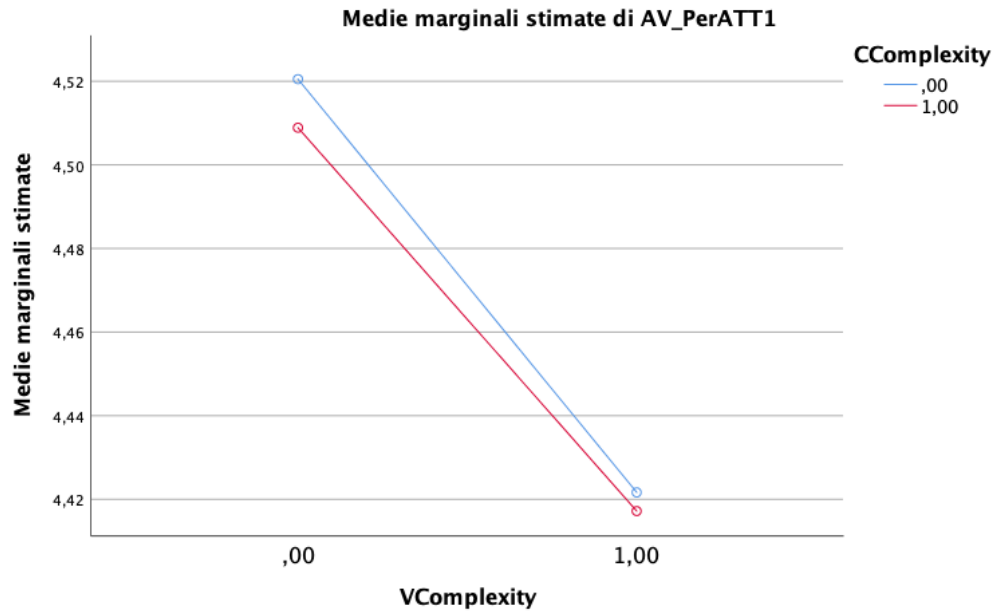
Le covariate presenti nel modello sono valutate ai seguenti valori: AV_EnvConc = 5,0515, AV_Ecoatt = 4,5079, Generations = ,6516



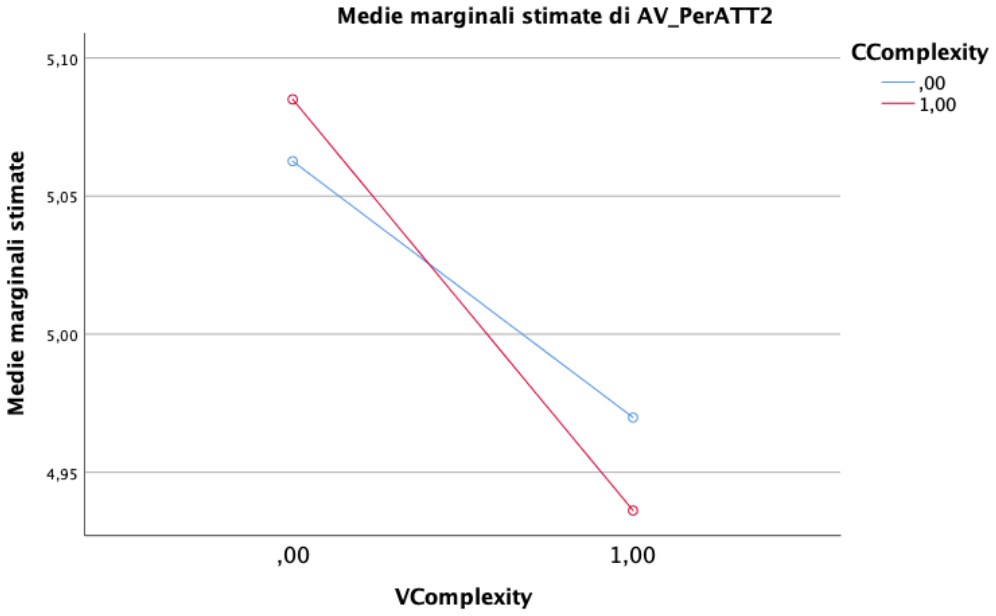
Le covariate presenti nel modello sono valutate ai seguenti valori: AV_EnvConc = 5,0515, AV_Ecoatt = 4,5079, Generations = ,6516



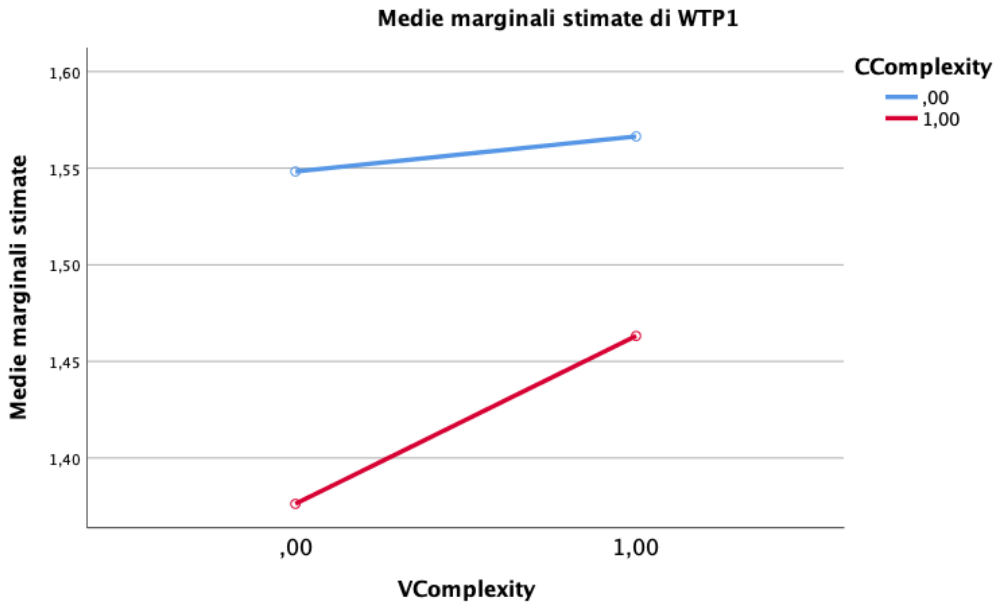
Le covariate presenti nel modello sono valutate ai seguenti valori: AV_EnvConc = 5,0515, AV_Ecoatt = 4,5079, Generations = ,6516



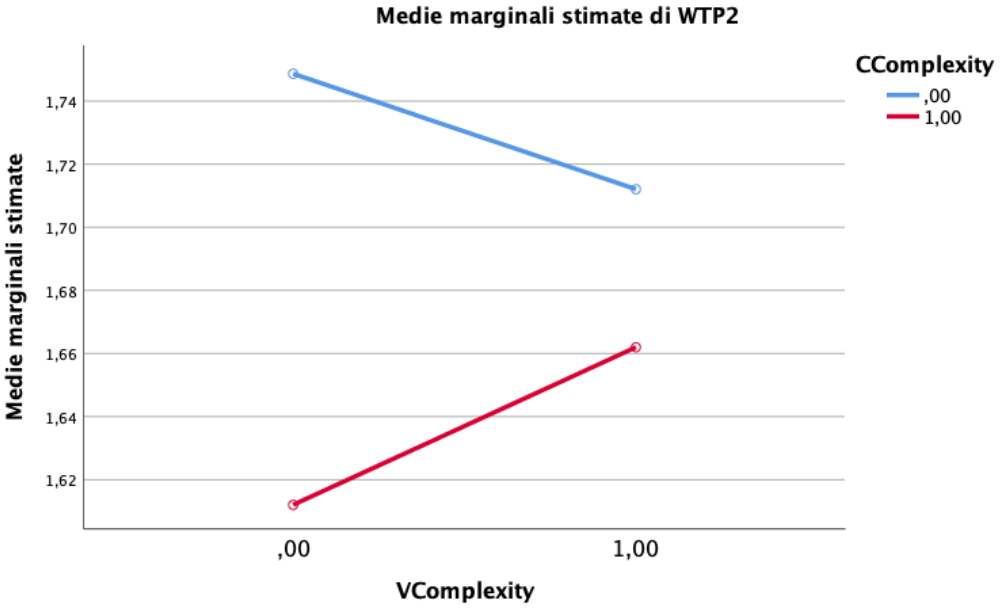
Le covariate presenti nel modello sono valutate ai seguenti valori: AV_EnvConc = 5,0477, AV_Ecoatt = 4,5030, Generations = ,6529



Le covariate presenti nel modello sono valutate ai seguenti valori: AV_EnvConc = 5,0515, AV_Ecoatt = 4,5079, Generations = ,6516

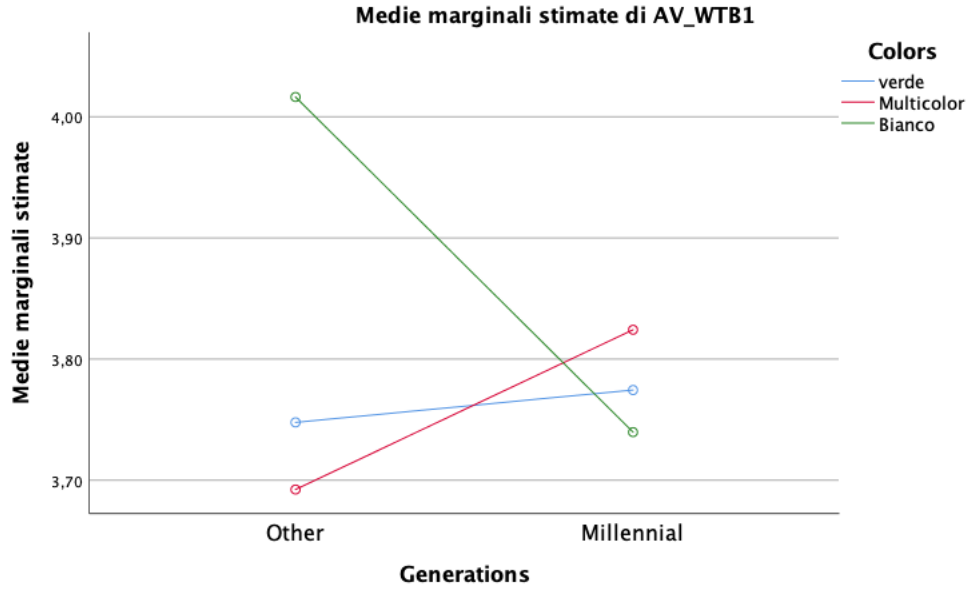


Le covariate presenti nel modello sono valutate ai seguenti valori: AV_EnvConc = 5,0515, AV_Ecoatt = 4,5079, Generations = ,6516

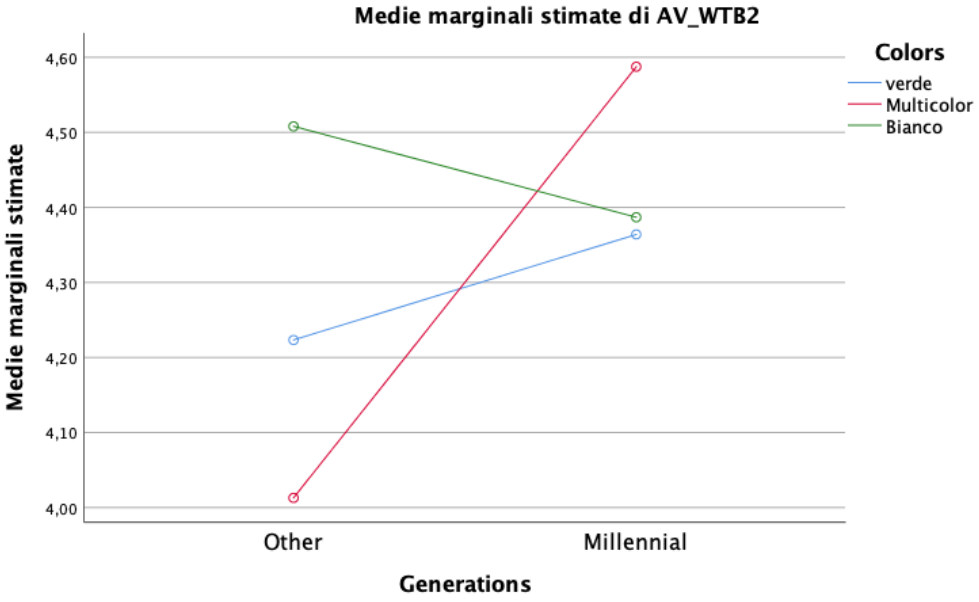


Le covariate presenti nel modello sono valutate ai seguenti valori: AV_EnvConc = 5,0515, AV_Ecoatt = 4,5079, Generations = ,6516

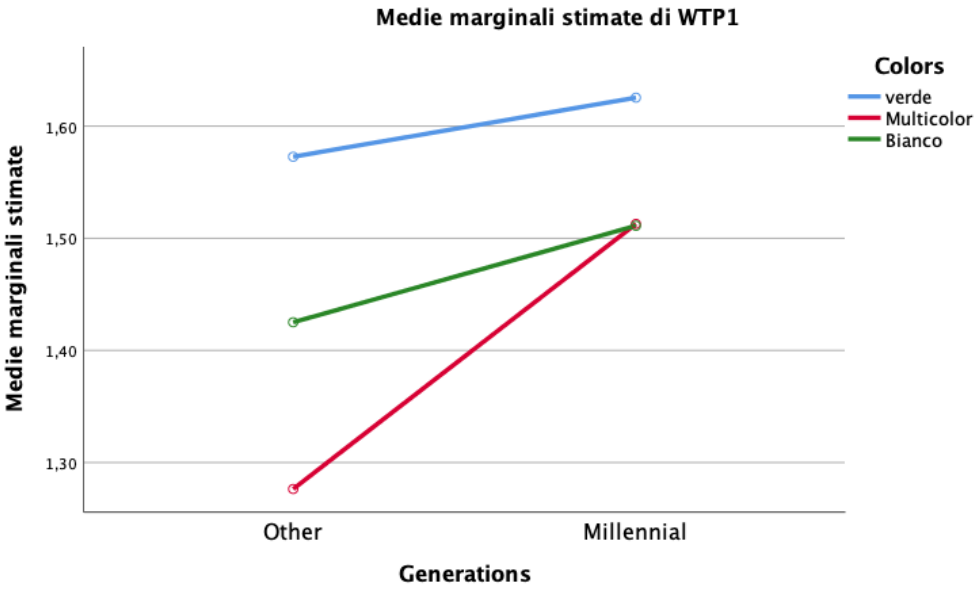
Appendix 2: Generations and colours' moderation analyses



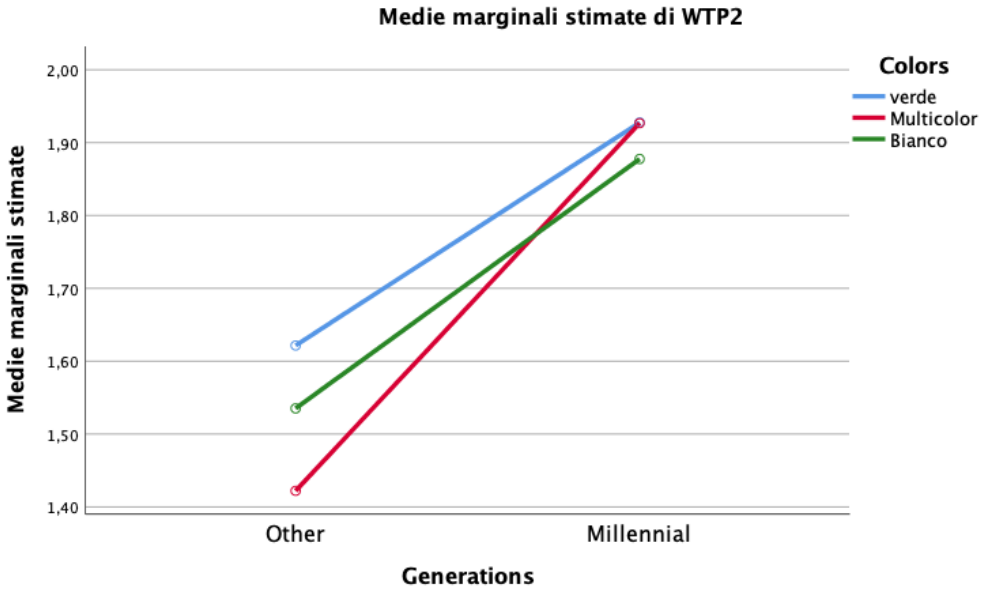
Le covariate presenti nel modello sono valutate ai seguenti valori: AV_Guilty = 2,5454, AV_Proud = 4,3024, AV_EnvConc = 5,0209, AV_Ecoatt = 4,5052



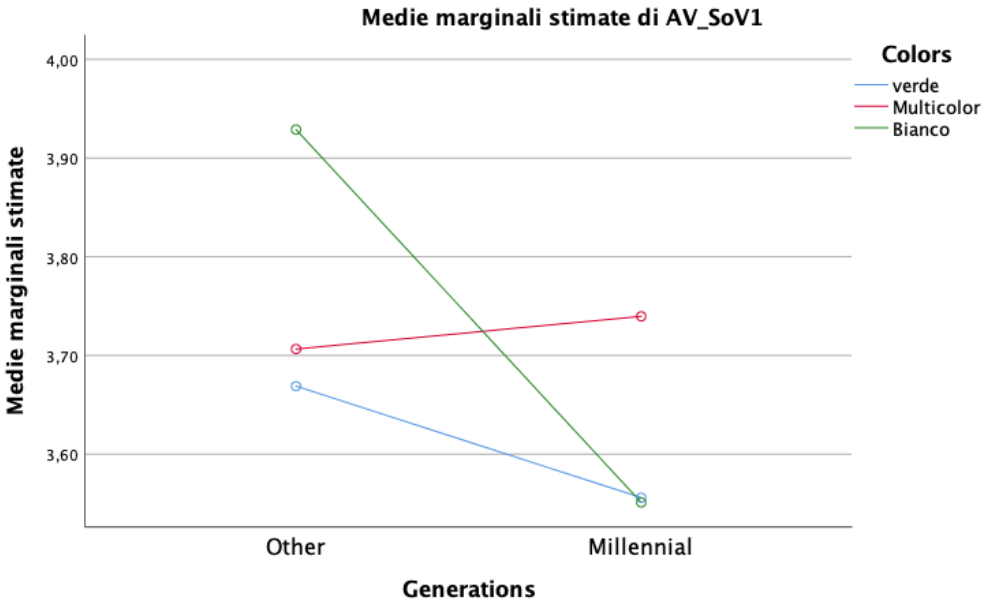
Le covariate presenti nel modello sono valutate ai seguenti valori: AV_Guilty = 2,5454, AV_Proud = 4,3024, AV_EnvConc = 5,0209, AV_Ecoatt = 4,5052



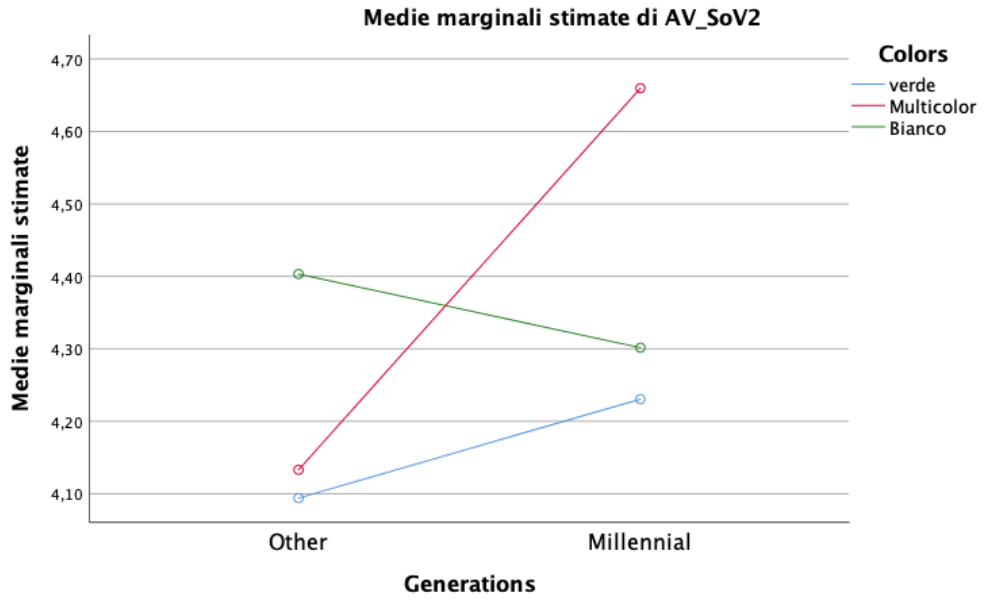
Le covariate presenti nel modello sono valutate ai seguenti valori: AV_Guilty = 2,5454, AV_Proud = 4,3024, AV_EnvConc = 5,0209, AV_Ecoatt = 4,5052



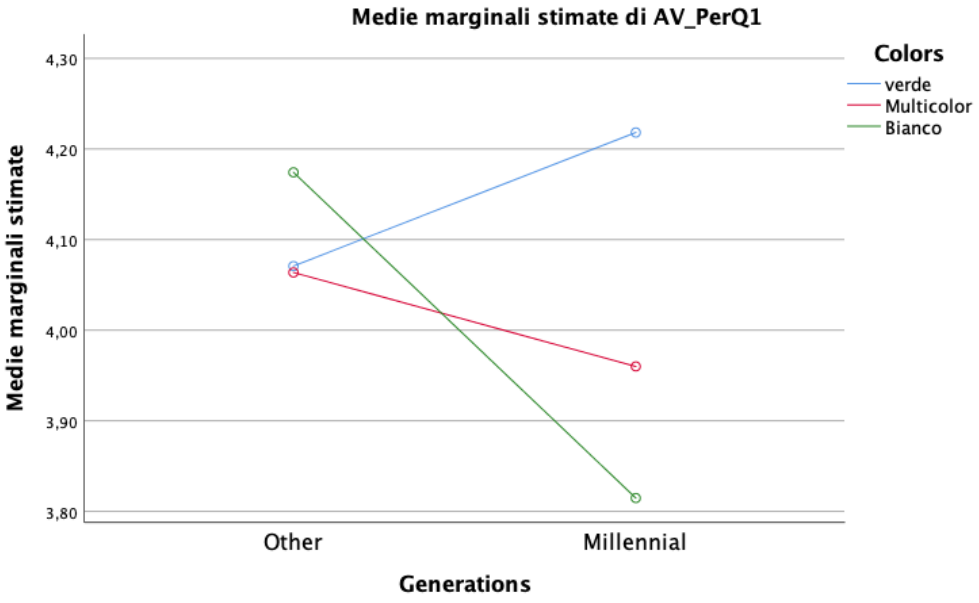
Le covariate presenti nel modello sono valutate ai seguenti valori: AV_Guilty = 2,5454, AV_Proud = 4,3024, AV_EnvConc = 5,0209, AV_Ecoatt = 4,5052



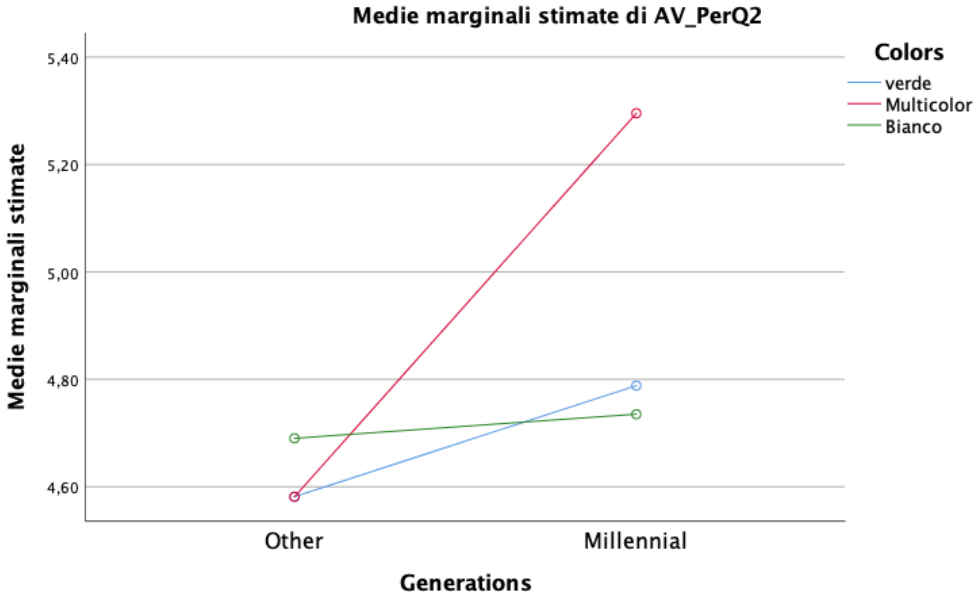
Le covariate presenti nel modello sono valutate ai seguenti valori: AV_Guilty = 2,5454, AV_Proud = 4,3024, AV_EnvConc = 5,0209, AV_Ecoatt = 4,5052



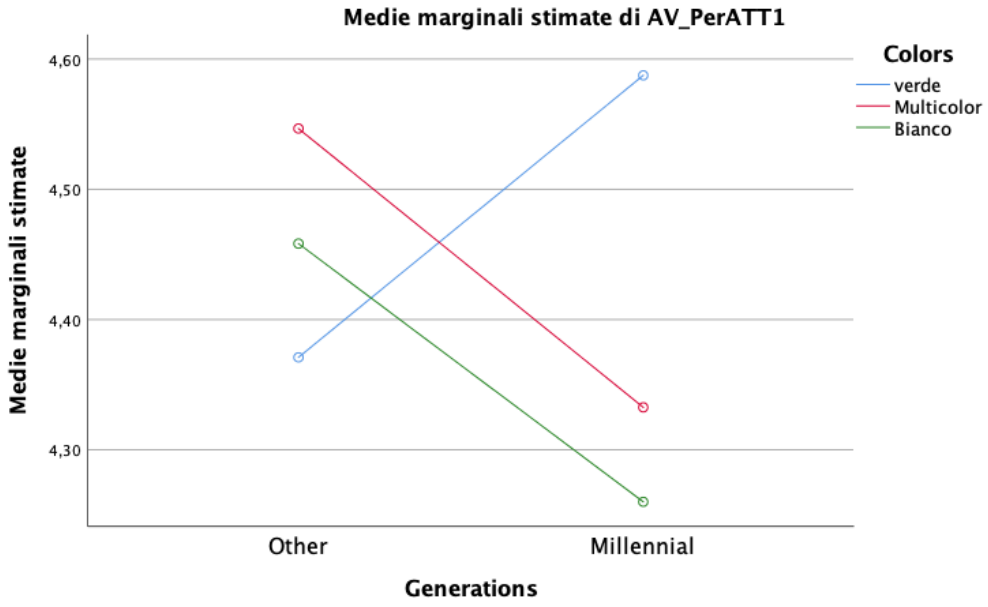
Le covariate presenti nel modello sono valutate ai seguenti valori: AV_Guilty = 2,5454, AV_Proud = 4,3024, AV_EnvConc = 5,0209, AV_Ecoatt = 4,5052



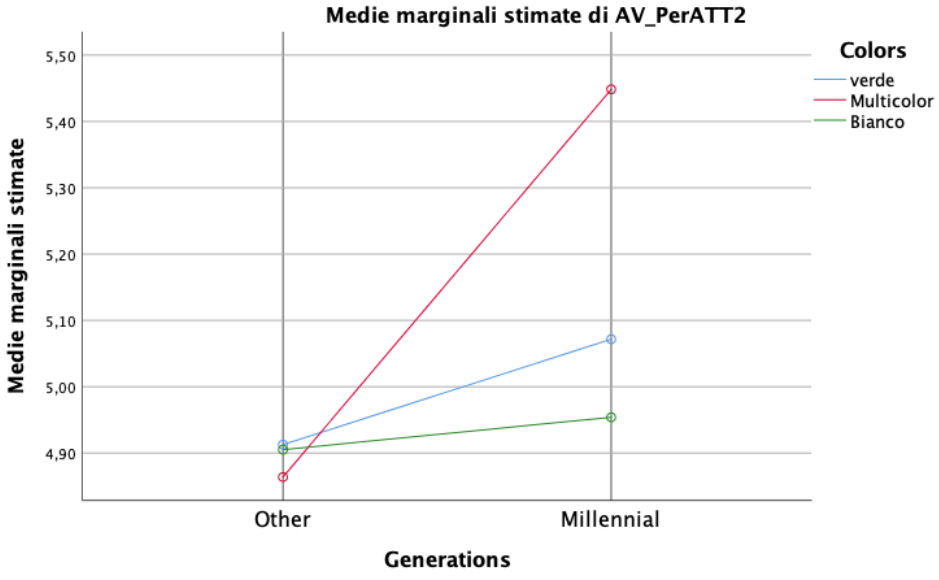
Le covariate presenti nel modello sono valutate ai seguenti valori: AV_Guilty = 2,5454, AV_Proud = 4,3024, AV_EnvConc = 5,0209, AV_Ecoatt = 4,5052



Le covariate presenti nel modello sono valutate ai seguenti valori: AV_Guilty = 2,5454, AV_Proud = 4,3024, AV_EnvConc = 5,0209, AV_Ecoatt = 4,5052



Le covariate presenti nel modello sono valutate ai seguenti valori: AV_Guilty = 2,5337, AV_Proud = 4,2953, AV_EnvConc = 5,0157, AV_Ecoatt = 4,4987



Le covariate presenti nel modello sono valutate ai seguenti valori: AV_Guilty = 2,5454, AV_Proud = 4,3024, AV_EnvConc = 5,0209, AV_Ecoatt = 4,5052

ABSTRACT

The environment is a crucial external contingency which is having a huge impact on all the actors involved in the consumption act.

First, this issue is involving the new generations and it is establishing a new perception of the consumption act. The Z-generation beliefs and their proactive approach are crucial points that are influencing their consumer outputs, such as their willingness to pay, their perceived attributes and their perceived quality of the products.

Thus, for the businesses and the social actors it is important to understand how to interact with the new consumers through the daily life products, as the FMCG's ones, in order to match their willing to consume sustainable products and, at the same time, taking into consideration how this willing may change across generations and nationalities.

Furthermore, there is a low degree of knowledge about these environmental-friendly marks and there are few communication campaigns which focus their message on how the ecolabels work and what they are guaranteeing. These are the main factors that compose the informative asymmetry between the suppliers and the consumers.

Hence, the understanding of how to stimulate the consciousness and the consumption act is decisive, because through the increase of green consumption it is possible to generate a sustainable lifestyle and to stimulate an increase of expenditure by all the social, private and institutional actors on these themes.

Lastly, the FMCG's market is composed by companies whose products follow four main features conveying their short-term belonginess to the shopfloor:

- Used at least once a month;
- Used directly by the end customer;
- Not sustainable;
- Sold as a package.

From this definition it is possible to understand why the three main top players of this huge market are reviewing and implementing their sustainable ambitions. It is quite clear that their sustainable aspirations are quite close, particularly comparing the Unilever and Nestlé ones. On a business point of view, the three major companies relate and compete on a higher level. In 2019, P&G net sales worldwide accounted for 67.7 billion US$, Unilever for 58.21 billion US$, Nestlé for 92.5 billion CHF (equal to 102.8 billion US$).

Therefore, the sustainable supply of goods is not only a relevant advantage to gain market share, and win over the competition, but it is also a way to reduce the footprint on the planet, and to maintain the profit margin generated by the products sold.

The goal of this study is to optimize the strategic design of the brand communication leveraging on the ecolabel and their potential intrinsic power with the purpose of stimulating the consumers outputs.

Thanks to the literature review it has emerged that not all the Hofstede's Cultural Dimensions directly impact the green purchase, but they directly influence those behaviours which are strictly connected with the acquisition act, in accordance with the theory of planned behaviour. (Liobikienė, G., 2016).

In function of this learning, the study has stated the following hypotheses:

H1a: *"The Consumer Country of Origin is correlated with the ecolabel knowledge."*

H1b: "When the consumer is French (vs. when the consumer is Italian), the ecolabel aesthetical appeal will be higher than the other case."

Moreover, it was found that the visual complexity positively influences subjects' pleasure in reaction to an object until an optimal level. In fact, there is a reverse U-shaped relation in which there is a first boost of pleasure due to the visual excitement and the learning potential of the stimulus. Then, as a consequence of any additional unit of complexity over the optimal peak of the curve, there is a reduction of the pleasure linked to an uncertainty on the interpretation and to a reduced margin of elaboration of the stimulus. (Berlyne, D.E., 1970)

For example, Henderson and Cote (1998) found a relation, following the research path cited previously, related to the Visual Complexity's effects toward the logo. However, a research conducted on large-scale surveys found that logo elaborateness has a generally positive effect on attitude toward the logo. (Henderson, Cote, Leong, and Schmitt, 2003; Van der Lans, et al., 2009). A research on the conceptual dimension of logo complexity made by Janiszewski and Meyvis (2001) shows the manipulation between verbal and visual parts of logos in multiple experiments. In their results, it is possible to observe that in general mono-meaning logos (i.e., logos in which text and visual elements both have the same meaning) are initially preferred to multi-meaning logos. Conversely, when the number of exposures increases, multi-meaning logos are relatively preferred to the mono-meaning logos.

Taking into consideration all the aspects cited, the study stated the following hypotheses:

H2a: *"Products using Low Visual Complexity logos (vs High Visual Complexity) will generate more favourable consumer responses, as: willingness to buy, willingness to pay, share of voice, perceived quality and perceived attributes."*

H2b: *"Ecolabel Conceptual Complexity will moderate the relationship between the visual complexity and the consumer responses. Specifically, when the label has a low conceptual complexity, a Low visual complexity ecolabel (vs a High Visual Complexity one) leads to higher consumer outputs."*

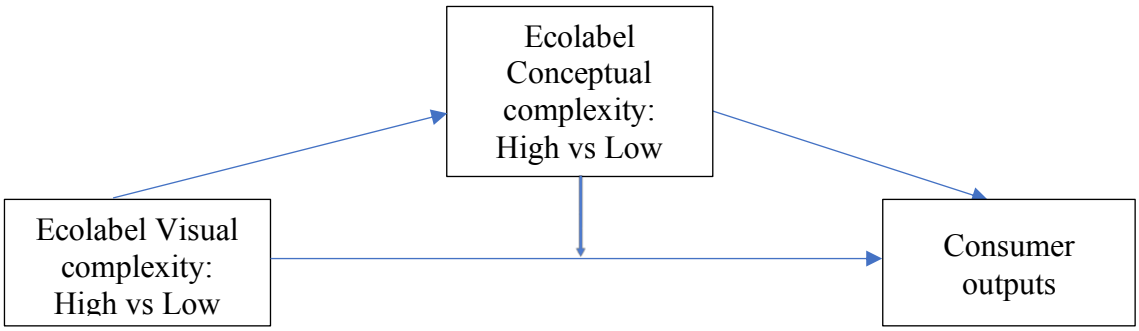


Figure 43: Representation of the visual and conceptual moderation framework

In addition, according to a Sliburyte and Skeryte study (2014), colours can build emotional links with potential outcomes, such as: increase of shelf visibility, a better product recognition, a strong connection with positive emotions and willingness to try.

The greatest thing about colours is that they are a tool that can be crucial for the consumers' choice, because of the positive feeling that can be generated, while being a relatively inexpensive tool that can be studied and strategically used by companies.

It was also found that consumers' colour perception depends on age, sex and education level and this variation on what is perceived by the customer may affect his or her purchase intention.

Thus, it is important to study how the colour of an ecolabel can influence the consumers' outputs across the generation of belongings.

H3a*: The consumer responses to a product will be more positive when the consumer is belonging to a young generation (Z generation and Millennials) than an older one (X generation and Baby Boomers).*

H3b: *Ecolabel colour will moderate the relationship between the generation of belonging and the consumer responses. Specifically, when the label is multicolour, a young generation of belonging (vs an older one) leads to higher consumer outputs.*

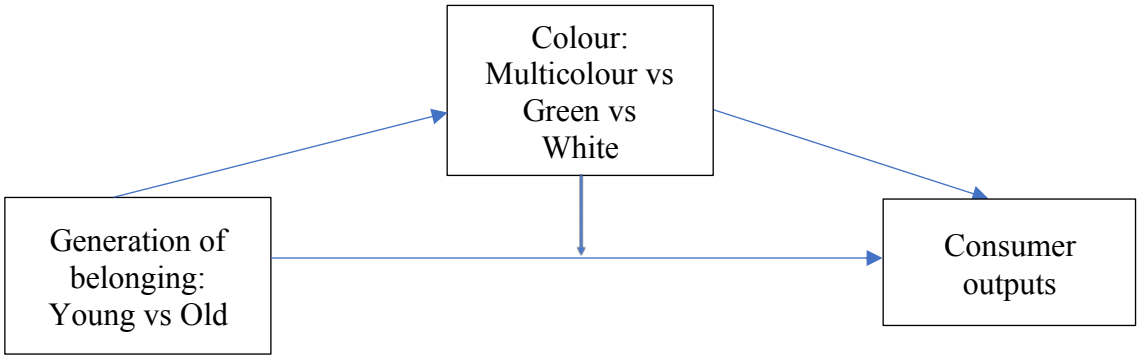


Figure 44: Representation of the generation of belongings and label colour moderation framework

Lastly, the feeling of proudness and guiltiness may lead to an increase in the intention to purchase green products. Particularly, consumers feel emotionally linked to their positive or negative outcomes based on what they might have caused on the environment, even when the consumption act is involuntary (Antonetti, P., & Maklan, S., 2014).

This last study explicates as research gap: the need to better understand how emotions influence the ethical consumption, particularly valuable in order to develop meaningful marketing campaign.

Moreover, it is also important to take into consideration the that the generations of consumers that are in front of the shelf everyday have completely different backgrounds, behaviours and consumptions.

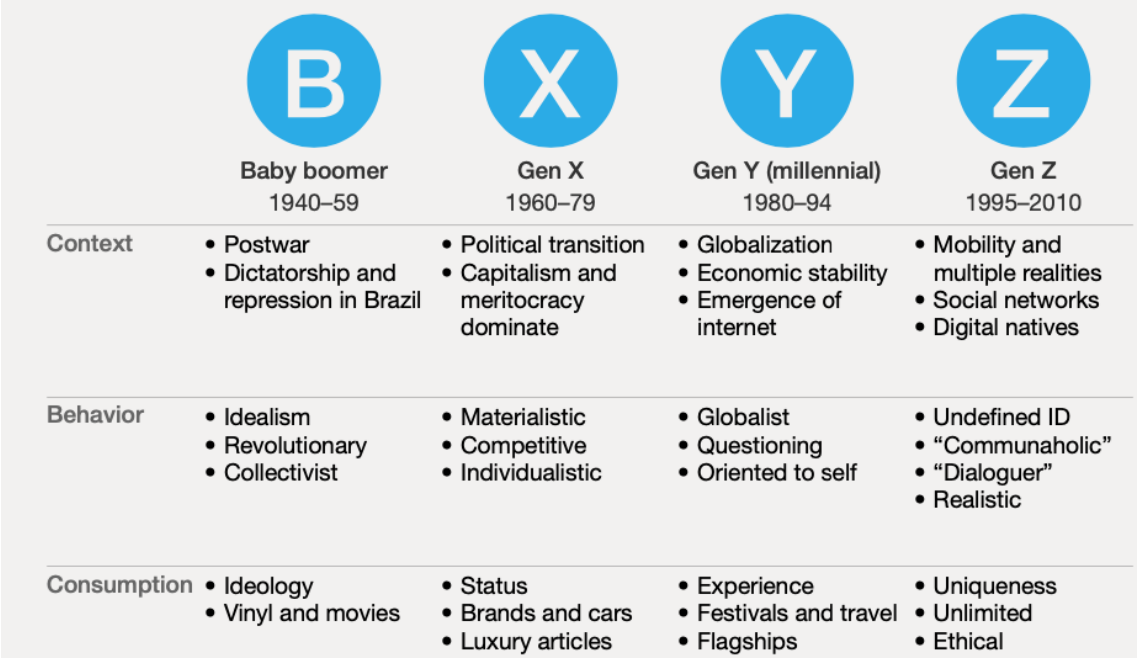


Figure 45: Cross generational differences (Francis, T., & Hoefel, F., 2020)

Therefore, in accordance with the theory of planned behaviour and the norm activation model, there are various subjective norms, perceptions of the relevant information and contexts across generation that may change the perception of a determinate set of emotions and the perception in relation to an ecolabel.

As stated before, the youngest are worried about the climate change, and this aspect can generate different emotions on their consumer outputs, such as the perceived quality, the share of voice or the willingness to buy.

Taking into consideration all the aspects cited, the study proposes to examine the following hypotheses:

H4a: *"Consumer responses will be higher when the consumer is belonging to a young generation (Z generation) than another one."*

H4b*: "The environmental concern, the proudness and the ecolabel attitude will mediate the effect of the generation of belonging (Z generation vs others) on consumer responses."*

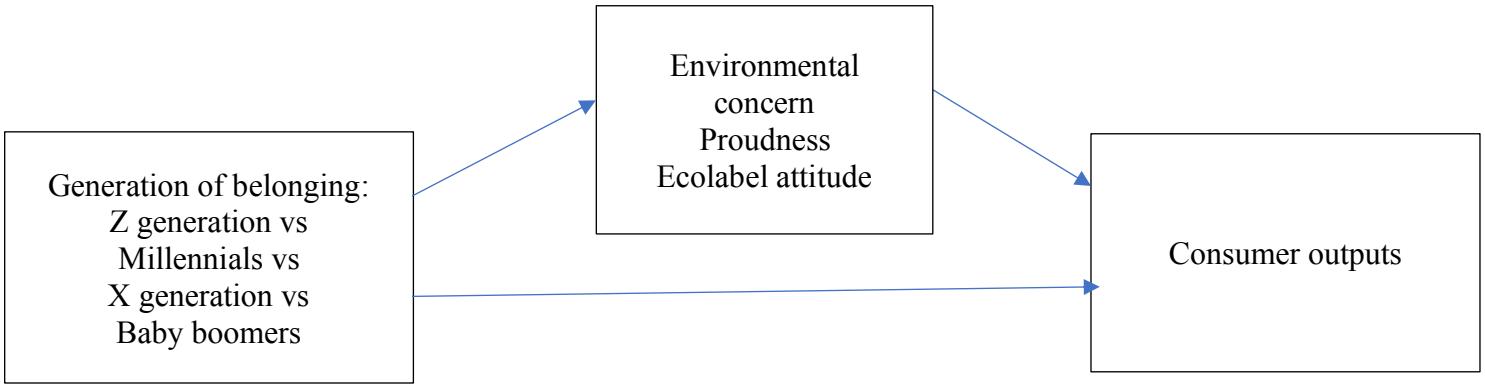


Figure 46: Representation of the generation of belongings and emotions mediation framework

The preliminary study aimed to demonstrate that the consumer knowledge elicited by the eco-label images has a statistically significant difference between the Italian sample and the French one. Moreover, the research sought to find a statistically significant gap between the two sample in terms of environmental concern.

Particularly, the expected result was to find an eco-label having a relationship with the respondents' country of origin, and that statistically differs in terms of label appeal. The reason why the current research wants to investigate this aspect is motivated by the fact that, as stated in a previously cited study (Halder, P., 2020), the collectivistic cultures have a relationship with the values linked to the green consumption, and according to figure 2 French are more collectivistic than Italian.

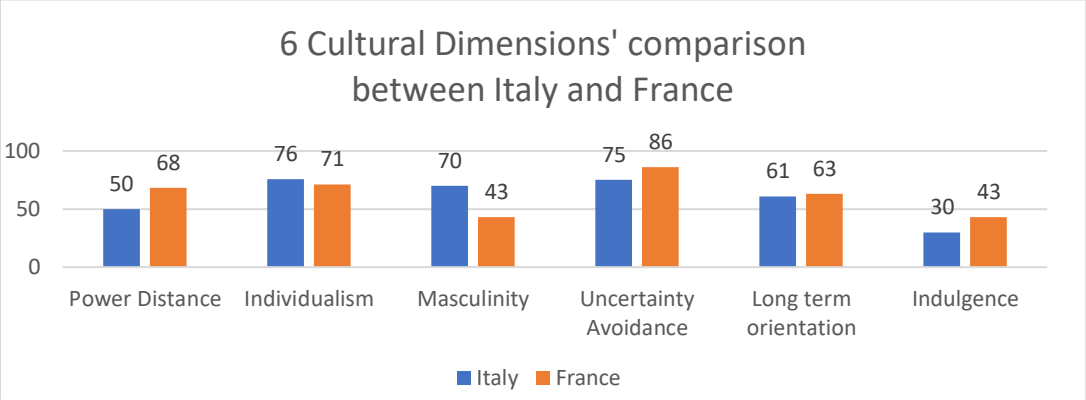


Figure 47: Personal reworking of "6 Cultural Dimensions" Comparison between Italy and France (Hofstede Insight, 2020)

Moreover, the French sample could have a greater consumer knowledge and a bigger environmental concern in comparison with the Italian one, because, as it was written before, a more collectivistic culture can influence their green values. (Halder, P., 2020)

Figure 48: Ecolabels used in the preliminary study

From the correlation tests it emerged that there are no correlation between respondents' nation of origin and the perceived environmental concern, because the values obtained are not statistically significant.

The t-test results evidence that there are no mean differences for environmental concern between French and Italian respondents.

These tests have disconfirmed what it was supposed in the second research question in the Paragraph 3.1. This fact could be justified by the fact that the difference between the Italian and the French on the Hofstede individualism dimension is not major. It is indeed far from the most collectivistic country in the world, that is Guatemala, with an indicator of 6 points on individualism (Hofstede Insight, 2020). Moreover, the I-Gens "Communaholic", dialoguer and realistic traits, as described by a McKinsey research (Francis, T., & Hoefel, F., 2020), can have potentially led to an increasing and standardized awareness and sensibility on the climate change among the two countries.

The purpose of the main study is to discover how the emotions, the ecolabels' colour and the consumers' generation of belonging can modify the willingness to buy, the willingness to pay, the share of voice, the ecolabel attitude, the perceived quality, and the perceived attributes. Moreover, the research aims to find a statistically significant gap in terms of consumer responses between the first view of the product with an ecolabel on pack and the second view of the same product with a zoom on the ecolabel and a brief description of it.

Figure 49: Personal representation of the visual stimulus shown during the questionnaire

Figure 50: Personal representation of the visual stimulus shown during the questionnaire

The results awaited are to determine the characteristics of an ecolabel which can influence the consumer outputs based on the colour, of the visual and the conceptual complexity. The reason why the study wants to understand more about these aspects is explained by the fact that, as stated in the previous paragraphs, the ecolabels are an important tool for companies, for governments and for all the entities involved in the supply of goods whose production have an impact on the planet. In fact, through these environmental-friendly labels it is possible to sensibilize the consumers on a better choice for them and for the planet.
The study was conducted on a sample composed by five hundred and eight respondents who have seen one of the four different ecolabels: the World Fair Trade Organization logo, the EU ecolabel, the Soil eco-mark, or the ICEA label.

The subjects were randomly exposed to one of the previously cited environmental-friendly logos and they were requested to answer to various questions linked to the dependent and to the mediator variables after the first and the second visualization of the stimulus.

The first interesting result emerged from the analysis of the consumer responses when observing a product with an ecolabel or the same product together with a brief description of the eco-mark meaning and a zoom on it. In order to understand if there is a statistically significant difference between the two visualizations, the questionnaire was conducted in a within-subject paired sample t-test. From the analysis it resulted that all the dependent variables considered (i.e., the willingness to buy, the willingness to pay, the share of voice, the perceived quality, and the perceived attribute) have a meaningful mean difference.

Specifically, when displayed to the consumer, an ecolabelled product with a focus on the eco-logo and a brief communication describing its meanings generates all reactions on average higher than a simple visualization of an ecolabelled product.

Another interesting result that it emerged from the study is represented by the impact of the environmental concern, the ecolabel attitude, and the generation of belonging on the various dependent variables.

In fact, by reviewing the results of the study, it is possible to highlight that these factors covariate in relation to the dependent variables in all the conditions displayed.

Furthermore, it was demonstrated that both the hypotheses stated in relation to the visual and conceptual complexity were confirmed only when the analysis was focused on the willingness to buy after the second visualization of the stimulus.

Secondly, an analysis was conducted on the moderation relationship between the generation of belongings and the colour of the ecolabel in relation to the dependent variables.

The first interesting result obtained by this examination is represented by the fact that the hypotheses stated for this analysis were not significant when the first visualization of the stimulus was considered.

Conversely, when the results of the second visual stimulus were analysed, there were main significant effects in all the analyses. Specifically, when was considered the willingness to pay, the subjects belonging to the young generations showed a higher mean value than the other generations. In other analyses, people who are born before the year 1981 have shown a higher average consumer response than the young generations.

Only when the dependent variables considered in the analysis were the share of voice, the perceived quality and the perceived attributes, there were interaction effects. In all of the cases, the multicolour World Fair Trade Organization label, when displayed to a respondent from a young generation, obtained a statistically higher mean value than the other conditions.

Lastly, a mediation analysis was conducted in relation to the generation of belonging and the consumer responses. From this analysis it is possible to highlight that all the results related to the willingness to buy, the perceived quality and the perceived attributes consequently the first visual stimulus are positive pure mediations. A positive partial mediation appeared only

the share of voice was considered, whereas when the dependent variable was the willingness to pay, there was not a significant value.

The results obtained by the analysis of the mediation relationship after the second visualization of the labels highlight that:

- In relation to the willingness to buy, the perceived quality and the perceived attributes, there is a partial mediation with all the mediators considered. Specifically, the generation variable has a negative effect, and the mediators have a positive impact.
- With respect to the willingness to pay, only the proudness variable has a positive and significant effect. Even in this case, the generation of belonging has a negative effect on the relationship.
- Regarding the share of voice, no statistically significant value was found.

Thanks to this study it would be possible to optimise the value of a Fast Moving Consumer Good product, particularly by implementing the considerations outlined in the previous paragraph.

This research, compared to other work in the same field, provides a more integrated view of the different visual and perceptual components.

Specifically, the study showed that it is crucial to adopt an educational approach on the implementation of the ecolabel on the product packaging during a TV advertisement or in an e-commerce display.

It explained why it is important to have an informative approach to the product communication strategy:

- Various scientific articles show that there is an information asymmetry between consumers and the long-term benefits of the ecolabel, which generates a lack of trust in the customer;
- The results obtained from the paired t-test show that when there is a focus on the ecolabel and there is a brief explanation of its benefits, there is a significantly higher perception of the product than when the product is simply displayed. In particular, when there was a focus on the ecolabel, the willingness to pay was on average 0.19 cents higher than when the product was simply displayed.

In support of this, it is fair to mention that when focusing on an ecolabel that has a low visual and conceptual complexity, there is a higher average willingness to buy than in the other condition.

This leads us to conclude that an ecolabel like the ICEA one has a stronger visual impact in the consumer's perceptual sphere and is able to generate a higher propensity to buy. Therefore, if we base the choice of which ecolabel to use on the basis of graphic and conceptual complexity, we should aim for a logo that is simple and clear.

This could be due to the aforementioned lack of consumer confidence in these labels. In fact, a clear and direct message can certainly decrease the information asymmetry and, consequently, induce more positive responses in consumers.

Furthermore, the study shows that if a company wants to attract a younger target group in order to develop the potential market for the label, the results show that the multi-coloured label performed significantly better in terms of share of voice, perceived quality and perceived attribute among young people.

Therefore, in terms of developing the potential market and educating the segment to a more sustainable consumption, the multicolour label has a significant intrinsic power and may be the best choice in terms of brand management.

Finally, companies aiming to attract younger consumer groups to their products will be able to leverage emotional factors such as pride, attitude towards consuming eco-labelled products and concern for the environment to increase all consumer outcomes when focusing on the eco-label.

Therefore, a communication that emphasises these aspects, combined with a brief explanation of the label and its long-term benefits could be the new key to success in overcoming the lack of confidence in consuming ecolabelled products.

The socio-environmental implications of the study on communicative activity related to brand management can contribute to the stimulation of the circle of environmental sustainability and reduction of market pollution.

Indeed, through the stimulation of purchase and profit margins generated by ecolabelled products, a higher volume of investment in corporate and product sustainability can be generated faster.

The study presents some limitations and leave space to further research and improvements.

The first limitation is represented by the sample of the preliminary study, because the number of subjects reached was not conspicuous and the collection of the interviews was done through the snowball method.

Moreover, the reason why the preliminary study did not show relevant results in terms of environmental concern can be reconducted to the fact that the Italian and French collectivism index is slightly different.

For a future research, it would be interesting to conduct a study on the ecolabel perception between countries which are completely different in terms of collectivism through a quantitative and qualitative research.

Even the main study is affected by some limitations and its area of interests can surely be expanded and improved.

Firstly, it is also important to consider that four hundred interviews of the study were collected thanks to a Luiss Guido Carli university panel, whereas the other one hundred and eight subjects have been contacted through a snowball sampling method.

The difference between the two collection methods could have partially played a role in the results obtained by the study. Thus, for the future research it would be interesting to repeat the study with a unique method of sampling.

Secondly, for a future research it would be interesting to analyse the differences between the respondents who have seen the visual stimulus with or without a zoom on the ecolabel and a brief explanation of its long-term benefits through a between subjects' analysis.

Thirdly, there were more than two hundred interviews which were eliminated from the data set, because the majority of them was incomplete. An explanation for this huge need of purification of the data can be explained by the collection method and/or by the number of questions exposed to the respondents.

Therefore, the current research actively contributes to the ecolabel communication strategy for a more conscious brand management decision making and the future research should focus more on the different ways to communicate the ecolabel and its meaning.

Specifically, it would be interesting to understand:

- How the communication channel can facilitate the ecolabel mission and long-term benefit (i.e., tv advertisement, e-commerce native advertisement, in-store activities and more);
- Which are the most effective communication styles in order to stimulate the consumer trust toward the ecolabels and the products, such as a message focus on the proudness, on the environmental concern, or concentrated on the consumers ecolabel attitude.
- If there is a different ecolabel's lack of trust among the generations and among different countries.
- Which is the communication strategy that can optimize the consumers responses toward the ecolabelled product in a cross-national and cross-generational analysis on different categories of Fast Moving Consumer Goods.