

Erasmus University Rotterdam

Erasmus School of Economics

Economics and Business: Marketing

**Crowdfunding and product perceptions as marketing tools  
to influence customers' willingness to pay**

**Supervisor**

Dr. Agapi Thaleia Fytraki

**Second Reader**

--

**Author**

Andrei Jitaru

615694

**Date**

--/--/--

The views stated in this thesis are those of the author and not necessarily those of the supervisor, second assessor, Erasmus School of Economics or Erasmus University Rotterdam.

---

## **ABSTRACT**

Crowdfunding is the meeting point of two contemporary trends that nowadays are ever-increasing in popularity: ease of accessibility to the digital world and the consumer's desire to be heard, being able to invest their money where they want to, and when they want to do so.

This thesis investigates whether this practice affects customer behavior, particularly whether it generates a higher willingness to pay. In this study, consumers have been exposed to two potential buying scenarios and asked about their monetary preference and feelings about the two respective products, a backpack and a smartwatch. A simple experiment was used to test the effect of the crowdfunding label: while some of the respondents have been presented with an explicitly crowdfunded product, others have not.

Several potential mediators and moderators have been identified through existing literature, and perceived product quality, usefulness, trust, and complexity have been remarked as major feelings that affect customers' judgement. Tests have then been carried out to verify these hypotheses; furthermore, to also gather straightforward empirical evidence, each analysis has been conducted twice, once for each of the products presented.

Two main findings emerged from the results. First, a characteristic such as perceived product usefulness would be expected to hold a certain degree of importance, but findings from this experiment show that it was not significant in either product. Second, results are conflicting according to which product is considered, making drawing standardized conclusions not ideal.

---

## TABLE OF CONTENTS

ABSTRACT .....	3
TABLE OF CONTENTS.....	4
1. Introduction .....	7
1.1. Introduction.....	7
1.2. Research Problem and Motivation.....	8
1.3. Research Objectives.....	9
1.4. Research Methodology.....	9
1.5. Thesis Outline .....	10
2. Literature Review .....	10
2.1. Defining Crowdfunding.....	10
2.1.1. Crowdfunding Stakeholders and Logic.....	11
2.1.2. The Crowdfunding Process.....	13
2.2. Hypothesis Development: Crowdfunding and Perceived Product Quality .....	14
2.2.1. Product Quality: a Brief Definition .....	14
2.2.2. Consumers and Product Quality.....	15
2.2.3. Crowdfunding and Product Quality: the Bandwagon Effect from a Marketing Perspective .....	16
2.3. Hypothesis Development: Crowdfunding and Perceived Product Usefulness .....	17
2.3.1. Product Usefulness: a Brief Definition .....	17
2.3.2. Increasing Usefulness: Consumer Participation in Product Design .....	17
2.3.3. Extracts from Crowdsourcing: the Creative Control of the Crowd .....	18
2.4. Hypothesis Development: Crowdfunding and Perceived Product Trust.....	19
2.4.1. The Trust Factor: from Direct Involvement to Feedback and Peer Reviews .....	19
2.5. Product Type and Perceived Product Complexity.....	20

---

2.5.1. Introducing Product Complexity .....	20
2.5.2. Product Complexity and Consumer Behavior .....	21
2.6. Conceptual Framework .....	23
3. Methodology .....	24
3.1. Research Design and Structure .....	24
3.2. Measures.....	25
3.2.1. Dependent Variable .....	25
3.2.2. Independent Variables .....	25
3.2.3. Control Variables: Demographics .....	28
3.3. Data Collection.....	28
3.4. Sample.....	29
3.5. Survey Structure.....	29
3.6. Qualtrics Scheme .....	30
3.7. Estimation Strategy .....	31
4. Data Preparation and Descriptive Statistics.....	32
4.1. Finalizing the Dataset .....	32
4.2. Descriptive Statistics.....	32
4.2.1. Variables.....	33
4.2.2. Familiarity and Demographics.....	35
4.3. Factor Analysis .....	36
4.3.1. Validity Testing.....	36
4.3.2. Factor Extraction .....	37
4.4. Reliability Check .....	39
5. Analysis.....	40
5.1. Hypothesis 1: Perceived Product Quality.....	40
5.2. Hypothesis 2: Perceived Product Usefulness .....	45

---

5.3. Hypothesis 3: Perceived Product Trust .....	49
5.4. Hypothesis 4: Perceived Product Complexity .....	54
6. Interpretation of Results.....	56
6.1. Hypothesis 1 .....	56
6.2. Hypothesis 2.....	57
6.3. Hypothesis 3.....	57
6.4. Hypothesis 4.....	58
7. Conclusions .....	59
7.1. Complementing Existing Literature and Research Contribution .....	59
7.2. Limitations of this Study and Future Research.....	60
7.3. Managerial Implications.....	61
Appendix A: Surveys .....	62
Appendix B: Components of Variables and Survey Statements.....	72
Appendix C: Regression Assumptions .....	72
Appendix D: Correlation Matrices .....	79
Bibliography .....	81

---

## 1. Introduction

### 1.1. Introduction

Businesses have changed radically over the last few years. Some seek to win over customers by aligning themselves with popular values such as sustainability and inclusion. Others might jump on the latest technologies to make bank and later expand into other industries – the recent wave of popularity of crypto assets is just one example. Crowdfunding combines both of these intentions and is getting traction in all global markets (Kalli & Vuola, 2020): using the power of digital information, companies seek to foster a sense of belonging in the people by having their products funded by the people themselves (Sidiq, et al., 2021).

Reactions among the public can be mixed. It has been argued that one of the main factors that generates enthusiasm among funders is the possibility to directly support the higher degree of creativity surrounding the crowdfunding community. On the other hand, however, too radical of an idea is likely to lower confidence in the actual feasibility of the project and turn prospective backers away (Gerber, et al., 2013).

The very idea of “success” with regards to a crowdfunding campaign has also been debated, and there are different layers to the concept from a creator’s or a funder’s perspective alike (Koch & Siering, 2015) (Wang, et al., 2018) (Cordova, et al., 2015). While raising awareness and building relationships with the community might be the primary goal of a company focused on an innovative project, collecting feedback might prove more valuable for an organization that already has product plans in place. Similarly, some funders are attracted to the ideological dimension of crowdfunding (i.e., being able to contribute to a cause they relate to rather than the physical product per se), while others are interested merely in shaping the product according to their needs and desires.

The raise in importance of crowdfunding is undeniable in today’s world driven by information. Several pieces of research have been published on the topic, investigating areas such as strategic management implications (Dushnitsky, et al., 2020), the viability of crowdfunding in marketing (Beier, et al., 2019) (Giones & Brem, 2019), or even applying crowdfunding practices so unconventional sectors such as healthcare (Bassani, et al., 2019) (Dressler & Kelly, 2018).

The purpose of this thesis is be, however, to research implications of crowdfunding on the consumers rather than the organizers, examining whether the crowdfunding label exercises a positive impact on

---

the end users' willingness to pay and whether there is any change in the consumers' behavior when the type, purpose, or characteristic of the crowdfunded product changes.

## **1.2. Research Problem and Motivation**

The rising popularity of crowdfunding is affecting business environments, and organizations are starting to adapt their business practices to the latest trends. While some sectors are still scouting the field (corporate finance scholars have only recently started analyzing the phenomenon (Vismara, 2021)), others such as marketing more familiarized with it. There have been several studies trying to identify the role of crowdfunding in a marketing, placing it as just a bonus to foster selected desirable values, a mechanism that can be used in product-related decisions (Ming, et al., 2015), or a proper marketing tool (Brown, et al., 2017).

And while there is a fair amount of recent research on crowdfunding and the role it has in marketing operations (Song, et al., 2020) (Poser, 2021) (Dahl & Hofstetter, 2021) there seem to be a scarcity of empirical evidence related to the end users of every product: the consumers. Reputation and user perception of a brand can make or break a company, and while it is unlikely for crowdfunding to have such an extreme impact, it certainly is an aspect that can contribute positively (or negatively, in some specific cases (Lacan & Desmet, 2017)) to an organization.

The association between labelling a product as crowdfunded and higher willingness to pay has already been explored in literature, e.g. Acar et al. (Acar, et al., 2021). In this research, the author tests the effect of two mediators, the higher perceived quality given by the so-called bandwagon effect and market inequality, on the higher willingness to pay generated by the crowdfunded label. This thesis theory tests the veracity of the bandwagon effect, but it attempts to reach deeper specificity into the behavior of the participants by also testing the influence of the additional perceived usefulness and trust generated by the label. This perceived usefulness mediator has been subject of studies in the crowdsourcing literature (Nishikawa, et al., 2017) but never in crowdfunding, so this area of research is virtually new. Trust, similarly, has been always considered in consumer behavior, but its applications to crowdfunding are scarce. Lastly, product type might also have an influence; while some research has been conducted in the luxury market, i.a., (Fuchs, et al., 2013) and (Dubois & Ordabayeva, 2015), this paper aims at expanding the field to products that are more accessible to the general public, such as a backpack and a smartwatch.



---

### 1.3. Research Objectives

This paper aims at establishing whether or not the crowdfunded label has an influence on customer behavior. First, the consumers' willingness to pay is analyzed in order to understand its variations and differences between crowdfunded products and conventionally funded products. Most researchers argue that a higher willingness to pay is generated, for example, by a higher perceived product quality linked to the crowdfunded label, though scholars have identified different reasons for this: while some attribute it to a bandwagon effect (Acar, et al., 2021), others focus instead of the creative control the crowd has over the design of the product (Nishikawa, et al., 2017). This paper combines and tests both of these perspectives. Other attributes such as perceived usefulness and trust have been shown to be fundamental in consumer behavior while also being relevant in crowdfunding campaigns, be it for factors such as personal preference or purely utilitarian reasons. It make sense for these too, then to be considered in this analysis.

A further step is taken in the form of comparing whether product class also influences customer behavior. It seems intuitive for users to be more likely to be involved in the crowdfunding of a complex, higher-end product than to one of daily use that is easily substitutable. There has been some research on tangent topics, e.g. the effect of user-designed luxury products on customer intentions and brand perception (Fuchs, et al., 2013), though analyses on a more generic level are rather scarce.

Each analysis is therefore to be conducted twice and all conditions are to be kept identical aside from the product considered, which will have a different degree of complexity. This allows to observe whether product class does hold any influence on customer behavior as well.

The objective of this thesis are formulated as follows:

**Research Question 1:** What is the impact of the crowdfunded label over the willingness to pay of consumers?

**Research Question 2:** What is the impact of the product type of crowdfunded products over the willingness to pay of consumers?

### 1.4. Research Methodology

An analysis is conducted by examining data through an experiment. There are two groups of participants. The introduction of the survey is the same for both groups. Respondents are introduced to two hypothetical scenarios where they would have to purchase two different items. For the

purpose of this study, a backpack and a smartwatch are used as the chosen commodities since they can appeal to a wide variety of market segments across different demographics. The item descriptions for the control group includes standard information about the product, such as basic features, price, or availability. The same information is included in the item description given to the treatment group, though this time the text specifies that the products have taken into account contributions from crowdfunding campaigns.

Each hypothesis is tested twice, once for each product, empirically showing first-hand how the type of product can change perspectives. A more detailed description of the methodology can be found in Chapter 3, while the full survey in both of its versions can be found in Appendix A.

### **1.5. Thesis Outline**

The thesis is structured over several comprehensive chapters. The present chapter, Chapter 1, offers basic knowledge on topics related to the subject and aims at establishing the direction and steps of the research. Chapter 2 is dedicated to the review of existing literature on crowdfunding practices, defining and examining key themes in crowdfunding and the motives behind their realization, and presenting relevant research leading to the formulation of four hypotheses. Chapter 3 presents thoroughly the research methodology used for this study, including detailed information about practical matters, the variables, and the sample size. Chapter 4 contains information on the data set, how it has been adapted to be suitable for the analysis, and descriptive statistics. The analysis is conducted in Chapter 5, with each result interpreted in Chapter 6. Chapter 7 draws conclusions, including mentions to limitations of the research that can be used as starting points for future research.

## **2. Literature Review**

This chapter reviews the trends and the relevant academic literature to define the phenomenon of crowdfunding and understand how successful campaigns are executed. Then, several testable hypotheses are drawn based on existing studies on crowdfunding, crowdsourcing, and consumer behavior.

### **2.1. Defining Crowdfunding**

In recent years, crowdfunding has emerged as an alternative way to raise external capital for new ventures. This phenomenon is rapidly expanding in many countries, and it is seen by many as a way

to fund innovative, humanitarian, and social projects that would not be carried out otherwise due to their higher risk (Böckel, et al., 2021). For instance, in 2020, the crowdfunding market was valued at 12.27 billion USD and is forecast to double by 2027 (Statista, 2021). Yet, despite crowdfunding being a growing phenomenon, scholarly knowledge about this topic remains limited and fragmented (Mochkabadi & Volkmann, 2020).

The definitions of crowdfunding are abundant across the literature. For instance, Belleflamme et al. (Belleflamme, et al., 2014) define it as a method to obtain funds in small portions from large audiences, rather than raising large sums from a small group of sophisticated investors. Similarly, and following Mollick (Mollick, 2014), here crowdfunding refers to *“the efforts by entrepreneurial individuals and groups – cultural, social, and for-profit – to fund their ventures by drawing on relatively small contributions from a relatively large number of individuals using the internet, without standard financial intermediaries”* (Mollick, 2014, p.2) This formulation identifies the two main actors of fundraising campaigns – the fundraisers and the backers – and acknowledges the role of the internet as an integral part of modern crowdfunding projects (Martínez-Climent, et al., 2018). Most campaigns happen on digital means, where platforms mediate and facilitate contact between the crowd and the fundraisers (Mollick, 2014).

Researchers typically distinguish four crowdfunding models. In reward-based crowdfunding - the most common model - the backers of a campaign receive non-monetary rewards for their investment (Mollick, 2014) (Shneor, et al., 2020). Alternatively, backers are rewarded with the status of early customer, allowing them access to a product or service produced by the funded project before release, or at a better price (Mollick, 2014). Donation crowdfunding campaigns are typically launched by non-profit organizations and NGOs to pursue humanitarian or cultural objectives (Böckel, et al., 2021). In this case, the supporters of the campaign do not receive any reward in return for their patronage, which is motivated by philanthropic, social, or civic intents (Mollick, 2014). The lending model (or more simply *crowdlending*) is comparable to a bank loan, where the supporters of a campaign act as lenders with a pre-defined interest rate (Mollick, 2014). Lastly, equity crowdfunding models treat funders as investors, giving them equity stakes in return for their monetary support (Mochkabadi & Volkmann, 2020).

### **2.1.1. Crowdfunding Stakeholders and Logic**

At the core of each crowdfunding model lies the expectation of a win-win situation for all the involved parties (Shneor, et al., 2020). These stakeholders, as already mentioned, are fundraisers, backers, and

crowdfunding platform. According to Shneor and colleagues (Shneor, et al., 2020), a fundraiser can be defined as an individual or organization that makes a public call for funding a project with a specific purpose. The most prominent and direct function of crowdfunding is financing new ideas and ventures with the money raised throughout the campaign. However, crowdfunding can also be used for other purposes, which are sometimes the primary goal of the fundraising effort. For instance, it can be used as a market test to assess whether there is demand from potential users for a proposed product, which can potentially lead to funding from more traditional sources (Mollick, 2014) (Shneor, et al., 2020). If the project fails to attract enough potential customers, then the campaign can “fail quickly” to limit their losses (Mollick, 2014). Fundraisers may also design their campaign to foster legitimacy, public approval, and credibility for their cause by attracting investors who are committed to the social or humanitarian vision of the entrepreneur (Böckel, et al., 2021). Finally, crowdfunding campaigns can be used for marketing purposes by establishing relations with potential customers, engaging in cost-efficient marketing promotions, collecting feedback that may inform or influence product development, and attracting the interest of the media and the general public (Böckel, et al., 2021) (Shneor, et al., 2020).

The backers (or funders, contributors, supporters) are individuals or organizations who answer a crowdfunding call (Shneor, et al., 2020). As already discussed previously, the benefits they receive depend on the crowdfunding model that is adopted by the originating company. The funders also enhance their levels of customer empowerment, as they can determine whether a project is successful, influence the design and creative direction of products, and strengthen their sense of belonging to certain groups and communities (Chaney, 2019) (Böckel, et al., 2021) (Shneor, et al., 2020).

Finally, crowdfunding platforms are internet applications that function as intermediaries between fundraisers and the crowd in accordance with pre-specified conditions (Shneor, et al., 2020), the platforms perform a gatekeeping function by ensuring that the campaign is compliant with the platform’s regulations and verifying the identity of the fundraiser (Shneor, et al., 2020). Furthermore, most platforms integrated a system to protect funders from unsuccessful campaigns. If the fundraisers fail to attract a minimum number of funds, then the campaign fails, and no money effectively flows from the funders to the fundraiser (Hossain & Oparaocha, 2016).

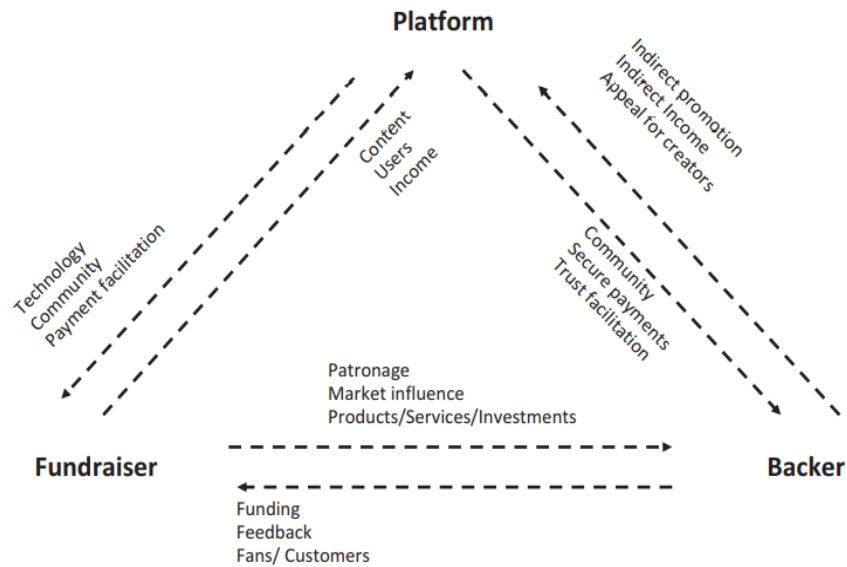


Figure 1. Win-win dynamics in crowdfunding (Shneor et al., 2020).

### 2.1.2. The Crowdfunding Process

Crowdfunding is a complex process that requires fundraisers to perform different activities. Shneor et al. (Shneor, et al., 2020) propose a very detailed process model that involves three core stages and seven sub-stages, as shown in Figure 2, and is based on earlier scholarly work and the latest insights from the crowdfunding industry.

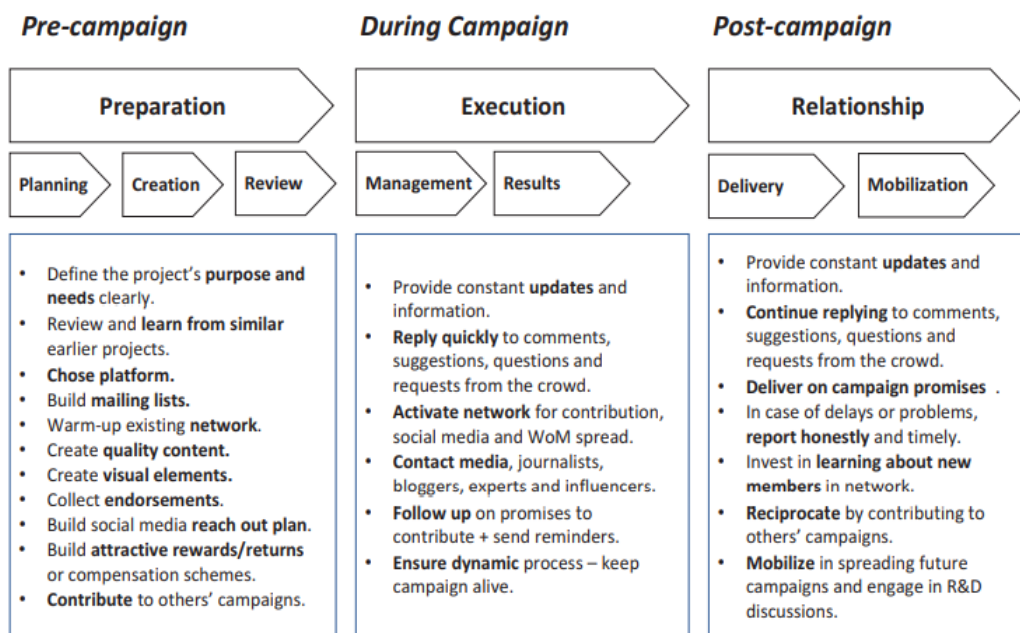


Figure 2. The Crowdfunding Process.

In the preparation (or pre-campaign) stage, fundraisers engage in *campaign planning*. This step entails defining the project, choosing one platform, preparing campaign materials (such as promotional texts or visual media), and outlining an execution plan. Next, in the creation phase, fundraisers establish their presence on social media and upload their material on the selected platform. A platform operator will then review all submitted documents in the third phase, effectively operating a gatekeeping function.

Once the requirements of the platform are met, the campaign becomes public and enters the execution stage. Fundraisers engage in *campaign management* (or community management), promoting their campaign both offline and online, mobilizing their existing networks, and providing new information and regular updates to investors and followers. This phase is critical for the campaign as the fundraisers need to build a constructive relationship with their crowd and signal trustworthiness by being responsive to prospective contributors' questions, comments, and requests (Chaney, 2019) (Shneor, et al., 2020). While being receptive to the crowd is essential for fundraisers to avoid the loss of prospective funders, at the same time, it shifts the power dynamic in favor of the consumers, who can influence and shape the creative direction of the project (Chaney, 2019).

The post-campaign stage entails maintaining constructive and positive relations with contributors. Fundraisers must first deliver on campaign promises by keeping investors informed about firm growth and finances in case of equity crowdfunding; supplying the product, services, or information in case of reward crowdfunding; or paying loans back at the stated interest rate in case of crowdlending (Shneor, et al., 2020). Maintaining positive relationships after the campaign with previous contributors is fundamental, as they can be mobilized in future campaigns or business development activities (Shneor, et al., 2020).

## **2.2. Hypothesis Development: Crowdfunding and Perceived Product Quality**

### **2.2.1. Product Quality: a Brief Definition**

Product quality is a broad concept that can be applied to any attribute of a given product. A research by Garvin (Garvin, 1984) focuses on different points of view and identifies five dimensions through which the definition of quality can be elaborated. While a few of them are technical (e.g., highlighting the superior features of the product compared to the competition or the manufacturer's adherence to specifications), the user-based definition stands out as it does not build on objective criteria, instead relying on perception in the customer's eyes without actually specifying any tangible feature.

Garvin goes on identifying eight dimensions of quality; once again, there are material attributes such as reliability and durability but also non-material ones such as aesthetics and especially perceived quality. In the brief conclusion of the research, the author also states that “*attention must be focused on the separate dimensions of quality [...], the organization must be tailored to support the desired focus*”, indicating that there is no right or wrong approach to product quality as long as the needs of the market and of the customers are satisfied. It then seems that an approach focusing on product quality is just as critical as numerical benchmarks and technical specifications.

### **2.2.2. Consumers and Product Quality**

Consumer behavior has also been debated in countless research papers, and at the basis of most of them lies an investigation on what triggers the buying decision. Even if industry specifics dictate most factors influencing purchase intention, there are a few one that emerge as a constant. Price plays a significant role in most buying decisions, and while it makes sense for it to be perhaps the most decisive factor for standardized, low-value products that have lots of alternatives, it becomes increasingly unimportant as product complexity grows.

As complexity grows, other factors take hold in the customer’s minds. Brand reputation, product knowledge, peer experiences, personal values (Hartmann & Apaolaza-Ibáñez, 2012), and especially perceived quality are among the most common ones. Naturally, it seems logical for consumers to seek higher quality in a product that is more expensive, important, or intended to last for longer. At the same time, it seems intuitive for them to agree to a higher price if they perceive the product to be qualitative and satisfactory of their needs.

Similarly to how purchase intention is influenced by several factors, so is perceived product quality. In more recent times, some have argued that the larger the market, the more qualitative the product (Berry & Waldfogel, 2010), others relate it to the brand as a whole (Calvo-Porrá & Lévy-Mangin, 2017), while some link the post-sales experience to the perceived quality for future purchases (Asmayad & Hartini, 2015), or even factors such as production origin (Cassia, 2020). As this evidence suggests:

**H1a.** A higher perceived product quality positively affects willingness to pay.

Crowdfunding combines several of the factors mentioned above both from the perspective of willingness to pay and from that of perceived quality. The following paragraph builds on existing



literature in order to see how a crowdfunded label strengthens the willingness to pay in consumers as a result of a higher perceived product quality.

### **2.2.3. Crowdfunding and Product Quality: the Bandwagon Effect from a Marketing Perspective**

The majority of studies on fundraising and crowdfunding are focused on the behavior of the organizers of the campaigns. Zvilichovsky et al. (Zvilichovsky, et al., 2018), for example, shows how consumers are used as part of the product creation process to shape their attributes; similarly, Chaney (Chaney, 2019) supports the idea that organizers benefit from the strong sense of empowerment that is generated by the consumers' inclusion in the process by allowing them to direct the creative orientation of the process and focus on attributes they deem worthy and qualitative.

Both of these and other studies adopt either the fundraiser's point of view or investigate the behavior of contributors, who have control over several aspects of the campaign's end-product. This thesis, instead, focuses on non-participating consumers and their behavior in front of a product that is the outcome of crowdfunding.

To the best of the author's knowledge, only Oguz Acar and colleagues (Acar, et al., 2021) attempt to investigate the behavior of non-participants. The researchers conducted seven studies and concluded that crowdfunded products have an edge over standardly funded products due to the psychological effects of crowdfunding. A product labeled as crowdfunded gives a strong, positive signal for product quality, which in turn raises its perceived value. According to them: *"we contend that revealed information regarding other consumers' investments in a crowdfunded project might be viewed by observing consumers as a strong signal in and of itself. Prior economics research has highlighted the value of such a signal; when individuals make decisions with imperfect information, they often follow others' beliefs, decisions and behaviors, a phenomenon also referred to as "herding behavior", "bandwagon effects" or "information cascades" (Acar et al., 2021, p. 646).* In other words, consumers make positive quality inferences on the quality of a crowdfunded product because a large number of contributors has invested in the campaign, thus trusting the opinion of the crowd. Consequently:

**H1b.** A crowdfunding product label has a positive impact on perceived product quality.

**H1c.** The effect of the crowdfunding label on the willingness to pay is mediated by perceived product quality.



---

## **2.3. Hypothesis Development: Crowdfunding and Perceived Product Usefulness**

### **2.3.1. Product Usefulness: a Brief Definition**

Intuitively, a useful product is one that successfully meets the customer's needs, and several researchers such as Szymanski & Henard (Szymanski & Henard, 2001) and Dahl and colleagues (Dahl, et al., 1999) focused on this definition of the concept; others, such as Gatignon & Xuereb (Gatignon & Xuereb, 1997), have taken a firm-oriented approach, defining a useful product as one that provides a competitive advantage thanks to its attributes and benefits. Lastly, Moldovan and peers (Moldovan, et al., 2011) combine both doctrines while keeping the former's customer-centric orientation and focusing on the perception in the customer's viewpoint rather than objective criteria, defining product usefulness as "the consumer's perception that a product or service provides a benefit that fulfills his/her needs". It should be noted that the authors themselves recognize that said definition is less likely to hold true if instead of a utilitarian or functional product one that is meant to bring personal enjoyment is considered. Given that the distinction between hedonic and utilitarian products is not the main focus of this paper, the definition given above can be considered for further analysis.

### **2.3.2. Increasing Usefulness: Consumer Participation in Product Design**

The last decade has been characterized by an exponential increase in information availability, with virtually every business field being affected by it. Consumer behavior is no exception, and there have been multiple studies on how the decision making process has changed from a customer's point of view (Gross, 2015) (Miklošík, 2018).

The desire for a better product combined with information availability and the ever-increasing popularity of consumer reviews and direct feedback has prompted companies to directly involve consumers in the product design process, generating a win-win situation for both parties – higher sales for the business, a more useful product for the consumer.

Some researchers attribute this increased ambition for involvement in consumers to a psychological factor, the so-called "I Made it Myself" effect (Troye & Supphellen, 2012) or more generally a psychological state of well-being (Abaidi, et al., 2022), while others point to personal motives such as values or hobbies (Zaichkowsky, 1986). One of the most basic and straightforward motivations for the consumer's own involvement, however, is the simple desire for a product that is more useful and better suited to their needs.

The digital era also brought to life this shift in the roles of a typical buyer-seller relationship. The buyer (the prospective customer) has typically been a passive actor subject to marketing campaigns, advertisements, or whatever strategy the seller (the business) adopted. Now, however, with the overload of information that the Internet offers, buyers do not need the sellers to tell them why the product is useful, as they can, and will, do their own research.

**H2a.** A higher perceived product usefulness positively affects willingness to pay.

Paragraph 2. 2. 1. briefly touched the importance of product quality in crowdfunding campaigns. Similarly, product usefulness is one of the reasons why users decide to not only get involved, but also contribute to campaigns in order to obtain a product better suited to their needs. The logical consequence is that a prospective non-involved user sees the product as more useful, since its design has been influenced that the very users that know what needs to be done and how to achieve it. The next paragraph shows how the creative control of the crowd has been tested in crowdsourcing and why it has every chance to be successful in crowdfunding as well.

### **2.3.3. Extracts from Crowdsourcing: the Creative Control of the Crowd**

Crowdsourcing is commonly defined as “*the act of taking a job traditionally performed by a designated agent (usually an employee) and outsourcing it to an undefined, generally large group of people in the form of an open call*” (Howe, 2008), which usually takes place on the internet (Brabham, 2012). There are evident parallels between the definition of crowdfunding and crowdsourcing: in both cases, there is an appeal to the crowd, a need to fulfill on the side of the campaign’s creators, and an attempt to integrate micro-resources into the operations of the firm (Allon & Babich, 2020). More importantly, crowdsourcing can also be used as a tool to leverage the wisdom of the crowd to gather ideas and inputs to develop new products (Allon & Babich, 2020). In this case, the firm grants creative control over the design of the product to the crowd, exactly as in crowdfunding. Because of these similarities, literature on crowdsourcing offers invaluable insights that can be applied to crowdfunding.

An emerging strand of the literature posits that consumers are strongly oriented towards products that have been ideated by the crowd or followed forms of peer-production. For instance, Nishikawa et al. (Nishikawa et al., 2017) analyze two randomized field experiments and reveal that marketing a product as crowdsourced at the point of purchase versus not mentioning the specific source of design increased the product’s actual market performance by up to 20%. The authors conclude that consumers perceive customer-ideated products to be more innovative, of higher quality, and based on ideas that address their needs more effectively (Nishikawa et al., 2017, p. 525).

The same logic can be applied to crowdfunding, where contributors influence the creative direction, design, and functionalities of the product throughout the campaign. That is, not only the product is funded by the crowd, but it is also shaped using their input, which may in turn raise the perceived usefulness of the end-product among other consumers. In light of these considerations, the following hypothesis is formulated:

**H2b.** A crowdfunding product label has a positive impact on perceived product usefulness.

**H2c.** The effect of the crowdfunding label on willingness to pay is mediated by perceived product usefulness.

## **2.4. Hypothesis Development: Crowdfunding and Perceived Product Trust**

### **2.4.1. The Trust Factor: from Direct Involvement to Feedback and Peer Reviews**

While trust is a generic term and is usually associated to post-sales concepts such as loyalty and retention, it definitely plays a role in early-stages consumer behavior. It is appropriate to first discern between trust in the brand (or the company as a whole) and trust in the product, which is one of the main focuses of this paper.

Trust in the brand has been defined as “ the willingness of the average consumer to rely on the ability of the brand to perform its stated function” (Chaudhuri & Holbrook, 2001). A strong trust in a brand leads to an increasing customer loyalty (Delgado-Ballester & Munuera-Alemán, 2001) (Wu & Lau, 2008), which is naturally profitable for the firm while also being an advantage for the consumer, reducing efforts in the purchase decision-making process.

Product trust, on the other hand, is more directly tangible to the consumer, since it is the product rather than the brand that directly fulfills their needs. Trust in the product can be built both indirectly and directly. Feedback from users and online reviews are the most accessible and straightforward sources of trust. Countless studies (De Maeyer, 2012) (Pan & Zhang, 2011) (Park & Han, 2007) (Zhu & Zhang, 2010) going as back the late 2000s have already analyzed the subject and most of them established the significant impact of digital word of mouth on basically any stage of the sales process.

Involving customers in the product design process has also already been hypothesized before and has been found to be a potential factor contributing to the success of a new product (Haugland, et al., 2011) (Brockhoff, 2003). However, it should be noted that besides practical benefits, customer involvement also cements trusts between the two parties in the long term, almost turning their

relationship from a basic *do ut des* business relationship to a partnership with mutual, additional benefits. As a consequence:

**H3a.** A higher perceived product trust positively affects willingness to pay.

It is evident how crowdfunding combines trust factors obtained both from direct and indirect sources: for a prospective consumer, the monetary and creative contributions of their peers to the campaigns are a testament of the product's trustworthiness even superior to online reviews or opinions. If the consumer is also actively contributing to the campaign, this sentiment is even stronger since it is to be fostered by the bias and momentum generated by their own involvement.

In his study on the signal value of crowdfunding, Acar (Acar, et al., 2021) distinctly reports the answer to one participant, interviewee number twenty-three: "*I would say that [the crowdfunded products are better], and I trust the crowd and the opinion of many and I would believe that the product would be better if 100 consumers say 'I would invest in it!'*", perfectly exemplifying how strong the sentiment towards their fellow peers can affect the customers' trust in a product.

Given the interactions between crowdfunding and trust highlighted above, the following hypotheses are formulated:

**H3b.** A crowdfunding product label has a positive impact on perceived product trust.

**H3c.** The effect of the crowdfunding label on willingness to pay is mediated by perceived product trust.

## **2.5. Product Type and Perceived Product Complexity**

### **2.5.1. Introducing Product Complexity**

There are too many elements that prevent effectively standardizing a theoretical framework for any given product. Besides the obvious difference in the practical use, a factor that significantly influences consumer behavior is product complexity.

Product complexity can be defined as a set of four characteristics: "*the number of product alternatives, the number of product attributes, variability of each product attribute, and inter-attribute correlations*" (Xiao & Benbasat, 2007).

For niche sectors such as luxury this is virtually a non-issue for consumers – more often than not the utility of the product is negligible and the main reason to purchase the product is mere status

signaling. Similarly, for straightforward single-use fast moving consumer goods other factors such as price are likely to play a bigger role.

The majority of product classes, however, carry a varying level of complexity that influence first the very initial buying decision and second the sum they are willing to spend. Some researchers have boldly stated that “*some products seem so complex that it is difficult for consumers to make good choices*” (Kalaycı & Potters, 2011), going on to elaborate how even a common technological product such as a smartphone typically has over thirty features listed in its description, making it hard for buyers to even assess the product and increasing their perception of the risk associated with the purchase. Naturally, this problem is not likely to arise if instead of a smartphone or a technology product the item in question is a generic retail commodity for daily use, as consumers will probably focus on factors such as price and the cost of switching to an alternative is basically null.

### **2.5.2. Product Complexity and Consumer Behavior**

A research paper by Johnson (Johnson, 1984) briefly explore a vaguely standardized structure related to consumer choice. The author identifies five main dimensions of the choice task: the number of alternatives, the role of technology and decision aids, the role of default offerings, choice over time, and how the task structure affects the search process. Each of the dimensions have peculiar factors defining and influencing them, though great emphasis is placed on the number of attributes the product possesses – a variable that inherently depends on product complexity.

In online shopping environments, it is common to provide as much information as possible about a product, regardless of its complexity and the sheer number of attributes it possesses. However, an abundance of information can result in attribute overload, making consumers feel more confused about the choice they have to make, and can ultimately deter them from purchasing even if the choice is important to them (Fasolo, et al., 2007). Research show that consumers strive to reduce the amount of cognitive effort associated with decision making to the extent that individuals are willing to settle for suboptimal product choices in return for a reduction in effort (Bettman, et al., 1990). This is particularly common when consumers find themselves in a highly complex decision environment, i.e., when the alternatives to a product are numerous and difficult to compare because of the sheer number of attributes the product possesses (Payne, et al., 1993).

According to Häubl and Trifts (Häubl & Trifts, 2000), one way to deal with complex decision-making tasks is relying on decision aids, such as product recommendation systems, which “can be highly beneficial to consumers, enabling them to find products that better match their preferences while at

the same time reducing search effort". In these systems, consumers select a number of attributes they believe to be more important and receive product recommendations based on those attributes, thus reducing the number of alternatives and overcoming attribute overload (Häubl & Trifts, 2000). A different type of decision aid consists in what has been identified in the literature as electronic word-of-mouth (Ponathil, et al., 2020) or more simply as product reviews (Li & Hitt, 2010). Product reviews have been regarded by the literature as a form decision aid and has been defined as "any positive or negative statement made by potential, actual, or former customers about a product or company made available to a large audience of both people and institutions via the Internet" (Mudambi & Schuff, 2010). People share their reviews on blogs, consumer review websites, official product website, forums (Ponathil, et al., 2020). Product reviews have become a key source for consumers to reduce search effort and the level of uncertainty about a product, as they turn to their peers to obtain detailed information and product recommendation. Similarly, the crowdfunding label can be regarded as a form of decision aid. In this case, the product recommendation does not come from an algorithm or a small number of reviewers, but by the hundreds and thousands of people who decided to invest their own money into a specific product. This perspective is also supported by (Acar, et al., 2021), who also argues that the costliness of this investment is a stronger, more positive signal compared to product reviews.

Ultimately, decision aids result in a more efficient decision-making process, where consumers make better choices while spending substantially less effort (Häubl & Trifts, 2000). Consequently, the role of decision aid is particularly more important when the complexity of the product grows, since there is a higher need to deal with multiple alternatives defined by a higher number of attributes (Häubl & Trifts, 2000).

Previous paragraphs have hypothesized how the crowdfunding label, through mediators such as perceived quality, product usefulness, and trust, increases the willingness to pay in consumers for a generic product. This time, however, the complexity of the product is taken into account and considered a moderator to the relationship. It is expected that the higher the complexity of the product, the stronger the influence of crowdfunding on willingness to pay will be, as customers turn to their fellows to seek their opinions, suggestions, and ideas; all concepts strongly represented by contributors of a crowdfunding campaign.

Consequently, the following hypothesis is formulated:

**H4a.** The effect of the crowdfunding label on willingness to pay is moderated by perceived product complexity.

### 2.6. Conceptual Framework

Taking into account all four hypotheses and relative sub-hypotheses, the conceptual framework below serves as the basis for this research.

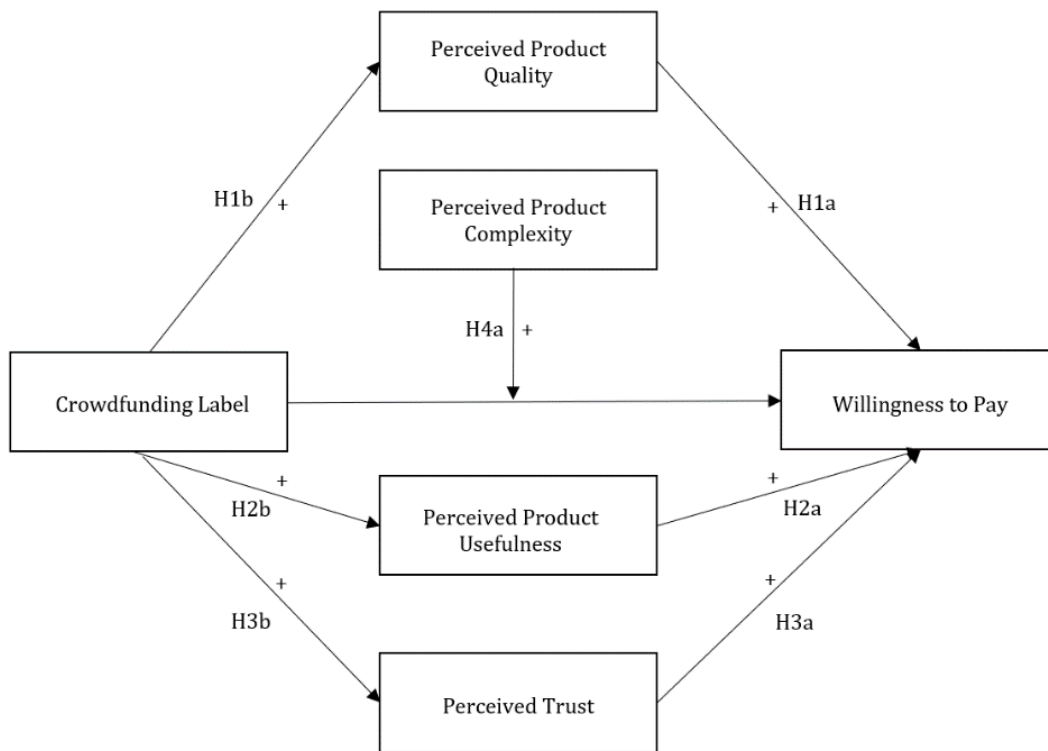


Figure 3. Conceptual Framework

---

### 3. Methodology

Chapter 3 presents the methodology used for this paper. First, the research design and structure is briefly be introduced, including, practical aspects of conducting the study, the desired participant characteristics, how the chosen variables interwind, the purpose and expectations of the research, and other choices regarding the approach taken to conduct the study.

Each of the variables of the model is then explained, focusing on how they are measured, how they are to be used, and how existing literature has considered them in related studies.

Lastly, the final paragraphs showcases a detailed breakdown of the experiment, including a detailed analysis and explanation of the two forms of the survey, their composition, and how they have been administered to the group of participants.

#### 3.1. Research Design and Structure

An appropriate research design creates the conditions for an efficient data collection (Malhotra & Birks, 2007) and a way to provide valid and reliable inferences, minimizing the effect of cognitive and statistical biases (Toshkov, 2016). The research objective is to investigate how the crowdfunded label affects the willingness to pay of prospective consumers. Based on the literature review conducted in Chapter 2, this research can be defined as explanatory, as it tries to evaluate the impact and the causal relationship between a cause (the crowdfunding label) and the outcome (the willingness to pay).

An online experiment is used to test the hypotheses and the theoretical framework. The participants are divided in a treatment and a control group through random assignment, allowing for the comparison of two groups which are similar in all observed and unobserved characteristics (Angrist & Pischke, 2015). The two groups are first exposed the to the same product, a backpack, and asked a series of questions on a multi-item Likert 7-point scale to assess the role of the mediators identified in the theoretical framework. A Likert scale is chosen as the preferred choice of measurement for most questions thanks to its ease of administration and simple quantifiability (Spector, 1992); the results it generates have also been repeatedly confirmed valid and reliable (Li, 2013), while also offering a robust numerical measurement that can directly be used for statistical inference (Normal, 2010). An open-ended question about their willingness to pay in numerical form is also included.

The same groups are then exposed to a second product, a smartwatch, and asked the same questions, including the monetary question on their willingness to pay intention. This allows to establish whether the difference in willingness to pay in a more complex product is greater than that when



considering a simpler item. The products are identical for both groups, with the crowdfunding label being the only distinguishable feature. The treatment group is exposed to the labeled product in both cases. A detailed breakdown of the survey and its structure is introduced in Paragraph 3.5..

## **3.2. Measures**

### **3.2.1. Dependent Variable**

#### **Willingness to Pay**

The dependent variable is the participants' willingness to pay for both products, which is elicited through stated preference. Soliciting the participants' willingness to pay directly by asking them to express it as a specific monetary value right after product exposure has been widely used in previous research (Steigenberger, et al., 2022) (CoreEcon, 2015). For mediating and moderating variables, a summary table showing the components of each of them can be found in Appendix B.

### **3.2.2. Independent Variables**

#### **Crowdfunding Label**

The main independent variable in this study is the crowdfunding label. As this study heavily relies on experimental random assignment, it is critical that both groups have two surveys that are equal in all aspects, except for the presence of the crowdfunding label. The main independent variable is therefore operationalized as a dummy variable, which assumes the value of 1 if the participant belongs to the treatment group and sees both products labelled as crowdfunded, or the value of 0 if they belong to the control group.

#### **First Mediating Variable: Perceived Product Quality**

Following Tsiotsou (Tsiotsou, 2005) product quality has been measured using a Likert 7-point scale where 1 indicates "Strongly Disagree" and 7 indicates "Strongly Agree". The questions have been adapted from Tsiotsou (Tsiotsou, 2005) and Acar (Acar, et al., 2021) and the prompts are shown in the table below.

**Table 1.** Measurement and component statements of variable perceived product quality.

Variable	Question prompt	Measurement
<b>Perceived Product Quality</b>	I think this product is of high quality	7-point Likert scale (1 – strongly agree; 7 – strongly disagree)
	I would recommend this product to others	7-point Likert scale (1 – strongly agree; 7 – strongly disagree)
	I think this product is satisfying	7-point Likert scale (1 – strongly agree; 7 – strongly disagree)

### Second Mediating Variable: Perceived Product Usefulness

Moldovan, Goldenberg, and Chattopadhyay employ a 7-point scale with four items to assess different components of product usefulness individually (Moldovan, et al., 2011). Following this approach and adapting the items to the context at hand, product usefulness is operationalized on a Likert 7-point scale where 1 indicates “Strongly Disagree” and 7 indicates “Strongly agree” with the following prompts.

**Table 2.** Measurement and component statements of variable perceived product usefulness.

Variable	Question prompt	Measurement
<b>Perceived Product Usefulness</b>	I think this product is useful	7-point Likert scale (1 – strongly agree; 7 – strongly disagree)
	I think this product is necessary	7-point Likert scale (1 – strongly agree; 7 – strongly disagree)
	I think this product is beneficial	7-point Likert scale (1 – strongly agree; 7 – strongly disagree)
	I think this product fulfills a need	7-point Likert scale (1 – strongly agree; 7 – strongly disagree)

### Third Mediating: Perceived Product Trust

Based on an article from Carvalho and Fernandes (Carvalho & Fernandes, 2018), perceived product trust is measured on a 7-point Likert scale where 1 indicates “Strongly Disagree” and 7 indicates “Strongly agree”, with the prompts below:

**Table 3.** Measurement and component statements of variable perceived product trust.

Variable	Question prompt	Measurement
<b>Perceived Product Trust</b>	I expect this product to meet my expectations	7-point Likert scale (1 – strongly agree; 7 – strongly disagree)
	Usually this product meets my expectations	7-point Likert scale (1 – strongly agree; 7 – strongly disagree)

### Moderating Variable: Perceived Product Complexity

Product complexity potentially moderates the relationship between the main independent variable and the outcome. As briefly mentioned in Paragraph 3.1., each group is be exposed to two products of different levels of complexity – a backpack and a smartphone. Ruefenacht (Ruefenacht, 2018) measures two aspects of product complexity, playing on both the technical side of the product – i.e. how much knowledge is required to understand the product) and the perceptive side – i.e., how complicated the user feels the product to be. This approach is coherent with other, older studies that have identified product knowledge as one of the pillars of perceived product complexity (Hartmann & Apaolaza-Ibáñez, 2012).

Skiver (Skiver, 2017) and Loureiro et al. (Loureiro, et al., 2020) focus instead of the number of attributes of the product; the former identifying it as a fundamental question related to product complexity and the latter adapting it into a 6-point Likert scale.

Based on this, the table below shows three prompts through which product complexity can be tested:

**Table 4.** Measurement and component statements of variable perceived product trust.

Variable	Question prompt	Measurement
<b>Perceived Product Complexity</b>	A lot of knowledge is required to take full advantage of this product	6-point Likert scale (1 – strongly disagree; 6 – strongly agree)
	This product is complicated in nature	6-point Likert scale (1 – strongly disagree; 6 – strongly agree)
	This product has a high number of attributes	6-point Likert scale (1 – strongly disagree; 6 – strongly agree)

### 3.2.3. Control Variables: Demographics

The last part of each survey contains questions about the participants' demographic characteristics, such as age, gender, educational background, and home residency. This information is collected ensuring the anonymity of the respondent in order to verify whether these characteristics are equally distributed across the treatment and the control groups, enhancing the internal validity of the experiment (Angrist & Pischke, 2015).

*Table 5. Question prompts for control variables*

<b>Variables</b>	<b>Question prompt</b>
<b>Age</b>	What age is the participant
<b>Gender</b>	What gender the participant identifies with
<b>Education</b>	What is the highest education the participant has achieved
<b>Residency</b>	What is the country of residence of the participant

### 3.3. Data Collection

The survey, created with online tool Qualtrics, has been distributed through digital means and participants were able to submit their responses on an online platform. This is the fastest and most convenient data collection technique for this study – crowdfunding already is conducted mainly through internet portals, so there was not to be any issue about reaching the correct target.

Also for this reason, the target demographics are also relatively large, since any frequent user of the internet has the potential to take part in a crowdfunding campaign. This is even more so true considering the fair popularity of the items chosen – a backpack and a smartwatch – that are not niche items as a luxury good could be.

The questions of the survey has been structured in such a way to be as clear and concise as possible, for two main reasons: first, the survey is slightly longer than the average form, given the need to test for two products; second, most questions are of a subjective nature, appealing to feelings and perceived characteristics rather than assessable quantities.

The data collection period has spanned a total of sixteen days, from June 22, 2022 to July 4, 2022. An in-depth detail of the participant pool is shown later in Chapter 4.

---

### 3.4. Sample

Deciding the ideal sample size has been debated several times in existing literature and many concepts can be drawn upon.

First, a convenience sampling (Etikan, et al., 2016) approach is preferred to a purpose sampling one. The main criteria for this is be the need for immediate availability of participants given the limited time to conduct this study, as well as the virtually non-existent constraints in terms of desirable candidate profiles. In particular, the author has managed manage the data collection process through direct means or through controlled online platforms, without having to resort to data collected wholly by third parties.

As for the ideal number of participants, research is plenty but there seem to be no general consensus. While some (Gay & Diehl, 1996) straightforwardly say the only answer to the dilemma is “large enough”, others rely instead of a ratio between the responses and the number of variables, such as Roscoe (Roscoe, 1975), with 30 respondents per independent variable, or Chassan with 25 (Chassan, 1979), with the latter also advocating for a minimum number of subjects of 100.

Considering these, a minimum of 100 responses seems to be suitable for the present research. Since it is expected for a part of the responses to be null or incomplete, a comfortable number of 150 participants is identified as the goal of the study.

### 3.5. Survey Structure

Two surveys versions are employed to conduct this study, presenting two products each. The treatment group received the survey where both products are introduced with the crowdfunding label; the control group received the one where neither product possesses the crowdfunding label, following the design in Paragraph 3.1.

In the first part, the respondent is introduced to the study and are given practical information such as the background topic of the survey and the time required to complete it. Assurances regarding the strict confidentiality of the answers and the inexistence of wrong answers are also mentioned. The participant then has to also tick a checkbox acknowledging all of the above.

In the second part, the respondent is introduced to a brief buying scenario for the backpack, the first product of the study, and is asked to place a largely estimated monetary value on the product. The

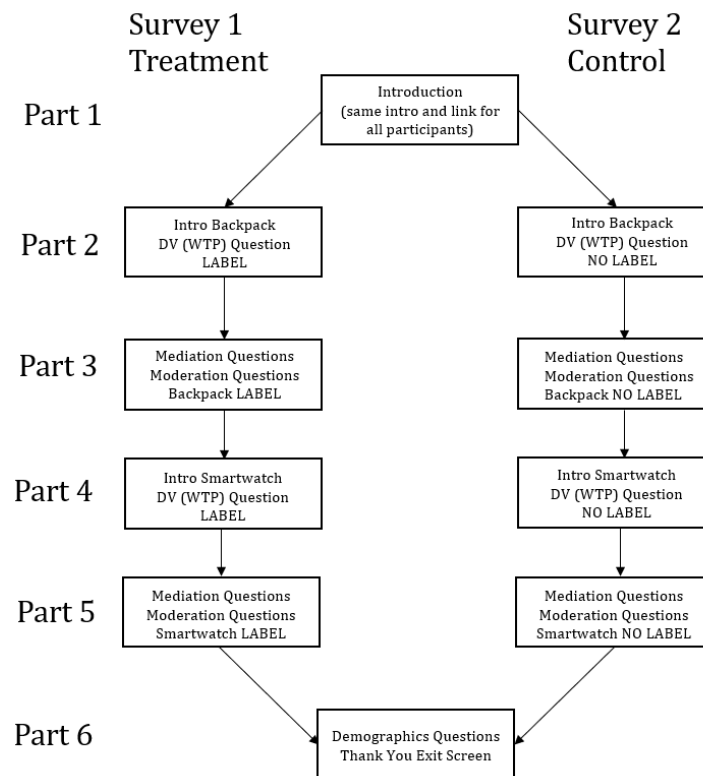
two scenarios are identical if not for the mention of the crowdfunding campaign behind the item in the treatment group’s survey.

After this, in the third part, the participants are asked a series of questions to test the three mediation variables and the moderation variable, following the prompts shown in the paragraphs above.

The second product, the smartwatch, is then introduced in part four, and in part five the process repeats with the same structure, premises, and questions. Lastly, part six tests control variables, and ultimately the participants are shown a thank you message after submitting the last answers.

### 3.6. Qualtrics Scheme

The graphic below is a simple visual representation of how the survey flow appears to be in Qualtrics. As can be seen, all participants have the first starting and ending point, though the version of the survey they receive is different and randomized.



**Figure 4.** Scheme representing survey flow in Qualtrics, showcasing randomization between two survey versions

---

### 3.7. Estimation Strategy

Statistical software SPSS has been used to conduct the analysis. As the dependent variable is not categorical, the statistical method of ordinary least Squares (OLS) is adopted in this analysis (Wooldridge, 2015). All hypotheses (and therefore all analyses) are to be conducted twice, once for each type of product. This offers a simplistic yet relevant piece of insight over how the class of product can influence the effect of the involved variables on willingness to pay.

The mediation analysis has been conducted through both Baron and Kenny's method (Baron & Kenny, 1986) and a bootstrap analysis with the aid of an add-on to IBM SPSS. The results obtained from the two methods have then been compared to see if they were consistent with one another and if not, why. To test H1b, H2b, and H3b a simple t-test has also been employed to show whether there is a significance difference in means when considering a label versus no label scenario.

Baron and Kenny (Baron & Kenny, 1986) identify three steps to a mediation analysis based on three distinct linear regressions. First, one concerning the effect of the independent variable on the dependent variable; second, one on the effect of the independent variable on the mediating variable; and lastly, one exemplifying the aggregate effect of the independent variable and the mediating variable on the dependent variable.

A mediating effect is said to be present when there is a significant degree of influence from all three: the independent variable's effect on the dependent variable is significant; likewise, the independent variable also significantly influences the mediating variable; and third, the mediator has a significant effect on the dependent variable in the last, aggregate regression.

Using the bootstrap method is much more simple and quick. The final result is a table presenting the direct effect of the independent variable on the dependent variable and on the mediator, while also showing the effect of the mediating variable. In this last case, however, there are no p-values or t-statistics since the data is normally distributed; instead, whether the confidence interval passes through 0 is taken as measurement.

The moderation analysis sees the introduction of two new variables, created purposely and specifically to conduct a reliable moderation analysis, and a series of regressions conducted to obtain the interaction effects.

Tests for OLS assumptions can be found in Appendix C.

---

## 4. Data Preparation and Descriptive Statistics

Chapter 4 presents and explains the steps taken to prepare the data collected so that it can be used for analysis. First, a thorough cleanup is conducted so that fields that are not necessary for the analysis are eliminated from the final datasheet extracted from Qualtrics.

Descriptive statistics follow to show an overview over the responses and extract basic information such as means and splits among different demographic categories.

Lastly, a factor analysis and related reliability check are carried out to prepare and solidify the responses and obtain the final data set that is to be used in the analysis in Chapter 5.

### 4.1. Finalizing the Dataset

The survey has been open from June 22, 2022 until July 5, 2022, for a total duration of approximately two weeks. 182 responses have been recorded, achieving the minimum requirement of 100 and the comfortability threshold of 150.

A total of 45 responses have been eliminated for several reasons. 30 participants have failed to successfully complete the survey, so their responses were incomplete. 2 participants have taken 14 215 and 163 202 seconds to complete the questionnaire (respectively 4 and 45 hours), which makes it fair to assume their attention span was not sufficiently high as to give adequate responses to the questions. A further 9 respondents failed to follow the instructions of the survey, namely of the willingness to pay questions, expressing their preference in other currencies or indicating illogical values (such as 0 or “12,0”). Lastly, 2 participants expressed the desire for their responses to not be used in the survey, so while they were complete and eligible, these answers have been eliminated. A final number of 137 entries has then been used from here forward.

### 4.2. Descriptive Statistics

Out of the final N=137 participants, 64 received the survey version focused on the crowdfunded product, with the remaining 73 being shown the normal items instead. In percentual values, this means a split of 53.3%-46.7%, which is reasonably close to 50% to consider that the randomization has been successful and the disqualified responses did not lean to either variant of the questionnaire.



**Table 6.** Participant randomization percentages.

Label	N	Percent
1	64	46.7
0	73	53.5

#### 4.2.1. Variables

##### Dependent Variable: Willingness to Pay

The mean price respondents would be willing to pay for a backpack equals to 46.38 Euro, while reaching a considerably higher mean of 128.01 for the smartwatch. It should be noted, however, that both items have a rather large standard deviation, respectively of 19.558 and 74.113, meaning that the means are not that accurate and while they are indicative, a deeper analysis should be performed.

**Table 7.** Means and standard deviations for willingness to pay, by product.

	Minimum	Maximum	Mean	Standard Deviation
<b>Backpack WTP</b>	15	100	46.38	19.558
<b>Smartwatch WTP</b>	20	400	128.01	74.113

Looking at the division given by the crowdfunding label, it can be observed that while crowdfunded products seem to have a higher willingness to pay, the difference in absolute values is not significant enough to draw conclusions; considering also the large standard deviations involved, it is impossible to intuitively deduce the relationship between the variables.

**Table 8.** Means and standard deviations by treatment and product.

	Mean		Standard Deviation	
	Backpack	Smartwatch	Backpack	Smartwatch
<b>Crowdfunded Label</b>	53.43	131.88	19.661	69.245
<b>No Crowdfunded Label</b>	40.29	124.62	17.414	78.453

##### Independent Variables: Mediators and Moderator

The tables below shows means and standard deviations for each of the elements contributing to the variables of this study. Since the study is focused mainly on the effect of the crowdfunded label and

not of the type of product (meaning that the participants receiving the label-based survey received both labelled products), the split between products is to be kept during the analysis as well, only converging when the moderating effect of perceived product complexity is tested.

While results are similar between product types (with occasionally being higher or lower for either of them), there is a clear and intuitive discrepancy in perceived complexity, which seems to be significantly higher when considering a smartwatch.

**Table 9.** Means and standard deviations by variable component and product.

Variable	Backpack		Smartwatch	
	Mean	Standard Deviation	Mean	Standard Deviation
<b>Quality 1</b>	5.05	1.031	5.15	1.212
<b>Quality 2</b>	4.47	1.105	4.54	1.272
<b>Quality 3</b>	5.17	0.920	5.01	1.134
<b>Usefulness 1</b>	5.60	1.003	4.95	1.447
<b>Usefulness 2</b>	4.42	1.523	3.47	1.636
<b>Usefulness 3</b>	5.20	1.097	4.88	1.233
<b>Usefulness 4</b>	5.12	1.292	4.77	1.450
<b>Trust 1</b>	5.14	0.994	4.97	1.169
<b>Trust 2</b>	5.05	1.114	4.74	1.220
<b>Complexity 1</b>	2.31	1.129	4.06	1.103
<b>Complexity 2</b>	2.01	1.047	4.11	1.161
<b>Complexity 3</b>	3.42	1.264	4.69	1.102

### Correlation Matrices

Correlation matrices can be found in Appendix D, with significant results marked with asterisks (respectively one for a 5% confidence intervals and two for a 1% confidence interval). Most variables present a certain degree of correlation, though only a few reach higher values (i.e. greater than 0.700) that might lead to concerns for this study. Indeed, it given the subjectivity of the language used for the questions, it is reasonable to assume that some questions might have been too similar to one another. A more comprehensive analysis of this aspect is included in the paragraph dedicated to the limitations of the study that is included later on in the paper.

#### 4.2.2. Familiarity and Demographics

Most participants had a certain degree of familiarity with the idea of crowdfunding, with more than 50% of them being at least somewhat familiar with the concept.

*Table 10. Frequency of control variable familiarity.*

<b>Familiarity</b>	<b>N</b>	<b>Percent</b>
<b>Not familiar at all</b>	14	10.2
<b>Slightly familiar</b>	22	16.1
<b>Somewhat familiar</b>	37	27.0
<b>Moderately familiar</b>	38	27.7
<b>Very familiar</b>	26	19.1

Slightly more than half of the participants fall within the 19-24 age category (69 respondents, equal to 50.4%), with another significant portion identifying with the 25-34 option (60 respondents, 43.8%). Only under 10% of respondents declared to be younger than 18 or above 35 years of age.

*Table 11. Frequency of control variable age.*

<b>Age</b>	<b>N</b>	<b>Percent</b>
<b>18 or younger</b>	3	2.2
<b>19-24</b>	69	50.4
<b>25-34</b>	60	43.8
<b>35-49</b>	4	2.9
<b>50 or older</b>	1	0.7

The majority of the respondents were women (70 respondents, equal to 51.1%), followed by men (59 respondents, equal to 43.1%). Under 10% participants opted for non-binary/third gender or preferred not to disclose their gender altogether (8 participants, equal to 5.8%).

**Table 12.** Frequency of control variable gender.

<b>Gender</b>	<b>N</b>	<b>Percent</b>
<b>Male</b>	59	43.1
<b>Female</b>	70	51.1
<b>Non-binary/third gender</b>	4	2.9
<b>Prefer not to say</b>	4	2.9

The majority of participants (75, equal to 54.7%) has completed a Bachelor’s Degree as their highest educational achievement. A significant portion has completed a Master’s Degree (43, equal to 31.4%), while a smaller but still relevant part has not undergone any higher education (16, equal to 11.7%).

**Table 13.** Frequency of control variable education.

<b>Education</b>	<b>N</b>	<b>Percent</b>
<b>High school or lower</b>	16	11.7
<b>Bachelor’s Degree</b>	75	54.7
<b>Master’s Degree</b>	43	31.4
<b>Post-graduate or higher</b>	3	2.2

Lastly, the majority of respondents (88, equal to 64.2%) lived in Europe excluding the Netherlands, with the rest almost evenly split between the Netherlands and the rest of the world.

**Table 14.** Frequency of control variable residency.

<b>Residency</b>	<b>N</b>	<b>Percent</b>
<b>The Netherlands</b>	28	20.4
<b>Other European country</b>	88	64.2
<b>Outside Europe</b>	21	15.3

## 4.3. Factor Analysis

### 4.3.1. Validity Testing

Given the methodology used for this study, a factor analysis is a reasonable procedure to undergo before executing the analysis. To validate whether this is appropriate, a Kaiser-Meyer-Olkin test (from now on referred to as KMO test) and a Bartlett’s Test for Sphericity are conducted.

## Backpack testing

*Table 15. KMO test and Bartlett's Test of Sphericity for backpack results.*

<b>KMO and Bartlett's Test</b>		
<b>KMO Measure of Sampling Adequacy</b>		0.836
<b>Bartlett's Test of Sphericity</b>	Approx. Chi- Square	805.087
	Df	66
	Sig.	<0.001

The KMO test suggests that the sample is adequate for factor analysis, given the resulting value of 0.836, which Kaiser describes as “meritous” (Kaiser & Rice, 1974). Similarly a significance smaller than 0.001 is well below the threshold of 0.05 for Bartlett’s Test of Sphericity. It cannot then be concluded that the identity matrix for the variables at hand is equal to the correlation matrix, and a factor analysis is appropriate to perform.

## Smartwatch testing

*Table 16. KMO test and Bartlett's Test of Sphericity for smartwatch results.*

<b>KMO and Bartlett's Test</b>		
<b>KMO Measure of Sampling Adequacy</b>		0.869
<b>Bartlett's Test of Sphericity</b>	Approx. Chi- Square	1128.84
	Df	66
	Sig.	<0.001

Results for the smartwatch variables are almost identical to those for the backpack variables. A slightly higher KMO value is obtained, 0.869, meaning that a factor analysis is even more appropriate in this situation. Similarly, a the significance of Bartlett’s Test of Sphericity confirms that the procedure is valid. The following paragraph sees the final factors extracted and defined.

### 4.3.2. Factor Extraction

A standard Varimax Rotation method is used in extracting the factors. Typically, the number of factors that should be kept is measured through the eigenvalues of the components of the rotated component matrix, keeping a value of 1 as threshold. However, doing so for this study would yield a

number of three factors, which is not convenient or ideal for the purpose of this study, given that the number of analyzed variables is four.

For this reason, the number of factors to be generated has been forcefully set to four, and the fourth value, holding an eigen value of 0.801, has also been considered in the analysis. The assignment of the components to the factors is consistent, and each of the dimensions (quality, usefulness, trust, and complexity), has a dedicated factor that relies on the respective questions of the survey.

The tables below show the breakdowns of the new variables following factor analysis. From now on, each of the factors will be referred to with the attribute their major component represent (e.g. Quality, Trust, etc).

### Backpack variables

*Table 17. Factor extraction for backpack answers.*

	<b>Factor 1</b>	<b>Factor 2</b>	<b>Factor 3</b>	<b>Factor 4</b>
<b>Quality 1</b>	.172	<b>.736</b>	.056	.386
<b>Quality 2</b>	.313	<b>.822</b>	.146	.056
<b>Quality 3</b>	.296	<b>.784</b>	.107	.294
<b>Usefulness 1</b>	<b>.757</b>	.162	-.091	.293
<b>Usefulness 2</b>	<b>.786</b>	.223	.112	.069
<b>Usefulness 3</b>	<b>.782</b>	.266	.108	.311
<b>Usefulness 4</b>	<b>.850</b>	.205	.045	.080
<b>Trust 1</b>	.270	.303	.074	<b>.785</b>
<b>Trust 2</b>	.265	.206	.054	<b>.793</b>
<b>Complexity 1</b>	.160	.149	<b>.873</b>	-.002
<b>Complexity 2</b>	.094	.004	<b>.883</b>	-.036
<b>Complexity 3</b>	-.210	.141	<b>.638</b>	.376

## Smartwatch variables

*Table 18. Factor extraction for smartwatch answers*

	<b>Factor 1</b>	<b>Factor 2</b>	<b>Factor 3</b>	<b>Factor 4</b>
<b>Quality 1</b>	<b>.787</b>	.088	.333	.269
<b>Quality 2</b>	<b>.742</b>	.351	.175	.255
<b>Quality 3</b>	<b>.812</b>	.358	.037	.085
<b>Usefulness 1</b>	.589	<b>.697</b>	.032	-.032
<b>Usefulness 2</b>	.049	<b>.811</b>	.115	.334
<b>Usefulness 3</b>	.508	<b>.671</b>	.052	.195
<b>Usefulness 4</b>	.404	<b>.756</b>	.194	.218
<b>Trust 1</b>	.675	.272	.045	<b>.601</b>
<b>Trust 2</b>	.279	.351	.067	<b>.837</b>
<b>Complexity 1</b>	.088	.088	<b>.907</b>	.058
<b>Complexity 2</b>	-.034	.161	<b>.890</b>	.017
<b>Complexity 3</b>	.346	-.006	<b>.753</b>	.052

### 4.4. Reliability Check

Identifying Cronbach's Alpha for each of the scales gives a solid measure for internal consistency, i.e. how reliable the factors are. Ideally, all factors should have a Cronbach's Alpha of 0.8 or greater, though 0.6 is considered acceptable as lower end threshold.

*Table 19. Reliability check for extracted factors.*

<b>Factor</b>	<b>No. of Components</b>	<b>Cronbach's Alpha</b>	
		<b>Backpack</b>	<b>Smartwatch</b>
<b>Quality</b>	3	0.829	0.872
<b>Usefulness</b>	4	0.861	0.875
<b>Trust</b>	2	0.791	0.848
<b>Complexity</b>	3	0.739	0.837

The table above shows that besides the factors representing trust and complexity in the backpack version of the survey, all variables reach the desired threshold of 0.8.

After preparing and testing the validity of the data, Chapter 5 now shows the detailed analysis process used to test hypotheses highlighted at the beginning of the research.

## 5. Analysis

Chapter 5 covers the analysis of the data collected and prepared in Chapter 4. The three mediation models are analyzed first (Hypotheses 1, 2, and 3), both for the backpack and for the smartwatch, followed by the moderation interaction focused on product complexity (Hypothesis 4).

### 5.1. Hypothesis 1: Perceived Product Quality

#### Backpack

The table below shows Baron and Kenny's first regression, the direct effect of the crowdfunded label on willingness to pay.

*Table 20. Linear regression results for the effect of label on backpack willingness to pay.*

DV BpWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
Constant	40.288	2.164		18.619	<.001
Label	13.141	3.179	.336	4.133	<.001
Adj. R Squared	.106				

Taking the conventional 95% confidence interval, it appears the crowdfunded label has a significant impact on willingness to pay.

Similarly, the label also positively and significantly influences the perceived product quality variable obtained from factor analysis, as shown below:

*Table 21. Linear regression results for the effect of label on perceived product quality.*

DV QtyB	Unstandardized B	Std. Error	Standardized B	t	Sig.
Constant	-.214	.114		-1.870	.064
Label	.458	.167	.229	2.736	.007
Adj. R Squared	.046				

The significant impact of the crowdfunded label can also be confirmed through a simple t-test showing the means, standard errors, and their differences, as shown below:



**Table 22.** T-test results for means and standard errors for variable perceived product quality, by label.

Group	Obs.	Mean	Std. Err.	Std. Dev.	Lower Bound	Upper Bound
No crowd-funded label	73	-.2138003	.1060223	.9058546	-.4251518	-.0024487
Crowdfunded label	64	.2438659	.1315504	1.052403	-.0190165	.5067484
Difference		-.4576662	.1673		-.7885341	-.1267982

Finishing Baron and Kenny's steps for mediation, aggregate regressions shows that the independent variable significantly affects willingness to pay as well:

**Table 23.** Aggregate linear regression results for the effect of perceived product quality and label on backpack willingness to pay.

DV BpWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
(Constant)	41.507	2.097		19.794	<.001
Label	10.512	3.126	.269	3.363	.001
QtyB	5.701	1.559	.293	3.658	<.001
Adj. R Squared	.182				

Considering this, it can be concluded that there is a mediating effect of perceived product quality on the interaction between the crowd-funded label.

To also test hypothesis H1a, although not strictly necessary for the mediating effect, a simple regression involving the effect of label is run. As it turns out, the effect is significant as well:

**Table 24.** Linear regression results for the effect of perceived product quality on backpack willingness to pay.

DV BpWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
(Constant)	46.377	1.574		29.463	<.001
QtyB	6.906	1.574	.354	4.388	<.001
Adj. R Squared	.119				

Based on the tests above, it can be concluded that **none of hypotheses H1a, H1b, or H1c can be rejected.**

The table below shows the results yielded from using the bootstrapping technique.

**Table 25.** Mediation results for label, perceived product quality, and backpack willingness to pay using the bootstrap method.

<b>Total effect of X on Y</b>					
<b>Effect</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>	<b>LLCI</b>	<b>ULCI</b>
13.1409	3.1792	4.1334	.0001	6.8530	19.4288
<b>Direct effect of X on Y</b>					
<b>Effect</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>	<b>LLCI</b>	<b>ULCI</b>
10.5125	3.1255	3.3634	.0010	4.3303	16.6946
<b>Indirect effect(s) of X on Y</b>					
	<b>Effect</b>	<b>Boot Std. Error</b>	<b>BootLLCI</b>	<b>BootULCI</b>	
<b>QtyB</b>	2.6284	1.0592	.6588	4.8593	

Conclusions are the same as those reached through Baron and Kenny's method. Both the direct and the aggregate effect of the independent and mediating variables are significant; furthermore, the mediating variable does indeed exercise a mediating effect since the limits of the confidence interval of 0.6588 and 4.8593 do not include 0.

### Smartwatch

The same analysis is now performed for the smartwatch. Contrary to the case of the backpack, it seems that the label does not exercise a direct significant effect on the willingness to pay.

**Table 26.** Linear regression results for the effect of label on smartwatch willingness to pay.

<b>DV SwWTP</b>	<b>Unstandardized B</b>	<b>Std. Error</b>	<b>Standardized B</b>	<b>t</b>	<b>Sig.</b>
<b>(Constant)</b>	124.616	8.696		14.330	<.001
<b>Label</b>	7.259	12.723	.049	.571	.569
<b>Adj. R Squared</b>	-.005				

Likewise, there is no significant effect on the perceived product quality, as shown through the regression below and confirmed by a t-test:

**Table 27.** Linear regression results for the effect of label on perceived product quality..

DV QtyS	Unstandardized B	Std. Error	Standardized B	t	Sig.
<b>(Constant)</b>	-.096	.117		-.818	.415
<b>Label</b>	.205	.171	.102	1.197	.233
<b>Adj. R Squared</b>	.003				

**Table 28.** T-test results for means and standard errors for variable perceived product quality, by label.

Group	Obs.	Mean	Std. Err.	Std. Dev.	Lower Bound	Upper Bound
<b>No crowdfunded label</b>	73	-.0956168	.1230377	1.051235	-.340888	.1496544
<b>Crowdfunded label</b>	64	.1090629	.116799	.9343917	-.1243412	.342467
<b>Difference</b>		-.2046798	.1709693		-.5428045	.133445

However, in the aggregate effect of both variables it appears that perceived quality does hold a significant influence on willingness to pay:

**Table 29.** Aggregate linear regression results for the effect of perceived product quality and label on smartwatch willingness to pay.

DV SwWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
<b>(Constant)</b>	127.618	7.933		16.086	<.001
<b>Label</b>	.833	11.640	.006	.072	.943
<b>QtyS</b>	31.392	5.829	.424	5.386	<.001
<b>Adj. R Squared</b>	.168				

Taking the bootstrapping route, the same results are obtained:

**Table 30.** Mediation results for label, perceived product quality, and smartwatch willingness to pay using the bootstrap method.

<b>Total effect of X on Y</b>					
<b>Effect</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>	<b>LLCI</b>	<b>ULCI</b>
7.2586	12.7229	.5705	.5693	-17.9034	32.4205
<b>Direct effect of X on Y</b>					
<b>Effect</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>	<b>LLCI</b>	<b>ULCI</b>
.8332	11.6397	.0716	.9430	-22.1881	23.8544
<b>Indirect effect(s) of X on Y</b>					
	<b>Effect</b>	<b>Boot Std. Error</b>	<b>BootLLCI</b>	<b>BootULCI</b>	
<b>QtyS</b>	6.4254	5.7486	-4.0591	18.7194	

The effect of the label on willingness to pay is not significant neither directly nor in the aggregate regression, and since the extremes of the confidence interval do include 0 this time, it can be concluded that the mediating effect of perceived product quality on the relationship between the crowdfunding label and willingness to pay is not significant, in the case of a smartwatch.

It is interesting to note, however, that while perceived quality does not act as a mediator, it still appears to have a significant influence on willingness to pay in the aggregate regression. The individual regression containing only perceived quality and willingness to pay also confirms this:

**Table 31.** Linear regression results for the effect of perceived product quality on smartwatch willingness to pay.

<b>DV SwWTP</b>	<b>Unstandardized B</b>	<b>Std. Error</b>	<b>Standardized B</b>	<b>t</b>	<b>Sig.</b>
<b>(Constant)</b>	128.007	5.755		22.241	<,001
<b>QtyS</b>	31.435	5.776	.424	5.442	<,001
<b>Adj. R Squared</b>	.174				

It can be concluded then that while perceived product quality does significantly influence willingness to pay for a smartwatch, it does not exercise a mediating effect on the relationship between the crowdfunding label and willingness to pay.

These analyses show, therefore that while **H1b and H1c can be rejected, H1a cannot.**

It appears, judging from this first analysis that the type of product is the deciding factor in this analysis, since the hypothesis cannot be rejected when dealing with a backpack but it is however rejected when analyzing a smartwatch. This contradiction is indeed a limitation of the study and further comments are included in [Chapter xxxx]

## 5.2. Hypothesis 2: Perceived Product Usefulness

### Backpack

Following Baron and Kenny's steps, the first regression showing the direct significant effect of the label on willingness to pay is shown below, as it was in H1:

*Table 32. Linear regression results for the effect of label on backpack willingness to pay.*

DV BpWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
<b>(Constant)</b>	40.288	2.164		18.619	<.001
<b>Label</b>	13.141	3.179	.336	4.133	<.001
<b>Adj. R Squared</b>	.106				

The second regression, regarding the effect of the label on perceived product usefulness, shows that the independent variable is not, however, significant. This is in line with the t-test showing the difference in means:

*Table 33. Linear regression results for the effect of label on perceived product usefulness..*

DV UsfIB	Unstandardized B	Std. Error	Standardized B	t	Sig.
<b>(Constant)</b>	.067	.117		.573	.568
<b>Label</b>	-.144	.171	-.072	-.838	.404
<b>Adj. R Squared</b>	-.002				

**Table 34.** T-test results for means and standard errors for variable perceived product usefulness, by label.

Group	Obs.	Mean	Std. Err.	Std. Dev.	Lower Bound	Upper Bound
No crowd-funded label	73	.0671106	.1101985	.9415366	-.1525662	.2867873
Crowd-funded label	64	-.076548	.1331368	1.065094	-.3426007	.1895046
Difference		.1436586	.1714292		-.1953756	.4826928

Lastly, the aggregate regression also suggests that there is no significant influence of the perceived product usefulness on willingness to pay either:

**Table 35.** Aggregate linear regression results for the effect of perceived product usefulness and label on backpack willingness to pay.

DV BpWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
(Constant)	40.121	2.155		18.620	<.001
Label	13.534	3.172	.346	4.267	<.001
UsflB	2.491	1.585	.128	1.571	.119
Adj. R Squared	.116				

Given that the requirements of both step two and step 3 of the procedure are not met, it can be concluded that there is no significant mediation. To test whether there is a direct effect of perceived usefulness on willingness to pay, a final regression is extracted:

**Table 36.** Linear regression results for the effect perceived product usefulness backpack willingness to pay.

DV BpWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
(Constant)	46.387	1.675		27.695	<.001
UsflB	1.958	1.679	.100	1.166	.246
Adj. R Squared	-.0027				

Perceived product usefulness does not hold a significant direct effect on willingness to pay.

Based on the above, **all of hypotheses H2a, H2b, and H3c are therefore rejected.** The same mediation result is yielded using the bootstrap method, as the results below show:

**Table 37.** Mediation results for label, perceived product usefulness, and backpack willingness to pay using the bootstrap method.

<b>Total effect of X on Y</b>					
<b>Effect</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>	<b>LLCI</b>	<b>ULCI</b>
13.1409	3.1792	4.1334	.0001	6.8530	19.4288
<b>Direct effect of X on Y</b>					
<b>Effect</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>	<b>LLCI</b>	<b>ULCI</b>
13.5338	3.1718	4.2669	.0000	7.2600	19.8075
<b>Indirect effect(s) of X on Y</b>					
	<b>Effect</b>	<b>Boot Std. Error</b>	<b>BootLLCI</b>	<b>BootULCI</b>	
<b>UsfIB</b>	-.3929	.5619	-1.7275	.5170	

While the effect of the label on willingness to pay is significant in both a direct and an aggregate regression (the direct effect of the label on the mediating variable is not captured here, though the analysis above shows its non-significance), there is no significant mediation of the perceived product usefulness, as the confidence interval limits include 0.

### Smartwatch

The crowdfunded label does not yield a significant effect on direct effect on willingness to pay:

**Table 38.** Linear regression results for the effect of label on smartwatch willingness to pay.

<b>DV SwWTP</b>	<b>Unstandardized B</b>	<b>Std. Error</b>	<b>Standardized B</b>	<b>t</b>	<b>Sig.</b>
<b>(Constant)</b>	124.616	8.696		14.330	<.001
<b>Label</b>	7.259	12.723	.049	.571	.569
<b>Adj. R Squared</b>	-.005				

While this is a sufficient indicator that no mediation is present, the rest of the analysis is performed for the sake of clarity and completeness.

The second regression shows that the label does not significantly affect perceived product usefulness either:

**Table 39.** Linear regression results for the effect of label on perceived product usefulness..

DV UsfIS	Unstandardized B	Std. Error	Standardized B	t	Sig.
<b>(Constant)</b>	-.134	.116		-1.156	.250
<b>Label</b>	.288	.170	.144	1.691	.093
<b>Adj. R Squared</b>	-.013				

As has been done in previous paragraphs, a t-test shows the consistency of the results:

**Table 40.** T-test results for means and standard errors for variable perceived product usefulness, by label.

Group	Obs.	Mean	Std. Err.	Std. Dev.	Lower Bound	Upper Bound
<b>No crowdfunded label</b>	73	.0671106	.1101985	.9415366	-.1525662	.2867873
<b>Crowdfunded label</b>	64	-.076548	.1331368	1.065094	-.3426007	.1895046
<b>Difference</b>		.1436586	.1714292		-.1953756	.4826928

Lastly and expectedly, no significant values are present in the aggregate regression:

**Table 41.** Aggregate linear regression results for the effect of perceived product usefulness and label on smartwatch willingness to pay.

DV SwWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
<b>(Constant)</b>	124.997	8.765		14.261	<.001
<b>Label</b>	6.443	12.895	.044	.500	.618
<b>UsfIS</b>	2.836	6.457	.038	.439	.661
<b>Adj. R Squared</b>	-.011				

Since none of the three steps of the mediation analysis is successful, it can be concluded that there is no mediating effect.

Lastly, the direct effect of perceived usefulness on willingness to pay is tested:



**Table 42.** Linear regression results for the effect of perceived product usefulness on smartwatch willingness to pay.

DV SwWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
<b>(Constant)</b>	128.007	6.349		20.162	<.001
<b>UsfIS</b>	3.301	6.372	.045	.518	.605
<b>Adj. R Squared</b>	-.0054				

As for the backpack case analyzed earlier, this effect is not significant either, and therefore **all of hypotheses H2a, H2b, and H3c can be rejected.**

Below is the bootstrap analysis, in order to further confirm that no influences are significant and the confidence interval includes 0:

**Table 43.** Mediation results for label, perceived product usefulness, and smartwatch willingness to pay using the bootstrap method.

<b>Total effect of X on Y</b>					
Effect	Std. Error	t	Sig.	LLCI	ULCI
7.2586	12.7229	.5705	.5693	-17.9034	32.4205
<b>Direct effect of X on Y</b>					
Effect	Std. Error	t	Sig.	LLCI	ULCI
6.4430	12.8955	.4996	.6182	-19.0620	31.9480
<b>Indirect effect(s) of X on Y</b>					
	Effect	Boot Std. Error	BootLLCI	BootULCI	
<b>UsfIS</b>	.8156	1.8595	-2.6519	5.2315	

### 5.3. Hypothesis 3: Perceived Product Trust

#### Backpack

Again, the significant relationship given by the regression between label and willingness to pay is the starting point for the analysis:

**Table 44.** Linear regression results for the effect of label on backpack willingness to pay.

DV BpWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
<b>(Constant)</b>	40.288	2.164		18.619	<.001
<b>Label</b>	13.141	3.179	.336	4.133	<.001
<b>Adj. R Squared</b>	-.106				

From the second regression between the label variable and perceived product trust, it would seem that there is not present a significant effect, as confirmed by a t-test as well:

**Table 45.** Linear regression results for the effect of label on perceived product trust.

DV TrustB	Unstandardized B	Std. Error	Standardized B	t	Sig.
<b>(Constant)</b>	-.071	.117		-.610	.543
<b>Label</b>	.153	.171	.077	.892	.374
<b>Adj. R Squared</b>	-.002				

**Table 46.** T-test results for means and standard errors for variable perceived product trust, by label.

Group	Obs.	Mean	Std. Err.	Std. Dev.	Lower Bound	Upper Bound
<b>No crowdfunded label</b>	73	-.0714295	.122288	1.044829	-.3152061	.1723471
<b>Crowdfunded label</b>	64	.0814743	.1184836	.9478688	-.1552963	.3182448
<b>Difference</b>		-.1529038	.17137		-.4918208	.1860133

Lastly, the aggregate regression shows that while the label is significant, perceived product trust is not:

**Table 47.** Aggregate linear regression results for the effect of perceived product trust and label on backpack willingness to pay.

DV BpWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
<b>(Constant)</b>	40.490	2.150		18.837	<.001
<b>Label</b>	12.650	3.166	.324	3.996	<.001
<b>TrustB</b>	2.826	1.588	.144	1.780	.077
<b>Adj. R Squared</b>	-.121				

Similarly to hypothesis two, the conditions described in step two and three of Baron and Kenny’s method are not met, meaning there is no significant mediating effect.

The direct effect of perceived trust on willingness to pay, however, is significant:

**Table 48.** Linear regression results for the effect of perceived product trust on backpack willingness to pay.

DV BpWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
<b>(Constant)</b>	46.344	1.658		27.949	<.001
<b>TrustB</b>	3.379	1.667	.172	2.026	.045
<b>Adj. R Squared</b>	-.022				

While there is no mediating effect and the crowdfunding label does not influence trust, perceived trust does significantly and independently affect willingness to pay. As a conclusion, while **H3a cannot be rejected, H3b and H3c can.**

The results can be confirmed through a bootstrap analysis as well, as shown below, where the confidence interval limits fall at opposite sides of the mean value of 0, indicating a non-significant mediating effect:

**Table 49.** Mediation results for label, perceived product trust, and backpack willingness to pay using the bootstrap method.

<b>Total effect of X on Y</b>					
<b>Effect</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>	<b>LLCI</b>	<b>ULCI</b>
13.1409	3.1792	4.1334	.0001	6.8530	19.4288
<b>Direct effect of X on Y</b>					
<b>Effect</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>	<b>LLCI</b>	<b>ULCI</b>
12.6499	3.1658	3.9958	.0001	6.3881	18.9118
<b>Indirect effect(s) of X on Y</b>					
	<b>Effect</b>	<b>Boot Std. Error</b>	<b>BootLLCI</b>	<b>BootULCI</b>	
<b>TrustB</b>	.4910	.6699	-.6182	2.0955	

### Smartwatch

As has been done for previous testing, the first regression of the mediation model does not yield a significant relation between the crowdfunded label and willingness to pay:

**Table 50.** Linear regression results for the effect of label on smartwatch willingness to pay.

<b>DV SwWTP</b>	<b>Unstandardized B</b>	<b>Std. Error</b>	<b>Standardized B</b>	<b>t</b>	<b>Sig.</b>
<b>(Constant)</b>	124.616	8.696		14.330	<.001
<b>Label</b>	7.259	12.723	.049	.571	.569
<b>Adj. R Squared</b>	-.005				

Similarly, no significance is present in the second regression:

**Table 51.** Linear regression results for the effect of label on perceived product trust.

<b>DV TrustS</b>	<b>Unstandardized B</b>	<b>Std. Error</b>	<b>Standardized B</b>	<b>t</b>	<b>Sig.</b>
<b>(Constant)</b>	.013	.117		.110	.913
<b>Label</b>	-.028	.172	-.014	-.161	.873
<b>Adj. R Squared</b>	-.007				

**Table 52.** T-test results for means and standard errors for variable perceived product trust, by label.

Group	Obs.	Mean	Std. Err.	Std. Dev.	Lower Bound	Upper Bound
No crowdfunded label	73	.0129073	.1156005	.9876912	-.2175381	.2433527
Crowdfunded label	64	-.0147224	.127685	1.02148	-.2698805	.2404357
<b>Difference</b>		.0276297	.171858		-.3122526	.367512

Finally, the final regression shows that, surprisingly, perceived product trust is significant when considering the aggregate model:

**Table 53.** Aggregate linear regression results for the effect of perceived product trust and label on smartwatch willingness to pay.

DV SwWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
<b>(Constant)</b>	124.421	8.545		14.561	<.001
<b>Label</b>	7.676	12.502	.052	.614	.540
<b>TrustS</b>	15.121	6.261	.204	2.415	.017
<b>Adj. R Squared</b>	.030				

While step three shows a significant effect of the mediating variable on the dependent variable, the lack of significance in step one and two makes it impossible to certainly affirm that there is a mediating effect in the model as a whole, and hypotheses **H3b and H3c are rejected**. However, hypothesis H3a cannot be rejected, since perceived trust holds a significant effect on willingness to pay when take independently, much like the case of the backpack:

**Table 54.** Linear regression results for the effect of perceived product trust on smartwatch willingness to pay.

DV SwWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
<b>(Constant)</b>	128.007	6.223		20.571	<.001
<b>TrustS</b>	15.068	6.245	.203	2.413	.017
<b>Adj. R Squared</b>	-.041				

The bootstrap method confirms the above as well, as shown below:

**Table 55.** Mediation results for label, perceived product trust, and smartwatch willingness to pay using the bootstrap method.

<b>Total effect of X on Y</b>					
<b>Effect</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>	<b>LLCI</b>	<b>ULCI</b>
7.2586	12.7229	.5705	.5693	-17.9034	32.4205
<b>Direct effect of X on Y</b>					
<b>Effect</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>	<b>LLCI</b>	<b>ULCI</b>
7.6764	12.5022	.6140	.5403	-17.0509	32.4036
<b>Indirect effect(s) of X on Y</b>					
	<b>Effect</b>	<b>Boot Std. Error</b>	<b>BootLLCI</b>	<b>BootULCI</b>	
<b>TrustS</b>	-.4178	2.7030	-5.8888	5.2954	

#### 5.4. Hypothesis 4: Perceived Product Complexity

##### Backpack

First, a straightforward aggregate linear regression is run to have a preliminary view of what the effects of the crowdfunded label and of perceived product complexity are on the willingness to pay:

**Table 56.** Aggregate linear regression results of perceived product complexity and label on backpack willingness to pay.

<b>DV BpWTP</b>	<b>Unstandardized B</b>	<b>Std. Error</b>	<b>Standardized B</b>	<b>t</b>	<b>Sig.</b>
<b>(Constant)</b>	40.334	2.169		18.594	<.001
<b>Label</b>	13.062	3.188	.334	4.098	<.001
<b>CompB</b>	1.098	1.599	.056	.687	.493
<b>Adj. R Squared</b>	.102				

It appears that while the label is significant (expectedly, based on the analyses of the previous paragraphs), product complexity is not.

To analyze the moderation effect of complexity, however, a new variable is created in order to capture its interaction with the crowdfunded label. After running an aggregate linear regression, the following results are obtained:

*Table 57. Aggregate linear regression results showcasing the interaction between label and perceived product complexity and its effects on backpack willingness to pay.*

DV BpWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
<b>(Constant)</b>	40.531	2.123		19.088	<.001
<b>Label</b>	12.973	3.118	.332	4.160	<.001
<b>CompB</b>	5.761	2.359	.294	2.442	.016
<b>CompModB</b>	-8.320	3.151	-.318	-2.641	.009
<b>Adj. R Squared</b>	.141				

While product complexity is not significant in the non-moderated model, it appears to be in the one accounting for moderation; at the same time, the moderation effect it has on the relationship between label and willingness to pay is, although negative, significant. Based on this, **H4a cannot be rejected.**

### Smartwatch

Again, an aggregate linear regression model is computed involving willingness to pay, label, and perceived product complexity, yielding the following results:

*Table 58. Aggregate linear regression results of perceived product complexity and label on smartwatch willingness to pay.*

DV SwWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
<b>(Constant)</b>	124.859	8.589		14.537	<.001
<b>Label</b>	6.740	12.567	.046	.536	.593
<b>CompS</b>	13.221	6.293	.178	2.101	.038
<b>Adj. R Squared</b>	.025				

Compared to the backpack case, the opposite results are obtained; while the label is not significant, perceived product complexity appears to be.

Considering the moderation between the two independent variables, however, their interaction is not significant, so perceived product complexity does not have a moderating effect on the relationship between label and willingness to pay; hypotheses **H4a is therefore rejected.**

**Table 59.** Aggregate linear regression results showcasing the interaction between label and perceived product complexity and its effects on smartwatch willingness to pay.

DV SwWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.
<b>(Constant)</b>	125.025	8.568		14.591	<.001
<b>Label</b>	6.725	12.536	.045	.536	.593
<b>CompS</b>	22.295	9.422	.301	2.366	.019
<b>CompModS</b>	-16.317	12.635	-.164	-1.291	.199
<b>Adj. R Squared</b>	.044				

## 6. Interpretation of Results

This chapter provides results interpretations and closing thoughts for each of the four hypotheses tested in Chapter 5. As a note, it is important to mention that for all mediation analyses both methods that were used provided the same results, so there are no conflicts based purely on methodology.

### 6.1. Hypothesis 1

Hypothesis 1 presents different results based on which product is analyzed. For the backpack, the none of three sub-hypotheses can be rejected, meaning that both the crowdfunding label and perceived product quality exercise a significant effect on willingness to pay, with the former significantly influencing the latter as well. The analysis shows, however, that the same does not hold true in the case of a smartwatch; while perceived quality is still a significant influencing factor on willingness to pay when considered per se, it does not mediate the relationship between the crowdfunded label and willingness to pay. Interestingly enough, the label itself is non-significant in the participants' eyes.

A possible explanation for this contradiction could lie in the degree of information consumers need in each of these cases. As the means shown in Chapter 4 show, users perceive a backpack to be significantly less complex and less expensive than a smartwatch; it is reasonable to assume (also based on literature presented in Chapter 2) that they prefer not to invest time and resources gathering information and prefer instead to rely on the label as indicator linked directly to the peers their trust.

A smartwatch, however, is both more complex and more expensive, so triggering a higher willingness to pay could be linked more to the direct involvement of the consumer, thus making the importance of a crowdfunding label less important. Given that perceived quality is still significant to participants



---

when considered as a standalone variable, it is reasonable to assume that they look for this perception in direct experiences rather than a generic label on the product.

## **6.2. Hypothesis 2**

All sub-hypothesis concerning perceived product usefulness are rejected, regardless of the type of product the respondent was presented in the survey. While there is no empirical data to support the smaller relevance of usefulness in the eyes of participants (the means of the answers to the relative questions and are indeed lower than those of the other two mediators, but only meagerly), some intuitive conclusions can be drawn.

Again, the type of product has a potential role to play in this. While it can be argued that a backpack is a useful item in common perception, a smartwatch is definitely still a somewhat mid- or high-end item that is useful but not really a must- so while it is surprising to see usefulness not impact the willingness to pay for a backpack, the result for a smartwatch is much less unexpected.

Second, it should be kept in mind that the survey presented one single mid-range version for each product; it is then perfectly possible that for the majority of respondents the products seemed far too high-end compared to a more basic version that could fulfill the same purpose, meaning that the product displayed did not inspire strict usefulness but rather additional comfort instead. This seems to be confirmed by the second question of the survey regarding usefulness that preyed on “necessity” and that has a considerably lower mean compared to the other entries for both products.

## **6.3. Hypothesis 3**

Product trust seems to behave similarly to Hypothesis 1: the direct effect of perceived trust is significant, though there is no mediation when involving the crowdfunding label.

It appears that consumers still value the trust aspect in the decision making process concerning how much they are willing to pay, though as a standalone factor rather than in combination with crowdfunding.

An explanation briefly mentioned before can be applied in this case as well. The type of product is likely to have an influence in consumer behavior; a backpack, for example, is a rather straightforward item that serves a well-defined purpose, so while participant valued the perceived trust in the product, they might have not deemed the label relevant enough in this context, since there was no need for such additional reinforcement.

---

Considering the smartwatch instead, the opposite applies and the same line of thought applied to perceived quality can be considered here: while the item is definitely not as simple as a backpack, the significantly increased complexity makes the label not unnecessary but rather not sufficient, and consumers may turn to their own past experiences or reviews of their personal contacts instead.

Lastly, and at the author's own admission, it is likely that the questions used in the survey to capture perceived trust were not adequate or enough in number, since only two of them were present (as opposed to three and four respectively for quality and usefulness) and both leveraged the same feeling of satisfied expectations.

#### **6.4. Hypothesis 4**

Hypothesis 4 shows perhaps the most surprising and controversial results out of all the tested hypotheses. Both intuition and literature suggest that there is valid reason for the decision aid effect that a crowdfunding label provides to be stronger as product complexity grows. Analysis show, however, that while this is the case when considering a backpack (the less complex of the two products shown in the survey), the same does not hold true when considering a smartwatch (the more complex of the two).

The likely reason for this is simply the simplicity of the study itself. Almost all of the sources mentioned in Chapter 2 highlight how perceived complexity is a definition on which there is no general consensus and different authors identify different definitions and measurement methods. It makes sense, then, for participants to behave in the same way and possibly failing to identify their own definition of complexity to that of the questions asked. When treating such an uncertain topic, furthermore, presenting only two products in two very specific versions greatly reduces the ability to generalize results.

Another unexpected aspect that directly contradicts intuition and literature is the negative sign of the beta coefficient – meaning that the more complexity increases, the less important the label becomes. Once again, the same reasoning used in the discussion of Hypothesis 3 can be involved here as well: the more complex the product, the more direct experience the user prefers to have before investing an additional sum of money, so the importance of third-party reinforcements given by the label produce the opposite effect than expected.

---

## 7. Conclusions

While literature on crowdfunding has been growing steadily in the last decade, the relationship between crowdfunding label and consumer behavior remains unexplored, particularly when consumers are exposed to products of varying complexity and characteristics. This thesis tried to fill the gap by empirically examining this understudied relationship, operationalizing consumer behavior as consumers' WTP. The goal was to understand whether a crowdfunded label and product complexity had an impact on willingness to pay, respectively in Research Question 1 and Research Question 2.

To address these questions, 182 participants took part into an experiment following a between-subject design. Then, the hypotheses identified in the theoretical framework have been tested through the statistical method of OLS. Specifically, the mediators have been tested through two different types of mediation analysis, the one devised by Baron & Kenny (Baron & Kenny, 1986) and a bootstrap method, while the moderation has been tested through moderated multiple regression.

### 7.1. Complementing Existing Literature and Research Contribution

The analysis revealed that the effect of the crowdfunding label can be mediated by perceived product quality, which is in line with the findings of Acar et al. (Acar, et al., 2021). However, it must be noted that the effect of the label on perceived product quality is highly dependent on the product to which consumers are exposed. In this study, the label either had an insignificant effect or a remarkably positive and statistically significant one when considering the same perceived feeling. This consideration is coherent with the analysis conducted by Fuchs (Fuchs, et al., 2013), who have shown that labelling certain products as "close to users" can have adverse consequences on purchase intention.

In direct opposition to existing research, however, is the result concerning perceived product usefulness, which has been found to be insignificant in all instances it was involved, contrary to Nishikawa's (Nishikawa, et al., 2017) findings. It should be noted, however, that Nishikawa examined a crowdsourcing environment instead of a crowdfunding one, and one of the secondary goals of this paper was precisely to find out whether there could be a similarity between the two in practice and not only in theory. Whether this correlation is significant or not (as it was not in this research), can be used as basis for future studies.

While trust has been found to be a significant variable when taken independently, it has failed to exercise any significant effect when taking into consideration crowdfunding, which was the central objective of Research Question 1. This is also in disagreement with the results found by Acar (Acar, et al., 2021) and Brockhoff (Brockhoff, 2003).

Lastly, literature analyzing directly the correlation between complexity and crowdfunding is scarce, so it is not possible to draw direct comparisons between this analysis and (non-)existing ones. A point of importance that should be considered, however, is the conflicting and intuitively unexpected results obtained. An important consequence of the mismatch in significance for the different types of products, most importantly, is that the second research question of this paper is inconclusive and it is impossible to answer definitively.

## **7.2. Limitations of this Study and Future Research**

The final sample size used for this research is not optimal; while it is large enough to conduct a meaningful analysis, a larger number of participants would have perhaps made some of the contradictions mentioned earlier not occur. The sample size was also considerably skewed towards a few answers in some of the results, which does not aid in providing a significant overview on the general population. The vast majority (94.2%) of the participants, for example, falls within the 19-24 and 25-34 age group; similarly, more than half of the respondents have completed a Bachelor's Degree. Given this, it can be concluded that the sample is most representative of a young and educated population segment, and generalizing results to the general population may not be that effective. Future research should be focused on obtaining a larger sample size by e.g. increasing survey availability time or resorting to paid participants – neither of which were used for this research.

The complexity of the survey could also be increased to obtain more specific results. Including more products and especially more versions of them could help pinpoint exactly which factors influence willingness to pay and which are not as relevant. Furthermore, a decision has been taken for this study to not randomize neither product nor the order in which they were shown – meaning that the participant that received the label version of the survey received both labelled products, showing the backpack first and the smartwatch second. This was done for the sake of brevity and because the main focus of the research was the crowdfunding label rather than studying different products; however, this also came at the risk of reinforcing the carryover effect and is definitely a threat to internal validity. Further research should focus on generating results in amore articulate, detailed,

and specific way. It seems reasonable to assume that the outcomes would likely be significantly different if respondents would have been shown e.g. six different products with three alternatives each rather than just two with one variant. Not imposing the condition of showing the label for all products like it was done in this paper also allows for a more detailed, although significantly longer, analysis. The empirical evidence from this study can serve as a starting point to explore these differences, but only an analytical study can yield relevant results.

Lastly, concerning the analysis, a significant decision was taken to force the number of factors to be equal to the number of variables so that all four factors clearly included only one of the variables. Had the factor analysis not been forced, independent variables perceived quality and perceived trust would have been merged into one single factor and it would have been impossible to attribute the results to either perception. While fixing this issue is not an easy task, diversifying the feelings on which the components are based in a trial-and-error fashion should be considered so that the variables carry as low a degree of correlation as possible.

### **7.3. Managerial Implications**

Marketers and business managers should be aware that crowdfunding is a factor to consider when laying out their strategy. It has been shown that the crowdfunding label does increase willingness to pay in some cases, so this alone should be enough to make them investigate a potential integration of the label in their product presentation. However, as outlined in Paragraphs 7.2. and 7.3., further tests and studies are necessary to identify precisely which factors are significant and which are not. The crowdfunding label should therefore be seen as complementary to a marketing strategy but not, at least based on the findings from this study, its main point of focus.

Adaptability and customer knowledge are key for any business initiative, and the integration of a crowdfunding label is no exception. The type of product involved, once again, perhaps plays the biggest part in all this, and the results outlined in earlier chapters have shown contradicting results that can only be the basis for future research, not only at academic level.

---

## Appendix A: Surveys

### Common Introduction

#### Welcome!

Thank you for taking part in this survey. This study is part of my Economics and Business Master's thesis at Erasmus University Rotterdam. Your answers will be completely anonymous and will only be used for academic purposes.

Keep in mind there is no right or wrong answer; answer the questions as truthfully as you can.

You will be presented with a buying scenario for two products and you will be asked to answer a few questions about your feelings in that situation. The survey will take about 5 minutes to complete.

Please feel free to reach out to me at [615694pj@student.eur.nl](mailto:615694pj@student.eur.nl) for any questions or suggestions you might have.

You will also receive a code for SurveySwap.io after completing this survey.

Please check the box below and answer the following question to start the survey.

I have read the above and I agree to take part in this study.

- Yes
- No

I have read the above and I agree to take part in this study.

- Yes
- No

Crowdfunding is the practice of funding a product by raising money from a large number of people who each contribute a relatively small amount, typically via the internet.

Are you familiar with the practice of online crowdfunding?

- Not familiar at all
- Slightly familiar
- Somewhat familiar
- Moderately familiar
- Very familiar

### Crowdfunding Label Version

Imagine you are browsing an online retailer looking for a new backpack to buy. You stumble upon this model:

**gofundme™**



Capacity	Medium
Size	Medium
Material	Textile
Suitable for work	Yes
Suitable for leisure	Yes

 CROWDFUNDED! Powered by **gofundme**

The backpack is a mid-range model suitable for both work and leisure situations and for all ages and uses. It has several internal and external pockets, a water flask net, a laptop elastic, and soft foam shoulder straps.

The backpack has also been crowdfunded. The company has asked users to contribute financially to the development of this product and has raised roughly 450 000 Euro for the design and development of the project. More than 10 000 investors from all around the European Union have contributed.

Please indicate an approximate price (in Euro) you would be willing to pay for this backpack

**Please indicate whether you agree or disagree with the following statements**

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I believe this product will be of high quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe I would recommend this product to others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this product will be satisfying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Please indicate whether you agree or disagree with the following statements**

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I believe this product will be useful to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this product is necessary to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this product will be beneficial to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this product will fulfill my need	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Please indicate whether you agree or disagree with the following statements**

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I expect this product to meet my expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Usually this product meets my expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Please indicate whether you agree or disagree with the following statements.**


	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
A lot of knowledge is required to take full advantage of this product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This product is complicated in nature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This product has a high number of attributes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Imagine you are browsing an online retailer looking for a new smartwatch to buy. You stumble upon this model:



Case Size	41 / 45mm
Material	Aluminum, glass
Waterproof	Yes
Connectivity	Wi-Fi, Bluetooth, GPS, App Integration
Warranty	1 year

 CROWDFUNDED! Powered by 

The smartwatch is a mid-range model suitable for all ages and uses. It is available in two sizes, a variety of colors, and it is waterproof. The watch also can be connected to Wi-Fi networks, Bluetooth devices, has GPS localization, and can be paired to a mobile app. The company also offers a one-year warranty to all buyers.

The smartwatch has also been crowdfunded. The company has asked users to contribute financially to the development of this product and has raised roughly 450 000 Euro for the design and development of the project. More than 10 000 investors from all around the European Union have contributed.

Please indicate an approximate price (in Euro) you would be willing to pay for this smartwatch

Please indicate whether you agree or disagree with the following statements

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I believe this product will be of high quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe I would recommend this product to others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this product will be satisfying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate whether you agree or disagree with the following statements

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I believe this product will be useful to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this product is necessary to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this product will be beneficial to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this product will fulfill my need	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate whether you agree or disagree with the following statements

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I expect this product to meet my expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Usually this product meets my expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate whether you agree or disagree with the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
A lot of knowledge is required to take full advantage of this product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This product is complicated in nature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This product has a high number of attributes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## STANDARD PRODUCT VERSION

Imagine you are browsing an online retailer looking for a new backpack to buy. You stumble upon this model:



Capacity	Medium
Size	Medium
Material	Textile
Suitable for work	Yes
Suitable for leisure	Yes

The backpack is a mid-range model suitable for both work and leisure situations and for all ages and uses. It has several internal and external pockets, a water flask net, a laptop elastic, and soft foam shoulder straps.

Please indicate an approximate price (in Euro) you would be willing to pay for this backpack.

**Please indicate whether you agree or disagree with the following statements**

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I believe this product will be of high quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe I would recommend this product to others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this product will be satisfying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Please indicate whether you agree or disagree with the following statements**

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I believe this product will be useful to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this product is necessary to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this product will be beneficial to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this product will fulfill my need	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Please indicate whether you agree or disagree with the following statements**

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I expect this product to meet my expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Usually this product meets my expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Please indicate whether you agree or disagree with the following statements.**

	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
A lot of knowledge is required to take full advantage of this product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This product is complicated in nature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This product has a high number of attributes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Imagine you are browsing an online retailer looking for a new smartwatch to buy. You stumble upon this model:



Case Size	41 / 45mm
Material	Aluminum, glass
Waterproof	Yes
Connectivity	Wi-Fi, Bluetooth, GPS, App Integration
Warranty	1 year

The smartwatch is a mid-range model suitable for all ages and uses. It is available in two sizes, a variety of colors, and it is waterproof. The watch also can be connected to Wi-Fi networks, Bluetooth devices, has GPS localization, and can be paired to a mobile app. The company also offers a one-year warranty to all buyers.

Please indicate an approximate price, in Euro) you would be willing to pay for this smartwatch.

**Please indicate whether you agree or disagree with the following statements**

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I believe this product will be of high quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe I would recommend this product to others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this product will be satisfying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Please indicate whether you agree or disagree with the following statements**

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I believe this product will be useful to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this product is necessary to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this product will be beneficial to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe this product will fulfill my need	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Please indicate whether you agree or disagree with the following statements**

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I expect this product to meet my expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Usually this product meets my expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Please indicate whether you agree or disagree with the following statements.**

	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
A lot of knowledge is required to take full advantage of this product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This product is complicated in nature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This product has a high number of attributes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**COMMON CONTROL VARIABLES ENDING**

---

**What is your age?**

- 18 or younger
- 19-24
- 25-34
- 35-49
- 50 or older

**What is your gender?**

- Male
- Female
- Non-binary / third gender
- Prefer not to say

**What is the highest level of education you have completed?**

- High school or lower
- Bachelor's Degree
- Master's Degree
- Post-graduate or higher

**What is your current country of residency?**

- The Netherlands
- Other European country (both EU and non-EU)
- Country outside Europe

---

## Appendix B: Components of Variables and Survey Statements

Variable	Survey Statements
<b>Perceived Product Quality</b>	I believe this product will be of high quality I believe I would recommend this product to others I believe this product will be satisfying
<b>Perceived Product Usefulness</b>	I believe this product will be useful to me I believe this product is necessary to me I believe this product will be beneficial to me I believe this product will fulfill my need
<b>Perceived Product Trust</b>	I expect this product to meet my expectations Usually this product meets my expectations
<b>Perceived Product Complexity</b>	A lot of knowledge is required to take full advantage of this product This product is complicated in nature This product has a high number of attributes

---

## Appendix C: Regression Assumptions

This appendix shows each of the linear regression assumptions tested and satisfied. For brevity reasons, only the ones for the variable perceived quality (both for the backpack and the smartwatch) are shown here.

### 1. Multicollinearity

#### Backpack

The results of the multicollinearity diagnostics run in SPSS are shown below. Given that the IVF values are converging towards 1, no significant collinearity is present in this case.



Collinearity Statistics							
DV BpWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.	Tolerance	VIF
(Constant)	41.507	2.097		19.794	<.001		
Label	10.512	3.126	.269	3.363	.001	.947	1.056
QtyB	5.701	1.559	.293	3.658	<.001	.947	1.056

### Smartwatch

Similarly, even lower VIF values are present in the collinearity test for the smartwatch, meaning once again that there is no disruptive multicollinearity between variables.

Collinearity Statistics							
DV SwWTP	Unstandardized B	Std. Error	Standardized B	t	Sig.	Tolerance	VIF
(Constant)	127.618	7.933		16.086	<.001		
Label	.833	11.640	.006	.072	.943	.989	1.011
QtyS	31.392	5.829	.424	5.386	<.001	.989	1.011

### Smartwatch

#### 2. Linear relationship between variables

### Backpack

All variables involved are either dummy variables or categorical variables. This means that there is a linear progression by design and this assumption is satisfied. However, for completeness, the correlation test has been run in SPSS too, as shown below.

		<b>BpWTP</b>	<b>QtyB</b>
<b>BpWTP</b>	Pearson Correlation	1	.354**
	Sig. (2-tailed)		<.001
	N	137	137
<b>QtyB</b>	Pearson Correlation	.354**	1
	Sig. (2-tailed)	<.001	
	N	137	137

\*\*Correlation is significant at the 0.01 level (2-tailed)

### Smartwatch

The same goes for the smartwatch:

		<b>SwWTP</b>	<b>QtyS</b>
<b>SwWTP</b>	Pearson Correlation	1	.424**
	Sig. (2-tailed)		<.001
	N	137	137
<b>QtyS</b>	Pearson Correlation	.424**	1
	Sig. (2-tailed)	<.001	
	N	137	137

\*\*Correlation is significant at the 0.01 level (2-tailed)

### 3. Normality of residuals

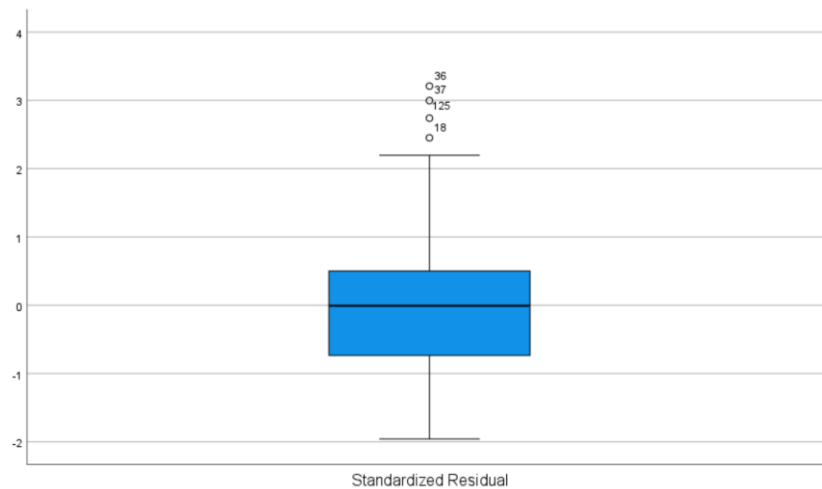
#### Backpack

An initial Shapiro-Wilk test of normality has been conducted to test the normality of residuals. Given that the p-value is lower than the 95% confidence interval, residuals can be assumed to not be normal.

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
<b>Unstandardized Residual</b>	.068	136	.200*	.964	136	.001
<b>Standardized Residual</b>	.068	136	.200*	.964	136	.001

\*This is a lower bound of the true significance

Four outliers have been identified through a boxplot, as shown below:



After removing the outlier variables, the Shapiro-Wilk test has been conducted again and produced a significance value of 0.162, meaning that the residuals now follow a normal distribution.

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
<b>Unstandardized Residual</b>	.048	132	.200*	.985	132	.162
<b>Standardized Residual</b>	.048	132	.200*	.985	132	.162

*\*This is a lower bound of the true significance*

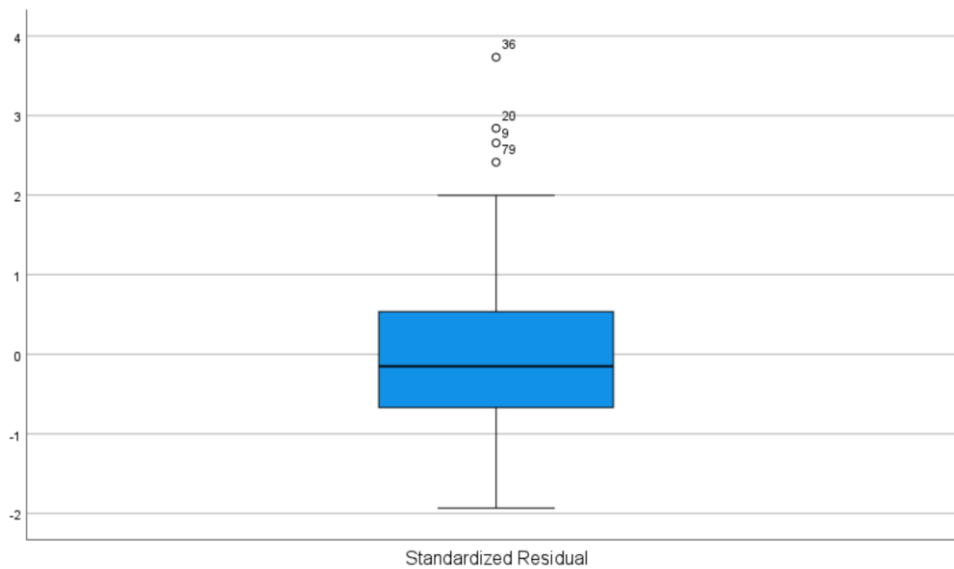
It should be noted, however, given that the outlier values influence positively the mediating effect, it is in the interest of this research for them not to be excluded from the considered data; therefore, they have not been removed from the overall analysis.

### Smartwatch

The same Shapiro-Wilk test is conducted for the smartwatch, with all the entries included. Once again, the significance level is below the confidence interval of 95%, which indicates non-normality.

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
<b>Unstandardized Residual</b>	.100	137	.002	.957	137	<.001
<b>Standardized Residual</b>	.100	137	.002	.957	137	<.001

Four outliers are identified, as per the graph below, and removed:



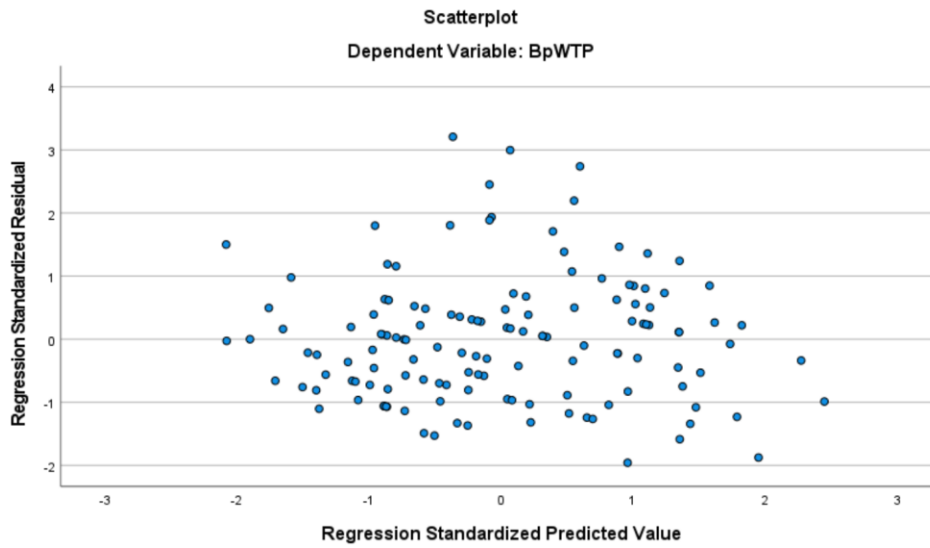
A new Shapiro-Wilk test is now conducted, showing the non-significant values and therefore normality.

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
<b>Unstandardized Residual</b>	.079	133	.041	.980	133	.055
<b>Standardized Residual</b>	.079	133	.041	.980	133	.055

#### 4. Homoscedastic variance of errors

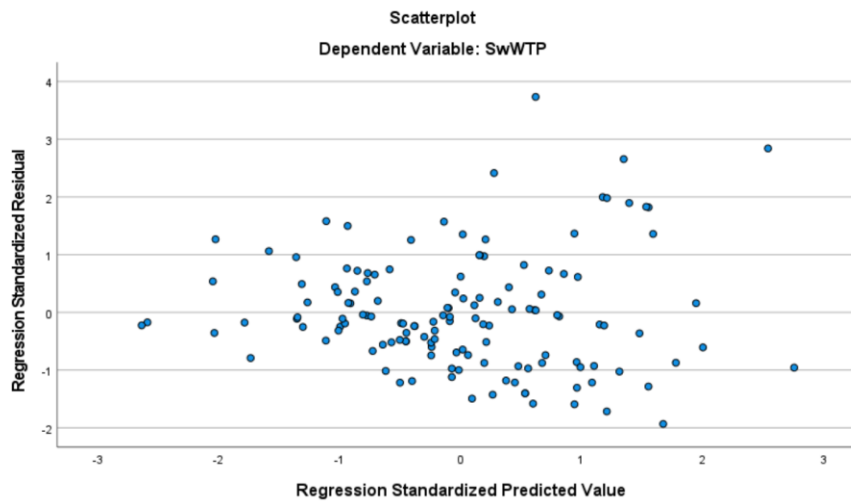
##### Backpack

The scatterplot computed and shown below, coupled with the normality outlined in point 3, suggest that the residuals do not follow any particular pattern and can therefore suggest homoscedasticity.



### Smartwatch

Similarly, there is no discernible pattern when considering the smartwatch variables, as shown in the scatterplot below:

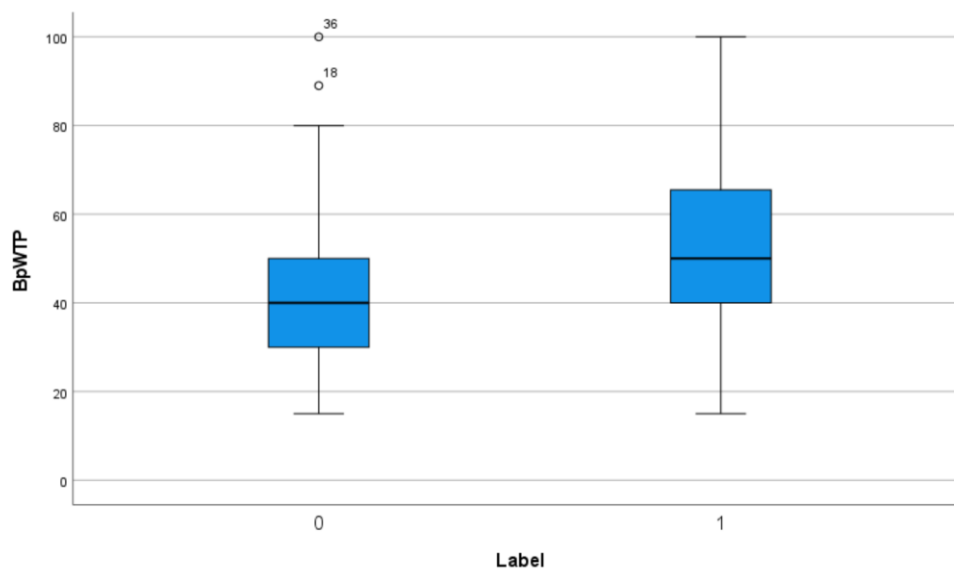


## 5. No extreme outliers

### Backpack

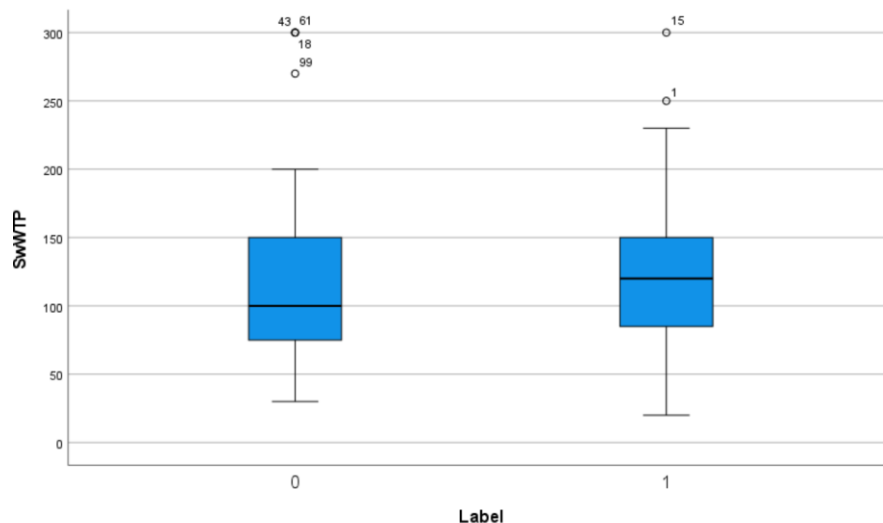
Visible outlying entries have already been manually removed from the datasheet by the author before processing any analysis. A further test has been conducted in SPSS to verify whether other outliers existed. The boxplot below shows entries number 18 and 36 being outliers.

As the removal favored the significance of the mediation, these have not been however removed from the main analysis, similarly to assumption number three,



### Smartwatch

Likewise, outlying data have been manually removed by the author before the analysis. However, an SPSS test suggests that the following values can also be categorized as outliers:



## Appendix D: Correlation Matrices

### Correlation Matrix Backpack

Variables	WTP	Quali ty1	Quali ty2	Quali ty3	Usefu lness 1	Usefu lness 2	Usefu lness 3	Usefu lness 4	Trust 1	Trust 2	Comp lexity 1	Comp lexity 2	Comp lexity 3
WTP	1	.283**	.320**	.433**	.433**	.105	.215*	.222**	.169*	.221**	.202*	.222**	.104
Quality1	.283* *	1	.553**	.642**	.389**	.356**	.478**	.315**	.538**	.440**	.207*	.061	.243**
Quality2	.320* *	.553**	1	.682**	.349**	.452**	.445**	.454**	.409**	.411**	.265**	.194*	.139
Quality3	.433* *	.642**	.682**	1	.440**	.385**	.572**	.446**	.553**	.451**	.260**	.113	.230**
Usefulness 1	.115	.389**	.349**	.440**	1	.543**	.667**	.629**	.440**	.348**	.093	-.060	.023
Usefulness 2	.105	.356**	.452**	.385**	.543**	1	.650**	.602**	.336**	.343**	.236**	.118	.020
Usefulness 3	.215*	.478**	.445**	.572**	.667**	.650**	1	.699**	.501**	.467**	.229**	.152	.094
Usefulness 4	.222* *	.315**	.454**	.446**	.629**	.602**	.699**	1	.359**	.348**	.175*	.119	-.050
Trust1	.169*	.538**	.409**	.553**	.440**	.336**	.501**	.359**	1	.658**	.190*	.105	.205*
Trust2	.221* *	.440**	.411**	.451**	.348**	.343**	.467**	.348**	.658**	1	.122	.107	.178*

Complexity1	.202*	.207*	.265**	.260**	.093	.236**	.229**	.175*	.190*	.122	1	.682**	.443**
Complexity2	.222*	.061	.194*	.113	-.060	.118	.152	.119	.105	.107	.682**	1	.370**
Complexity3	.104	.243**	.139	.230**	.023	.020	.094	-.050	.205*	.178*	.443**	.370**	1

### Correlation Matrix Smartwatch

Variables	WTP	Quality1	Quality2	Quality3	Usefulness1	Usefulness2	Usefulness3	Usefulness4	Trust1	Trust2	Complexity1	Complexity2	Complexity3
WTP	1	.499**	.435**	.376**	.288**	.166	.226**	.300**	.391**	.298**	.179*	.220**	.299**
Quality1	.499*	1	.695**	.641**	.495**	.316**	.534**	.509**	.714**	.440**	.378**	.296**	.470**
Quality2	.435*	.695**	1	.751**	.630**	.493**	.596**	.617**	.713**	.533**	.281**	.204*	.350**
Quality3	.376*	.641**	.751**	1	.650**	.402**	.605**	.609**	.671**	.448**	.152	.117	.261**
Usefulness1	.288*	.495**	.630**	.650**	1	.495**	.755**	.745**	.582**	.455**	.163	.100	.253**
Usefulness2	.166	.316**	.493**	.402**	.495**	1	.554**	.658**	.438**	.500**	.176*	.193*	.145
Usefulness3	.226*	.534**	.596**	.605**	.755**	.554**	1	.695**	.650**	.560**	.167	.148	.237**
Usefulness4	.300*	.509**	.617**	.609**	.745**	.658**	.695**	1	.638**	.569**	.270**	.272**	.311**
Trust1	.391*	.714**	.713**	.671**	.582**	.438**	.650**	.638**	1	.737**	.167	.094	.273**
Trust2	.298*	.440**	.533**	.448**	.455**	.500**	.560**	.569**	.737**	1	.170*	.119	.219*
Complexity1	.179*	.378**	.281**	.152	.163	.176*	.167	.270**	.167	.170*	1	.753**	.614**
Complexity2	.220*	.296**	.204*	.117	.100	.193*	.148	.272**	.094	.119	.753**	1	.526**
Complexity3	.299*	.470**	.350**	.261**	.253**	.145	.237**	.311**	.273**	.219*	.614**	.526**	1



---

## Bibliography

- Abaidi, I., Cottet, P. & Abaidi, J., 2022. Co-production: a source of psychological well-being for consumers?. *Journal of Consumer Marketing*, Ahead-of-print(Ahead-of-print), pp. Ahead-of-print.
- Acar, O. A., Dahl, D. W., Fuchs, C. & Schreier, M., 2021. The Signal Value of Crowdfunded Products. *Journal of Marketing Research*, 58(4), pp. 644-661.
- Allon, G. & Babich, V., 2020. Crowdsourcing and Crowdfunding in the Manufacturing and Services Sectors. *Manufacturing & Service Operations Management*, 22(1), pp. 102-112.
- Angrist, J. D. & Pischke, J.-S., 2015. *Mastering 'Metrics: The path from cause to effect*. Princeton: Princeton University Press.
- Asmayad, E. & Hartini, S., 2015. The Impact of Service Quality and Product Quality towards Customer Loyalty through Emotional and Functional Values in Traditional Markets in Pontianak, Indonesia. *European Journal of Business and Management*, 7(5), pp. 128-135.
- Baron, R. M. & Kenny, D. A., 1986. The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations.. *ournal of Personality and Social Psychology*, 51(6), pp. 1173-1182.
- Bassani, G., Marinelli, N. & Vismara, S., 2019. Crowdfunding in healthcare. *The Journal of Technology Transfer*, 44(August 2019), pp. 1290-1310.
- Beier, M., Früh, S. & Jäger, C., 2019. *Reward-based Crowdfunding as a Marketing Tool for Established SMEs: A Multi Case Study*. Chur, Swiss Institute for Entrepreneurship .
- Belleflamme, P., Lambert, T. & Schwienbacher, A., 2014. Crowdfunding: Tapping the right crowd. *Journal of Business Venturing*, 29(5), pp. 585-609.
- Berry, S. & Waldfogel, J., 2010. Product Quality and Market Size. *The Journal of Industrial Economics*, 58(1), pp. 1-31.
- Bettman, J. R., Johnson, E. J. & Payne, J. W., 1990. A componential analysis of cognitive effort in choice. *Organizational Behavior and Human Decision Processes*, 45(1), pp. 111-139.

- Böckel, A., Hörisch, J. & Tenner, i., 2021. A systematic literature review of crowdfunding and sustainability: highlighting what really matters. *Management Review Quarterly*, Volume 71, pp. 433-453.
- Brabham, D. C., 2012. Crowdsourcing: A Model for Leveraging Online Communities. In: *The Participatory Cultures Handbook*. New York: Routledge, p. 10.
- Brockhoff, K., 2003. Customers' Perspectives of Involvement in New Product Development. *International Journal of Technology Management*, 26(5/6), pp. 482-498.
- Brown, T. E., Boon, E. & Pitt, L. F., 2017. Seeking funding in order to sell: Crowdfunding as a marketing tool. *Business Horizons*, 60(2), pp. 189-195.
- Calvo-Porrá, C. & Lévy-Mangin, J.-P., 2017. Store brands' purchase intention: Examining the role of perceived quality. *European Research on Management and Business Economics*, 23(2), pp. 90-95.
- Carvalho, A. & Fernandes, T., 2018. UNDERSTANDING CUSTOMER BRAND ENGAGEMENT WITH VIRTUAL SOCIAL COMMUNITIES: A COMPREHENSIVE MODEL OF DRIVERS, OUTCOMES AND MODERATORS. *The Journal of Marketing Theory and Practice*, 26(1-2), pp. 23-37.
- Cassia, F., 2020. 'Manufacturing is coming home': does reshoring improve perceived product quality?. *The TQM Journal*, 32(6), pp. 1099-1113.
- Chaney, D., 2019. A principal-agent perspective on consumer co-production: Crowdfunding and the redefinition of consumer power. *Technological Forecasting and Social Change*, Volume 141, pp. 74-84.
- Chassan, J., 1979. *Research Design in Clinical Psychology and Psychiatry*. 1st a cura di New York City: John Wiley & Sons Inc.
- Chaudhuri, A. & Holbrook, M. B., 2001. The Chain of Effects from Brand Trust and Brand Affect to Brand Performance: The Role of Brand Loyalty. *Journal of Marketing*, 65(2), pp. 81-93.
- Cordova, A., Dolci, J. & Gianfrate, G., 2015. The Determinants of Crowdfunding Success: Evidence from Technology Projects. *Procedia - Social and Behavioral Sciences*, 181(May 2015), pp. 115-124.
- CoreEcon, 2015. Capstone: Economics of the Environment. In: *The Economy*. s.l.:s.n.
- Dahl, D., Chattopadhyay, A. & Gorn, G., 1999. The Use of Visual Mental Imagery in New Product Design. *Journal of Marketing Research*, 36(1), pp. 18-28.

---

Dahl, D. W. & Hofstetter, R., 2021. *Crowdsourcing for Marketing Success*. [Online]  
Available at: <https://www.ama.org/2021/11/17/crowdsourcing-for-marketing-success>  
[Consultato il giorno 17 December 2021].

De Maeyer, P., 2012. Impact of online consumer reviews on sales and price strategies: a review and directions for future research. *Journal of Product & Brand Management*, 21(2), pp. 132-139.

Delgado-Ballester, E. & Munuera-Alemán, J. L., 2001. Brand trust in the context of consumer loyalty. *European Journal of Marketing*, 35(11/12), pp. 1238-1258.

Dressler, G. & Kelly, S. A., 2018. Ethical implications of medical crowdfunding: the case of Charlie Gard. *Journal of Medical ethics*, 44(7), pp. 453-457.

Dubois, D. & Ordabayeva, N., 2015. Social Hierarchy, Social Status, and Status Consumption. In: *The Cambridge Handbook of Consumer Psychology*. s.l.:Cambridge university Press, pp. 332-367.

Dushnitsky, G., Piva, E. & Rossi-Lamastra, C., 2020. Investigating the mix of strategic choices and performance of transaction platforms: Evidence from the crowdfunding setting. *Strategic Management Journal*, 43(3), pp. 563-598.

Eastman, J. K., Goldsmith, R. E. & Flynn, L. R., 1999. STATUS CONSUMPTION IN CONSUMER BEHAVIOR: SCALE DEVELOPMENT AND VALIDATION. *Journal of Marketing Theory and Practice*, 7(3), pp. 41-52.

Etikan, I., Sulaiman Abubakar, M. & Rukayya Sunusi, A., 2016. Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), pp. 1-4.

Fasolo, B., McClelland, G. H. & Todd, P. M., 2007. Escaping the tyranny of choice: when fewer attributes make choice easier. *Marketing Theory*, 7(1), pp. 13-26.

Fuchs, C., Prandelli, E., Schreier, M. & Dahl, D. W., 2013. All That Is Users Might Not Be Gold: How Labeling Products as User Designed Backfires in the Context of Luxury Fashion Brands. *Journal of Marketing*, Volume 77, pp. 75-91.

Garvin, D. A., 1984. Product quality: An important strategic weapon. *Business Horizons*, 27(3), pp. 40-43.

Gatignon, H. & Xuereb, J.-M., 1997. Strategic Orientation of the Firm and New Product Performance. *Journal of Marketing Research*, 34(1), pp. 77-90.

---

Gay, L. R. & Diehl, P. L., 1996. *Research Methods for Business and Management*. 1st a cura di N/A: Macmillan Publishing Company.

Gerber, E., Hui, J. & Kuo, P.-Y., 2013. Crowdfunding: Why People Are Motivated to Post and. *ACM Transactions on Computer-Human Interaction*, 20(6), pp. 1-32.

Giones, F. & Brem, A., 2019. Crowdfunding as a tool for innovation marketing: technology entrepreneurship commercialization strategies. In: F. Thérin, F. Appio & H. Yoon, a cura di *Handbook of Research on Techno-Entrepreneurship*. Rotterdam: Edward Elgar, pp. 156-174.

Gross, R., 2015. A Theoretical Consumer Decision Making Model: The Influence of Interactivity and Information Overload on Consumers Intent to Purchase Online. *International Journal of Business Management and Economic Research*, 5(4), pp. 64-70.

Hartmann, P. & Apaolaza-Ibáñez, V., 2012. Consumer attitude and purchase intention toward green energy brands: The roles of psychological benefits and environmental concern. *Journal of Business Research*, 65(9), pp. 1254-1263.

Hartmann, P. & Apaolaza-Ibáñez, V., 2012. Consumer attitude and purchase intention toward green energy brands: The roles of psychological benefits and environmental concern. *Journal of Business Research*, 65(9), pp. 1254-1263.

Häubl, G. & Trifts, V., 2000. Consumer Decision Making in Online Shopping Environments: The Effects of Interactive Decision Aids. *Marketing Science*, 19(1), pp. 1-104.

Haugland, S. A., Grønhaug, K. & Hammervoll, T., 2011. Marketing strategy and customer involvement in product development. *European Journal of Marketing*, 45(4), pp. 513-530.

Hossain, M. & Oparaocha, G. O., 2016. Crowdfunding: Motives, Definitions, Typology and Ethical Challenges. *Entrepreneurship Research Journal*.

Howe, J., 2008. *Crowdsourcing: how the power of the crowd is driving the future of business*. I ed. s.l.:Crown Publishing Book.

Johnson, M. D., 1984. Consumer Choice Strategies for Comparing Noncomparable Alternatives. *Journal of Consumer Research*, 11(3), pp. 741-753.

Kaiser, H. F. & Rice, J., 1974. Little Jiffy, Mark Iv. *Educational and Psychological Measurement*, pp. 111-117.

---

Kalaycı, K. & Potters, J., 2011. Buyer confusion and market prices. *International Journal of Industrial Organization*, 29(1), pp. 14-22.

Kalli, A. & Vuola, L., 2020. *History of Crowdfunding in the Context of Ever-Changing Modern Financial Markets*. [Online]

Available at: [https://link.springer.com/chapter/10.1007/978-3-030-46309-0\\_10](https://link.springer.com/chapter/10.1007/978-3-030-46309-0_10)

[Consultato il giorno 15 December 2021].

Koch, J.-A. & Siering, M., 2015. *Crowdfunding Success Factors: The Characteristics of Successfully Funded Projects on Crowdfunding Platforms*. Muenster, 23rd European Conference on Information Systems (ECIS 2015).

Lacan, C. & Desmet, P., 2017. Does the crowdfunding platform matter? Risks of negative attitudes in two-sided markets. *Journal of Consumer Marketing*, 24(6), pp. 472-479.

Li, Q., 2013. A novel Likert scale based on fuzzy sets theory. *Expert Systems with Applications*, 40(2013), pp. 1609-1618.

Li, X. & Hitt, L. M., 2010. Price Effects in Online Product Reviews: An Analytical Model and Empirical Analysis. *MIS Quarterly*, 34(4), pp. 809-831.

Loureiro, F., Garcia-Marques, T. & Wegner, D. T., 2020. Norms for 150 consumer products: perceived complexity, quality objectivity, material/experiential nature, perceived price, familiarity and attitude. *PloS One*, 15(9), pp. 1-16.

Malhotra, N. & Birks, D., 2007. *Marketing Research Instructor's Manual*. 3 a cura di Pearson Education Limited : London.

Martínez-Climent, C., Zorio-Grima, A. & Riberiro-Soriano, D., 2018. Financial return crowdfunding: literature review and bibliometric analysis. *International Entrepreneurship and Management Journal*, Volume 14, pp. 527-553.

Miklošík, A., 2018. Changes in purchasing decision-making process of consumers in the digital era. *European Journal of Science and Technology*, 11(6), pp. 167-176.

Ming, H., Xi, L. & Mengze, S., 2015. Product and Pricing Decisions in Crowdfunding. *Marketing Science*, 34(3), pp. 309-472.

---

Mochkabadi, K. & Volkmann, C. K., 2020. Equity crowdfunding: a systematic review of the literature. *Small Business Economics*, pp. 75-118.

Moldovan, S., Goldenberg, J. & Chattopadhyay, 2011. The different roles of product originality and usefulness in generating word-of-mouth. *International Journal of Research in Marketing*, 28(2), pp. 109-119.

Mollick, E., 2014. The dynamics of crowdfunding: An exploratory study. *Journal of Business Venturing*, pp. 1-16.

Mollick, E., 2014. The dynamics of crowdfunding: An exploratory study. *Journal of Business Venturing*, 29(1), pp. 1-16.

Mudambi, S. M. & Schuff, D., 2010. Research Note: What Makes a Helpful Online Review? A Study of Customer Reviews on Amazon.com. *MIS Quarterly*, 34(1), pp. 185-200.

Nishikawa, H., Schreier, M., Fuchs, C. & Ogawa, S., 2017. The Value of Marketing Crowdsourced New Products as Such: Evidence from Two Randomized Field Experiments. *Journal of Marketing Research*, 54(4), pp. 525-539.

Normal, G., 2010. Likert scales, levels of measurement and the "laws" of statistics. *Advances in Health Sciences Education*, 15(5), pp. 625-632.

Pan, Y. & Zhang, J. Q., 2011. Born Unequal: A Study of the Helpfulness of User-Generated Product Reviews. *Journal of Retailing*, 87(4), pp. 598-612.

Park, D.-H. & Han, I., 2007. The Effect of On-Line Consumer Reviews on Consumer Purchasing Intention: The Moderating Role of Involvement. *International Journal of Electronic Commerce*, 11(4), pp. 125-148.

Payne, J. W., Bettman, J. R. & Johnson, E. J., 1993. *The Adaptive Decision Maker*. 1 a cura di Cambridge: Cambridge University Press.

Ponathil, A., Gramopadhye, A. & Madathil, K. C., 2020. Decision Aids in Online Review Portals: An Empirical Study Investigating Their Effectiveness in the Sensemaking Process of Online Information Consumers. *Multimodal Technologies and Interaction*, 4(2), p. 32.

Poser, E., 2021. *O XUM and the power of the community: crowdfunding as a marketing tool in e-business*. [Online]

---

Available at: <https://repositorio.iscte-iul.pt/handle/10071/23418>

[Consultato il giorno 16 December 2021].

Roscoe, J. T., 1975. *Fundamental Research Statistics for the Behavioral Sciences, Volume 2*. 1st a cura di New York City: Holt, Rinehart and Winston.

Ruefenacht, M., 2018. The role of satisfaction and loyalty for insurers. *International Journal of Bank Marketing*, 36(6), pp. 1034-1054.

Shneor, R., Zhao, L., Zhao & Flåten, B.-T., 2020. *Advances in Crowdfunding*. 1 a cura di London, United Kingdom: Palgrave Macmillan.

Sidiq, S. S., Jalil, A. & Willya, A. W., 2021. Virtual World Solidarity: How Social Solidarity is Built on the. *Webology*, 18(1), pp. 1-11.

Skiver, R. L., 2017. *A Comprehensive Examination of Product Complexity and Product Complexity Drivers*, Oshkosh: University of Wisconsin.

Song, X., Jung, J. & Zhang, Y., 2020. Consumers' Preference for User-Designed Versus Designer-Designed Products: The Moderating Role of Power Distance Belief. *Journal of Marketing Research*, 58(1), pp. 163-181.

Spector, P. E., 1992. *Summated rating scale construction: An introduction..* 1st a cura di New York city: Sage Publications, Inc..

Statista, 2021. *Market size of crowdfunding worldwide in 2020 with a forecast for 2027*. [Online] Available at: <https://www.statista.com/statistics/1078273/global-crowdfunding-market-size/>

Steigenberger, C., Flatscher-Toheni, M., Siebert, U. & Leiter, A. M., 2022. Determinants of willingness to pay for health services: a systematic review of contingent valuation studies. *The European Journal of Health Economics* .

Szymanski, D. M. & Henard, D. H., 2001. Customer satisfaction: A meta-analysis of the empirical evidence. *Journal of the Academy of Marketing Science*, 29(16).

Toshkov, D., 2016. *Research Design in Political Science*. 1st a cura di London: Red Globe Press.

Troye, S. V. & Supphellen, M., 2012. Consumer Participation in Coproduction: 'I Made It Myself' Effects on Consumers' Sensory Perceptions and Evaluations of Outcome and Input on Product. *Journal of Marketing*, 76(2), pp. 33-46.

---

Tsiotsou, R., 2005. Perceived Quality Levels and their Relation to Involvement, Satisfaction, and Purchase Intentions. *Marketing Bulletin*, 16(Research Note 4).

Vismara, S., 2021. *Expanding corporate finance perspectives to equity crowdfunding*. [Online] Available at: <https://link.springer.com/article/10.1007/s10961-021-09903-z> [Consultato il giorno 15 December 2021].

Wang, N. et al., 2018. Understanding the importance of interaction between creators and backers in crowdfunding success. *Electronic Commerce Research and Applications*, 27(January-February 2018), pp. 106-117.

Wooldridge, J., 2015. *Introductory econometrics: A modern approach*. 1st a cura di Mason, Ohio: South-Western College.

Wu, W.-P. & Lau, H. H., 2008. Does consumers' personal reciprocity affect future purchase intentions?. *Journal of Marketing Management*, 24(3-4), pp. 345-360.

Xiao, B. & Benbasat, I., 2007. E-Commerce Product Recommendation Agents: Use, Characteristics, and Impact. *MIS Quarterly*, N/A(N/A), pp. 137-209.

Zaichkowsky, J. L., 1986. Conceptualizing Involvement. *Journal of Advertising*, 15(2), pp. 4-34.

Zhu, F. & Zhang, X. (., 2010. Impact of Online Consumer Reviews on Sales: The Moderating Role of Product and Consumer Characteristics. *Journal of Marketing*, 74(2), pp. 133-148.

Zvilichovsky, D., Danziger, S. & Steinhart, Y., 2018. Making-the-Product-Happen: A Driver of Crowdfunding Participation. *Journal of Interactive Marketing*, 41(1), pp. 81-93.