



Wrist-worn Fitness Trackers:
perception and purchase intention
among the Generation Z in Italy
- Study of a potential profitable market

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Abstract

Title of the dissertation: Wrist-worn Fitness Trackers: perception and purchase intention among the Generation Z in Italy - Study of a potential profitable market

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Wearable technologies, such as fitness trackers, are considered among the top 10 fitness trends in 2022 (ACSM; 2022). Generation Z is the fastest growing generation of smart wearable users. Despite this, there are few studies on the perception and purchase intention of fitness trackers by Generation Z, and even fewer on Generation Z in Italy. Therefore, this research aims to explore a potentially lucrative market by uncovering the current perception, drivers, and barriers toward the adoption of wrist-worn fitness trackers.

A literature review was conducted, as a result of which a research framework was developed. An extended version of TAM, TPB, and in-depth interviews were used to develop several hypotheses, with the aim of answering the research questions of this thesis.

The results show that Generation Z in Italy has a positive perception of fitness trackers, although their purchase intention is relatively low. They still perceived WTF to be niche products and too expensive. It was found that what most drives purchase intention is a positive attitude, and attitude is mainly influenced by enjoyment. The lowest attitude and purchase intention are recorded among non-users and non-technology lovers, so companies should aim to make the benefits of these products known to a wider audience.

Keywords: fitness trackers, fitness wearables, wrist-worn fitness trackers, wearables, perception, purchase intention, GenZ

Resumo

Título da dissertação: Monitores de atividade de pulso: percepção e intenção de compra entre a Geração Z em Itália - Estudo de um potencial mercado lucrativo

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As tecnologias utilizáveis, tais como as pulseiras de fitness, são uma das 10 principais tendências de fitness em 2022 (ACSM; 2022). A Geração Z é a geração de utilizadores de rastreadores de fitness com crescimento mais rápido. Apesar disto, existem poucos estudos sobre a percepção e intenção de compra destes pela Geração Z, e ainda menos pela Geração Z em Itália. Por conseguinte, esta investigação visa explorar um mercado potencialmente lucrativo, infiltrando a percepção atual, os condutores, e as barreiras à adoção de rastreadores de fitness utilizados nos pulsos.

Foi realizada uma revisão bibliográfica, cujo resultado da mesma foi utilizado no desenvolvimento de um quadro de investigação. Uma versão alargada de TAM, TPB, e entrevistas aprofundadas foram utilizadas para desenvolver várias hipóteses, com o objetivo de responder às questões de investigação desta tese.

Os resultados mostram que a Geração Z em Itália tem uma percepção positiva dos rastreadores de fitness, embora a sua intenção de compra seja relativamente baixa. Continuaram a considerar a WTF como sendo produtos de nicho e demasiado caros. Descobriu-se que o que mais impulsiona a intenção de compra é uma atitude positiva, e esta é influenciada principalmente pelo prazer. A atitude e a intenção de compra mais baixas encontram-se entre os não utilizadores e os que não são adeptos da tecnologia, pelo que as empresas devem procurar dar a conhecer os benefícios destes produtos a um público mais vasto.

Palavras-chave: Monitores de atividade, artigos de fitness, pulseiras de fitness, artigos de fitness, percepção, intenção de compra, Geração Z

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LIST OF ABBREVIATIONS

FT – Fitness Trackers

GenZ – Generation Z

WAT – Wearable Activity Trackers

WFT – Wrist-worn Fitness Trackers

TAM – Technology Adoption Model

UTAUT1&2 – Unified Theory of Acceptance and Use of Technology

TPB -Theory of Planned Behavior

BI – Behavioral Intention

PU – Perceived Usefulness

PEU – Perceived Ease of Use

PE – Perceived Enjoyment

DA – Designed Aesthetics

PV- Price Value

PP – Perceived Privacy

PC – Perceived Comfort

A – Attitude

PI – Purchase Intention

BN – Brand Name

SN – Subjective Norm

PBC – Perceived Behavioral Control

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1. INTRODUCTION

New technological innovations reshape our lives every day and have made it possible to monitor almost every aspect of people's lives.

Self-tracking plays an important role in health promotion and healthcare, especially in times when obesity, heart diseases, diabetes, anxiety, and sleep disturbances issues are widespread. Fitness tracking technologies aim to promote healthy behaviours by allowing people to track their fitness metrics through various parameters such as exercises, calories burned, blood pressure and oxygen level, sleep monitoring, and heart rate.

Although fitness trackers have been around for a long time, due to the global Covid-19 pandemic and the general growth in awareness of health-related issues, the market has seen substantial growth and has become one of the biggest trends in the fitness industry in recent years (ACSM, 2022).

In fact, the global fitness tracker market is projected to grow from \$36.34 billion in 2020 to \$114.36 billion in 2028, with a CAGR of 15.4% over the 2021-2028 forecast period (Fortune Business Insights, 2021).

These types of devices have become very popular especially among the Gen Z.

Since there is no common agreement on the cut-off age, Gen Z is defined, in this research, as the demographic cohort born from 1996 to 2010 (Forbes, 2016).

Gen Z are referred to as first true "digital natives", as they were the first to access the Internet and portable digital technology from an early age. They differ from other generations in fundamental political, social, and economic factors that have shaped their beliefs and sense of belonging.

Thanks to the advances in technology, Generation Z has become more motivated to invest time in health and fitness, measuring their health data with activity trackers (Kamble, Desai, Abhang; 2021).

Given the growing popularity, fitness trackers are no longer a product confined to a niche, but are becoming an everyday must have (CNET, 2022).

For this reason, it is important for companies to understand what consumers' current perception of these types of products is and what factors influence their purchase intention.

This research will focus on the target audience of Generation Z, as this is one of the segments where fitness trackers have gained most popularity.

Wrist-worn trackers are considered both a functional and a fashionable product (Bolen, 2020), so considering its fashion history and that 15% of the Italian population (Istat, 2018) is GenZ, Italy was chosen as the country in which to conduct the study.

Despite the fierce competition among fitness trackers manufactures, Fitbit is still considered a major player in the industry.

To outperform the competition and differentiate itself, the brand focuses on developing premium features with more advanced medical technology and high-end designs.

Fitbit's target customers are not the GenZ, but rather young professionals between the ages of 25 and 40, with disposable income, belonging to the middle class, and with a good level of education. They have a desk job and are too busy to exercise regularly, but they want to have a happier and healthier lifestyle.

Thus, this research serves to provide valuable insights into Italian Gen Z consumers and uncover new potential opportunities for the players of the industry.

1.1 Problem Statement and Research Questions

The objective of this research is to study the perception and purchase intention of the Italian Gen Z toward fitness trackers. Due to the technological advantages and increased awareness on health and related topics, Gen Z consumers have started to adopt more fitness wearable technologies. Therefore, considering this potential lucrative target audience, this study aims to uncover the barriers and drivers to these latter devices.

More specifically, to investigate the potential growth opportunities for companies in this target audience, the research considers Fitbit, one of the oldest and strongest players in the wrist-worn fitness tracker market, as a representative of the fitness tracker category.

Therefore, the following research questions are assessed:

RQ1: What is the perception of the Italy's Generation Z toward wrist-worn fitness trackers?

RQ2: What factors influence the purchase intention of wrist-worn fitness trackers by Generation Z in Italy?

RQ3: What are the barriers that prevent Italian Generation Z consumers from purchasing wrist-worn fitness trackers?

1.2 Dissertation Structure

This dissertation is divided in 5 chapters: Introduction, Literature Review, Methodology, Results, Conclusion and Limitations.

In the *Introduction*, the thesis topic, objective, and research questions are introduced. In *Literature*, an overview of the wearable fitness technology and research frameworks are presented. The third Chapter comprises the *Research Methodology*, where qualitative and quantitative research can be found. The results of the research are found in the fourth chapter named *Results*. And the fifth and last chapter presents the conclusion and limitations of the dissertation.

2. LITERATURE REVIEW

2.1 Overview of fitness trackers and other wearables

Smart wearable devices are defined “as a user worn accessory, with integrated electronic and computing technologies that captures or reports on some form of data” (Puri 2017).

They can be categorized into three categories according on their functions: notifiers, glasses and trackers (Kamble, Desai, Abhang 2021).

In the category of notifiers, it is possible to find smartwatches - defined as “a wrist-worn device with computational power, acting as an extension to a mobile phone, that provides alert notification, collects personal data through a range of sensors and stores them” (Wu, Wu, Chang 2016).

In the tracker category there are smart wristbands, which are devices worn on the wrist that track and monitor various parameters through their biometrical sensors to provide continuous data on one’s physical health.

Although they can be considered similar to smartwatches, their main function is to track health parameters, while smartwatches are cross-functional devices that go further than fitness monitoring (Chuah et al-2016; Dehghani and Dangelico 2018) and focus more on functions such as call, email, and messaging.

In addition, WATs (wearable activity trackers) are cheaper because they contain less expensively designed hardware and often fewer sensors.

As a result of the transition and widespread adoption of smartphones, the usage of wearables has also increased dramatically, as these two devices are often synchronized.

The most popular wearable category is smart wearables for fitness (approximately 60%).

This is the result of an increasing health-conscious consumer behavior that has made them more inclined toward fitness activities, leading to an increase in the demand for these devices (Kamble, Desai, Abhang 2021).

The competition is intense, and the major players in the market are Fitbit, Garmin, Xiaomi, Apple and Samsung.

2.1.1 Fitbit

As mentioned earlier, this study will mainly consider the Fitbit brand, an American digital health and fitness brand company, as a representative of the wrist-worn fitness tracker category.

Among fitness trackers manufactures, Fitbit is undoubtedly a major player in the industry.

Its success has attracted the attention of Google, which on January 14th decided to acquire the company for \$2.1 billions.

Fitbit has one of the largest portfolios of products in the fitness world; among other types of fitness wearables, the company also provides medical healthcare and assistance during the workouts.

Fitbit's tracking functions include steps, distance, floors climbed, heart rate, active zone minutes, calories, sleep, blood oxygen saturation, daily readiness score, menstrual cycles, atrial fibrillation, stress, and skin temperature.

The company has a strong market image and global presence due to the uniqueness of its products and services. Its products are considered easy to use, convenient, and highly functional.

Each Fitbit device is paired with the Fitbit app, available for Android, iOS and desktop. Using the app, Fitbit customers can store their daily data on health and fitness statistics.

In 2019, the brand introduced Fitbit Premium, with which users can unlock special features such as workout plans, tips, advanced sleep statistics, and more at the price/cost of \$10 per month or \$79.99 per year.

When it comes to target the customers, Fitbit follows behavioural segmentation and then categorise people based on the benefits they seek.

The latest Fitbit to hit the market is Fitbit Charge 5, considered Fitbit's best fitness tracker. It includes a heart rate monitor, GPS, water resistance to 50 meters, a 0.86x0.58-inch AMOLED touchscreen display, the ability to make mobile payments, swimming monitoring, an ECG monitor, and a 7-day/5-hour battery life with GPS.

One of Fitbit's strengths is its community. In the app, by accessing the Community tab, you can connect to other people with the same interests (sports & activities) as you.

Because their current boom, competition has become fierce; among the major players in the market, we can find Garmin, Apple, Polar, Xiaomi, Samsung and Fitbit.

2.2 Technology Adoption Theories and Models

2.2.1 Technology Acceptance Model

A search of the literature has identified several theories related to technology adoption, such as the Technology Acceptance Model and the Theory of Planned Behaviour.

The TAM proposed by Davis is one of the most used theories in the context of technology adoption (Nasir & Yurder, 2015).

The model (Davis, 1989) suggests that the attitude toward a certain technology can be explained by two factors: Perceived Ease of Use (PEU) and Perceived Usefulness (PU). These two factors influence the Attitude Towards Use (A) of a technology, which in turn will determine Behavioral Intention (BI).

One study found that simplicity and ease of use ranked among the top three important criteria for wearable technology (Schooler, 2014).

Perceived Usefulness

Perceived usefulness (PU) is defined as the degree to which an individual believes a technology will enhance their performance in an activity (e.g. job performance, physical performance). Consumers are more likely to adopt a technology when they are confident that it will benefit them (Rogers, 2003). Perceived usefulness plays an important role in user acceptance of technology (Davis, 1989); the more useful a technology product is perceived to be, the more likely it is to be adopted by the user. Therefore, considering that PU influences attitude and usage, by stressing product attributes and benefits to potential users, companies can increase the adoption and usage of their products (Lunney et al., 2016).

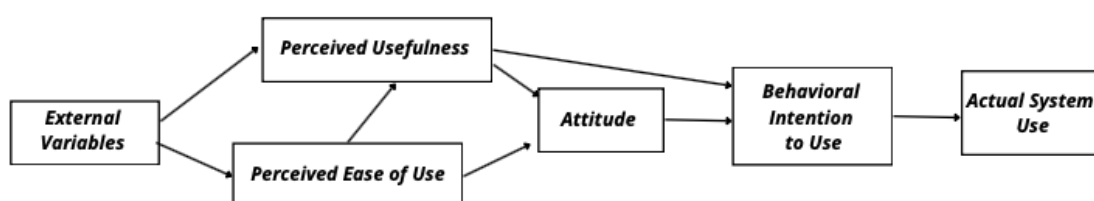
Perceived Ease of Use

PEU is one of the two key factors that influence a consumer purchase intention.

It is described as the extent to which a person is confident that using a wrist fitness tracker will be effortless (Davis et al., 1989). When consumers perceive a technology (such as a fitness tracker) is easy to use, they develop a positive attitude toward that device (Kim and Shin, 2015).

The TAM theory postulates that if consumers perceive a technology to be useful and easy to use, they form a strong behavioral intention to use that technology, thus forming a purchase intention (Davis, 1989).

Figure 1 – Technology Acceptance Model (TAM)



Although the soundness of TAM has been validated by many scholars, it has its limitations since it only focuses on the extrinsic motivational factors related to the utilitarian aspects of information technology, disregarding the intrinsic factors of individuals. Therefore, many extensions of the TAM have been developed.

Previous literatures consider perceived aesthetics (Jeong et al. 2017), perceived price value (Venkatesh's, 2012), perceived privacy (Nasir & Yurder, 2015), perceived comfort (Liao, Tanner, MacDonald, 2020), and perceived enjoyment (Choi & Kim, 2016) as relevant factors influencing attitudes toward the use of wrist fitness trackers.

2.2.2 Extension of the TAM

Some of the weaknesses of TAM were addressed by Venkatesh in the UTAUT (2003) and UTAUT2 (2012) theories.

In the UTAUT (2003), factors such as performance expectancy, effort expectancy, facilitating conditions and social influence were included. This led to a substantially improved variance explained in behavioural intention and technology use.

However, this model still neglected one of the most important variables influencing user acceptance of technology: hedonic motivation.

Venkatesh developed the UTAUT2 model, in which factors such as price value, habits and hedonic motivation were included. In this theory, it was demonstrated that hedonic motivation is a crucial determinant of behavioral intention and that individual characteristics, such as gender, age, and experience, jointly moderate the effect of hedonic motivation on behavioural intention (Venkatesh et al., 2012). Hedonic motivation can be represented by two different factors: Perceived Enjoyment and Perceived Aesthetics.

Perceived Enjoyment

Davis, Bagozzi, and Warshaw (1992) identified *Perceived Enjoyment* as a major key intrinsic motivational factor affecting consumers' behavioral intention.

Enjoyment is defined as “the extent to which the activity of using a device is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated” (Davis et al., 1992). Perceived Enjoyment influences consumers decisions more when it concerns hedonic-oriented computing devices than utilitarian ones (Van der Heijden, 2004). Therefore, an individual's need for uniqueness is an important factor in determining the liking of a technology device (Choi & Kim, 2016).

Fitness wearables are considered both utilitarian and fashion products, so considering the results of these studies, it is suggested that Perceive Enjoyment has an important weight on consumer's behavioral intention.

Designed Aesthetics

Although in UTAUT and UTAUT2 Venkatesh considered important factors not included in the TAM, he did not consider other important variables such as design aesthetic.

Wearable technologies are referred to as “fashnology” because they are viewed as both a fashion accessory and a functional device (Rauschnabel et al., 2016).

Perceived aesthetics are considered a top priority by consumers when making a purchase decision toward a wearable device (Chuah et al., 2016; Jung et al., 2016). In fact, users may reject wearable technology if the device does not meet the user's fashion standards (Carp, 2015).

Design aesthetic can strengthen a consumer's emotional connection to a specific device (Nanda et al., 2008). Consumers prefer products that can reflect their uniqueness through aesthetic design (Yang et al., 2016).

When choosing a smart wearable device, consumers consider all aesthetics attributes such as colour, size, design, and texture (Coorevits & Coenen, 2016).

Therefore, it is suggested that Perceived Aesthetics play an important role for consumers when it comes to their purchase intention.

Price value

One of the new factors studied in the UTAUT2 is price value, defined as “the consumers' cognitive trade-off between the perceived benefits of applications and the monetary cost for using them”. (Dodds et al., 1991).

Indeed, many times consumers define the value of a product by considering the monetary cost/price along with the quality of it (Zeithaml, 1988).

Scholars suggest that when the benefits of using a smart wearable device outweigh the monetary cost, the price value has a positive influence on behavioral intention toward using that device (Venkatesh et al., 2012). Many studies found a significant effect between consumer purchase intention and the price value of the technology taken into consideration.

Perceived Privacy

All the smart technologies are characterized by connectivity, autonomy, and context awareness (Silverio-Fernandez et al., 2018) in what is known as the Internet of Things (IoT). One of the prerequisites of these technologies is the collection and analysing of a large amount of user data, which has led to many concerns for privacy from the customer perspective.

However, willingness to provide personal information is often a prerequisite for the acceptance of smart technologies (e.g. smart wearables).

Scholars (Gu et al., 2015) define perceived privacy as the degree to which an individual believes that he or she has the right to control the collection and use of his or her personal information, even after disclosing it to others. If an individual has concerns about his or her privacy, this would lead to a lack of trust and thus it negatively affects their purchase intention (Chang et al., 2016).

Scholars suggest that perceived privacy has a large effect on attitudes towards fitness wearables (Chang et al., 2016).

Perceived Comfort

Another important criterion that influences the adoption of activity trackers is *Comfort* (Endavour, 2014). For consumers to adopt and continue using the device for long periods of time, they must perceive the product as comfortable to use.

As a matter of fact, one of the main reasons consumers reject wearable devices is that the device is perceived as uncomfortable to wear (Lin and Kreifeldt, 2001).

Studies have found that if a device is considered uncomfortable, this negatively affects the behavioral intention to adopt that product (Coorevits & Coenen, 2016).

2.2.3 Theory Of Planned Behavior (TPB)

The TAM is a powerful model that incorporates several important factors but fails to consider other significant potential variables such as age and gender.

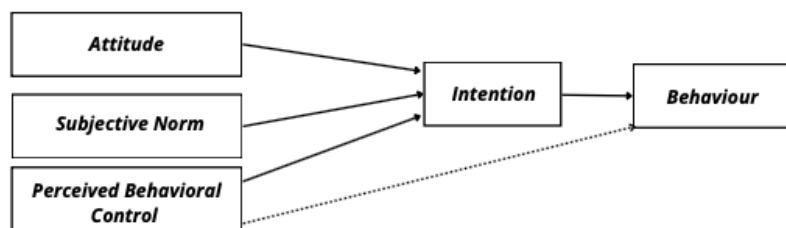
It also assumes that there is a connection between intention and actual behavior.

The Theory of Planned Behavior (TPB), states that behavioral intentions are influenced by three major factors: attitude toward the behavior, subjective norm and perceived behavioral control over the use of a certain technology (Taylor & Todd, 1995).

A combination between TAM and TPB can lead to a better understanding of consumers behavior toward high technology adoption (Yang et al., 2016). Therefore, a combination of TAM and TPB will be used for this research.

According to the TPB, the more favourable the attitude and subjective norm, and the greater the perceived behavioural control, the stronger should be the person's intention to perform the behavior in question (Melvin M. Mark, et al. 2011). A concrete intention is formed only when perceived control over the behaviour is sufficiently strong (Ajzen, 2020).

Figure 2 - Theory of Planned Behavior (TPB)



According to the theory, intention is the immediate antecedent of behavior and completely mediates the effects of attitude and subjective norm on behavior. Perceived behavior control is supposed to influence behavior both indirectly through intention and directly (Ajzen, 1991).

Attitude toward behavior

To understand people's attitudes toward a particular behaviour, it is important to analyse their salient behavioral beliefs.

Behavioral belief is an estimate of the probability that performing a given behavior will lead to a certain outcome.

In the context of new technological devices, attitude toward use can be defined as the positive or negative feeling toward the use of a new technology (Nasir & Yurder, 2015); thus, attitude is described as "a person's favourable or unfavourable evaluation of the behavior" (Heinrich, 2016). Studies have found that when attitude toward using is positive, it positively influences consumers' intentions to adopt a given wearable device and thus their purchase intentions (Chau et al., 2016).

Subjective Norm

Subjective norm is defined as the social power to perform or not to perform a target behavior (Ajzen, 1985). It consists of salient normative beliefs, which are a person's perceptions of an individual's or target group's social influences on the performance of the behavior under consideration (Ajzen, 1985). The subjective norm can directly influence TAM; in fact, from the TPB perspective, the subjective norm can make people feel superior to others when using new technologies, influencing the decision-making on adoption of new technologies due to the social pressures.

Scholars have found that social pressure from peers has an influence towards the consumers' intention to adopt a certain technology.

Perceived Behavioral Control

Perceived control is defined as the "perceived ease or difficulty of performing the behavior" (Ajzen, 1991). It refers to the belief that one is able to perform a given behavior (Ajzen, 2020). It is based on salient control beliefs, which are a person's perception of the likelihood that a given facilitating or impeding factor is present.

Control factors include factors such as money, lack of time, skills, and other resources that are independent of the individual's motivation.

Perceived Behavioral Control is assumed to moderate the influence of attitude and subjective norm on intention (Ajzen 2020). PBC has a positive influence on one's purchase intention towards wearable devices (Turnhan, 2013).

2.3 Proposed model of the attitude towards wrist-worn fitness trackers usage among the GenZ in Italy

After the literature about wrist-worn fitness trackers were reviewed a research framework have been developed.

In the following, all the factors found to have an influence in the customer's attitude and purchase intention will be presented:

Perceived Usefulness

This research evaluated the influenced that Perceive Usefulness have on individual's attitude towards fitness trackers. Since in the wearable device's context, PU is defined as the degree to which an individual believes that a technology will strengthen their performance, following the TAM (Davis, 1989), this study hypothesized that:

H1: Perceived Usefulness positively influences Italian Gen Zers consumers' attitude towards using wrist-worn fitness trackers.

Perceived Ease of Use

Perceived Ease of Use influences both PU and A, which subsequently influence users' behavioral intention. It is a vital factor that determines consumers' acceptance of wrist-worn fitness trackers. A wearable device is considered to be more useful, if it is perceived as easy to use. In this study, it is hypothesized that:

H2: Perceived Ease of Use positively influences Italian Gen Zers consumers' attitude towards using wrist-worn fitness trackers.

Perceived Enjoyment

As smartwatches, wrist-worn fitness trackers are also considered both utilitarian and fashion products. As previous studies have shown, behind the behavioral intention of the customers the hedonic factor of Perceived Enjoyment places an important role. Thus, this research hypothesized that:

H3: Perceived Enjoyment positively influences Italian Gen Zers consumers' attitude towards using wrist-worn fitness trackers.

Perceived Aesthetics

As mentioned before, fitness trackers are considered also a fashion product, thus the hedonic factor of Perceived Aesthetics is considered to influence the consumer's purchase intention. Thus, it is hypothesised that:

H4: Perceived Aesthetics positively influences Italian Gen Zers consumers' attitude towards using wrist-worn fitness trackers.

Price value

Scholars identified that price value is positive whenever the perceived benefits are bigger than the costs (Venkatesh et al., 2012).

Thus, in this study is hypothesised that:

H5: Price Value positively influences Italian Gen Zers consumers' attitude towards using wrist-worn fitness trackers.

Perceived Privacy

Various studies have proved that perceived privacy has an effect on the behavioral intentions of customers. In fact, it was found that when an individual has concerns about their own privacy, they would develop a negative influence towards their purchase intention (Chang et al., 2016).

Thus, this research hypothesized that:

H6: Perceived Privacy positively influences Italian Gen Zers consumers' attitude towards using wrist-worn fitness trackers.

Perceived Comfort

Studies have shown how perceived comfort is a critical factor for consumers when it comes to adopt and keep using a fitness wearable (Endavour, 2014).

Consumers will reject a fitness wearable if they perceived it as uncomfortable to wear (Lin and Kreifeldt, 2001). Thus, considering the importance of comfort in the adoption of fitness trackers, this research hypothesises that:

H7: Perceived comfort positively influences Italian Gen Zers consumers' attitude towards using wrist-worn fitness trackers.

Attitude towards the behavior

In this research, the attitude towards using a wrist-worn fitness tracker is evaluated considering the factors mentioned previously, such as: PEOU, PU, PE, DA, PV, PP and PC. Thus, the attitude of participants of whether they overall consider fitness trackers beneficial was measured. This study hypothesises that:

H8: Attitude towards using positively affects Italian Gen Zers' intention to purchase wrist-worn fitness trackers.

Subjective Norm

Previous studies found that social pressure from peers has an influence towards the consumers' intention to adopt a certain technology.

Considering that in this study subjective norm is defined as the extent to which consumers perceived a social pressure to purchase a wrist-worn wristband, it was hypothesised that:

H9: Subjective Norm positively influences Italian Gen Zers consumers' intention to adapt/purchase wrist-worn fitness trackers.

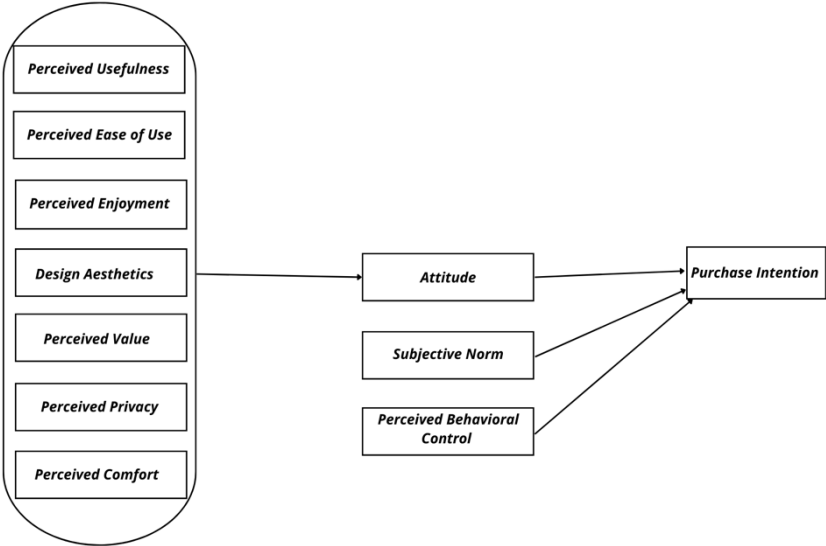
Perceived Behavioral Control

Previous studies have shown that PBC not only moderate the influence of attitude and subjective norm on intention (Ajzen, 2020) but also has a positive influence on one’s purchase intention towards wearable devices (Turnhan, 2013).

Thus, in this research it was hypothesised that:

H10: Perceived Behavioral Control positively influences Italian Gen Zers consumers’ intention to purchase a wrist-worn fitness tracker.

Figure 3 – Proposed Research Framework 1



3. METHODOLOGY

3.1 Research Approach

This research aims to assess the purchase intentions and perception of the Italian Gen Z toward wrist-worn fitness trackers. Deductive research was chosen to conduct the present study.

Trochim (2005) refers to two “broad methods of reasoning as the deductive and inductive approaches. The main difference between the two approaches is that the deductive approach starts from the general and ends with the specific, while the inductive approach does the opposite by going from the specific to the general.

The deductive approach is defined as a research approach “concerned with developing a hypothesis based on an existing theory, and then designing a research strategy to test the hypothesis” (Wilson J., 2010).

Using the deductive approach, this research will follow a “top down” method, starting from theories that have not been fully validated to test new hypotheses emerging from those theories.

First, qualitative research was conducted, in which in-depth interviews were conducted to gain a deeper insight into consumers’ perspectives.

This type of interviews has advantages and challenges. Indeed, they allow the participant to fully express their ideas, but unintentionally the interviewer may influence the respondent’s answers (Malhotra et. Al, 2020). However, this technique is a powerful tool, that allow researchers to uncover consumers’ attitudes, motivations, feelings, and beliefs about specific topics.

The results of the qualitative research were then tested in the quantitative research, where an online survey was distributed to the targeted audience through online platforms such as WhatsApp, Instagram, Facebook and LinkedIn. These platforms were chosen considering the preferences of the Generation Z.

With an online survey, a large number of responses can be obtained inexpensively and in a short time. In addition, questionnaires are a useful tool because they allow for the collection of consistent data and through the use of fixed responses, variability in results can be reduced (Malhotra et. Al, 2020).

The survey results were analysed with SPSS and the results were used to answer the research question.

3.2 Research Design

3.2.1 Interviews

To either validate or reject the findings from the literature review, in-depth interviews were conducted. In-depth interviews are one of the main methods to collect data in qualitative research (Ritchie and Lewis, 2003), in fact, considering the proximity with the respondents, this method gives to the interviewer the opportunity to understand the beliefs, feelings and emotions of the participants. Moreover, in order to gain more valuable insights, it allows the interviewer to select their desired sample (Neale, 2009). Considering interviews are informal and face to face, it is easier to assist the participants and give all the necessary clarifications for them to understand better the questions (Neale, 2009).

The aim of this study is to understand the purchase intention and perception of the Italian Gen-Z towards wrist-worn fitness trackers, thus for the sample member of the Italian Gen-Z were chosen. To have a deeper understanding of the topic, two different sub-groups were interviewed: fitness wearable users and non-users.

In total, the sample comprehended fourteen participants, from an age range of 19 to 24, eight females and six males, all from Italy although some of them live abroad.

Considering that the respondents were in different countries, the 30-40 minutes interviews were conducted both online and offline.

At the beginning of the interview, to give a context to the participants, the scope of the research was presented.

Two different scripts were developed, one specific for fitness wearable users and another one for fitness wearables non-users.

For users, questions were focus in knowing which were the factors that influenced the most their buying decision, what they currently like the most about their wearables and which type of wearable they own. Instead, for non-users, questions aim to investigate their barriers towards the adoption of WFT (wrist-worn fitness trackers), what is their current perception, what could influence their purchase intention and whether they are considering adopting a fitness wearable in the near future.

3.2.2 Online Questionnaire

In order to reach a broadest audience and be able to validate or reject the previous findings, an online questionnaire was distributed. The target of this survey was the Italian Gen-Z, for this reason the survey was available not only in English but also in Italian. An online

questionnaire allows the researcher to extract, in a short time and at a low cost a large amount of data from a specific audience to uncover their preferences, behaviours and opinions (Nayak, Narayan; 2019).

To better reach the target of the study, the survey was distributed through the preferred channels of the Italian Gen Z, hence Instagram, WhatsApp, Twitter and LinkedIn (Buzzoole, 2021).

The survey was composed by 25 questions which were divided into three different sections. In the first section, the aim was to screen the respondents, in order to distinguish Italians from non-Italians, fitness wearable owners from non-users and who were already familiar with this type of product from who wasn't.

The second section investigated the factors that could influence the perception and purchase intention of the consumers. To give the participants a context, a description of the Fitbit Charge 5 and Fitbit Premium App was provided. After that, for each factor, 5-points Likert scale questions were made. Respondents were presented different statements where they needed to indicate their level of agreement or disagreement, where 1 was "strongly disagree" and 5 "strongly agree".

The survey concluded with a socio-demographic section, where more insights about gender, grade of education, occupation, family income and country of residence were gathered.

3.3 Data Collection

3.3.1 Primary data collection

3.3.1.1 Interviews Findings

Four of the interviews were conducted face-to-face, while the others were conducted online. Interview participants were evenly divided between users and non-users of fitness wearables.

Fitness wearables users:

Seven of the respondents were fitness wearable owners, more specifically, three of them owned a smart-watch and four of them owned a wrist-worn fitness tracker.

Although the study focuses on fitness trackers, given the similarity and lack of resources, other wearable owners were also considered.

Most of participants agreed that they decided to purchase a fitness wearable to better achieve their goals, improve their fitness performance, and be motivated to have a healthier lifestyle. Among the different factors, the ones that most influenced their purchase decision were price, comfort, compatibility, enjoyment, and design.

Price was one of the first aspects that respondents looked at; they looked for something affordable that would meet their needs. So, between two products, one superior to the other, if the cheaper, lower quality one was able to meet their needs, they would choose that one. As mentioned above, comfort is also an important factor for users, especially in the long run. One participant stated “I wear my fitness all the times because it is comfortable and I don’t even notice it. If it wasn’t, I would be unmotivated to wear it for a long time and look for better alternatives”.

Three of the seven respondents said that one of the features they value the most in fitness wearables is the ability to join a community and be able to stay connected with family and friends. “Most of my family members own a fitness wearable, so every day we have internal competitions to see who takes the most steps and who is the most active. We push each other to do better and it’s fun to compete with each other”.

All the participants consider fitness wearables to be both functional and fashionable products, but while males tend to view the product more from a functional point of view, females place a lot of importance on design aesthetic – “I absolutely consider fitness trackers to be a fashionable product – before I bought one, the first thing I looked at was its design, size, and available colours. I wanted to be able to change the wristbands depending on my outfit and mood”.

The *Brand name* was also mentioned by four of the seven participants, especially when talking to smartwatch owners.

In addition, another important feature identified during the interviews was the ability of a fitness wearable to receive smart notifications. This feature was considered important not only for convenience, but also because it allows users to reduce cell phone use.

Fitness wearable non-users:

Among the seven participants who did not own a fitness tracker, only two considered buying one. Despite this, the sample showed a positive attitude toward fitness wearables, considering them useful and functional. However, they consider these products as niche products, and some of respondents think that they are useful only for those who practice some specific sports (such as running).

Moreover, most of the respondent have a negative perception of the value of the price of fitness wearables, although they stated that they have never researched their actual price. The few participants who considered buying a fitness wearable stated that the product features they most looked at most were compatibility, price, comfort, and design. In addition, some of

them mentioned the importance of the brand: “Since I am not an expert in this field, I would first consider well-known brand instead of choosing unknown ones”.

The main barrier to adoption was perceived usefulness; in fact, although respondents perceived these products as very useful, they did not perceived them as useful for themselves. One respondent stated “For the type of training I do, I don’t need a fitness wearable, fitness apps are enough for me”. In fact, as mentioned before, this sample considers fitness wearables to be a product specifically for sports and fitness fanatics, and they do not consider themselves part of this group.

In one of the questions, respondents were asked to indicate what features a fitness wearable should have in order to be adopted. Few of them stated that a lower price might motivate them purchase, and most participants listed specific features that would influence their purchase intention.

However, most of the features mentioned were already incorporated in most of the fitness wearables available on the market. This shows that the participants do not have much knowledge on the topic and their perceptions are mainly based on assumptions.

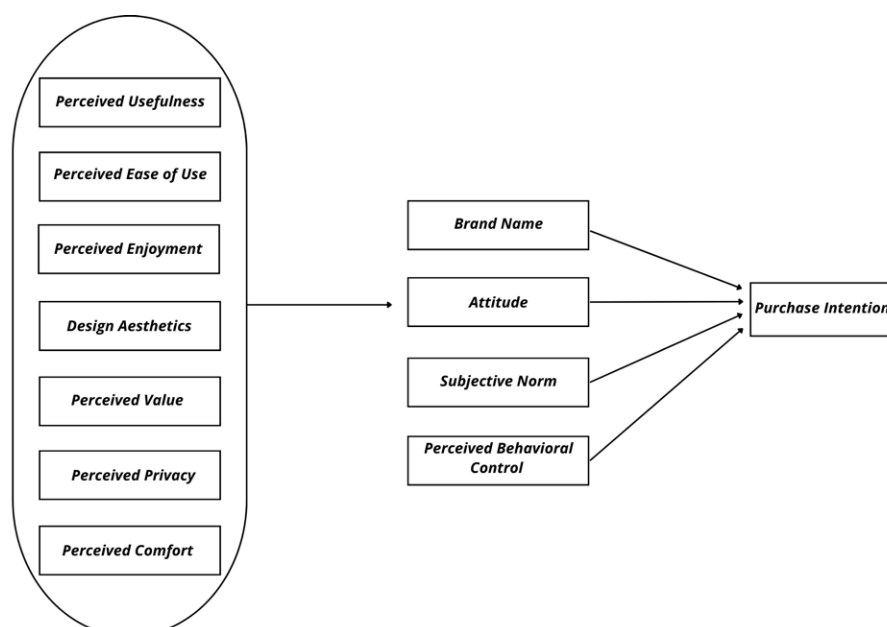
This might indicate that companies producing fitness wearables, especially fitness trackers, should explain their benefits more concisely to influence the masses.

Brand Name

Since the feature brand name was mentioned by some of the users and non-users of wearables, it was decided to include this new factor in the proposed model.

H11: The Brand Name positively influences the intention of the Italian Gen Z to purchase a wrist-worn fitness tracker.

Figure 4 – Proposed Research Framework 2



3.3.1.2 Online Survey

The collected data were analysed using IBM SPSS statistical software.

A total of 218 responses were collected, but only 196 were considered valid.

At first, descriptive statistics and frequencies tables were examined to obtain information about the socio-demographic characteristics and habits of the respondents and to find out their opinions regarding the different statements. The respondents were then divided into different sub-groups, and the means of the different groups were studied with the T-test and ANOVA. Finally, to validate or reject the research hypotheses, Correlation Analysis and Linear Regression were conducted. In this way, it was possible to know which factors had a statistically significant relationship with Attitude and Purchase Intention. These analyses were conducted not only on the group of all respondents, but also to the subgroup “fitness wearable non-users”. Non-users are potential buyers, so it is important to know their views.

3.3.2 Secondary data collection

To develop the research framework, a literature review about models of technology adoption and wearables purchase intention was used.

4. RESULTS

4.1 General sample characteristics

4.1.1 Socio-demographic characteristics and habits

A total of 218 responses were collected, though during data analysis only 196 were considered valid. Non-Italian participants, those born before 1996 (not in the Gen Z cohort) and those who failed the attention test were excluded from the sample.

Among the participants, 34.2% were male while 65.8% were female. The sample consisted mainly of students or student-workers (a total of 83%), particularly bachelor's degree students (41.8%), followed by master's degree students (39.3%), while only 2% were high school and middle school students.

Most participants were already familiar with fitness trackers, however there was a small percentage (6.6%) of participants who did not know what a fitness tracker was.

Only 30.6% of the respondents already owned a fitness wearable, more specifically 17.9% owned a smartwatch, 12.2% owned a fitness tracker and 1% owned another fitness wearable.

Among fitness trackers owners, the most popular brand was Xiaomi, followed by Fitbit, Garmin, and other brands.

Regarding healthy habits, most participants consider it important to be physically active (67.3%), but only 44.4% practice sport regularly and 56.1% practice a healthy lifestyle.

One aspect that was not considered relevant by the participants is the early search for information about new technologies (39,3%).

Participants have widely varying levels of household income: 33.2% report having an annual income of less than 20.000 €, 24% have an annual income of more than 30.000€, and the rest of participants have an income between 21.00€ to 29.000€.

As for the country in which the participants are currently located, 88.8% live in Italy, while 11.2% live abroad.

4.1.2 Descriptive Statistics and Frequencies

To understand what factors drive and discourage purchase intention and adaption of fitness wearable, several factors were studied through a survey using a 5-point Likert scale.

Participants were asked to indicate their level of agreement with the different statements from "1= strongly disagree to 5= strongly agree".

In this section, descriptive statistics and frequencies were examined to study the different means, standard deviations, and percentages.

Table 1 - Perceived Usefulness

	PU1	PU2	PU3	PU4	PUtot
Mean	3.633	3.77	3.43	3.91	3.6862
St. Deviation	0.7764	0.767	0.906	0.802	0.63832

As it can be seen, the factor with the highest mean is PU4, thus most of the participants perceive the fitness tracker as useful. While PU3 “I believe a fitness tracker would help me to improve my health” has the lowest mean among all.

Overall, as it can be noticed from the PUtot, participants tend to perceive fitness trackers as useful. In fact, by looking at the frequencies (*see Appendix IV*), it is possible to see that only 18.8% have a negative or neutral view on the overall usefulness of fitness trackers. While 62.3% and 74% believe that this type of device would help them strengthen their fitness performance and better achieve their fitness goals.

Table 2 – Perceived Easy of Use

	PEU1	PEU2	PEUtot
Mean	3.96	4.14	4.0485
St. Deviation	0.899	0.755	0.70453

As it can be observed from the PEUtot, respondents agree that fitness trackers are easy to use. In fact, it is possible to see that 75.5% of the participants think that using a fitness tracker would be effortless and the 85.2% think it would be easy to understand how to use it (*see Appendix IV*))

Table 3 - Perceived Enjoyment

	PE1	PE2	PE3	PEtot
Mean	3.88	3.89	3.53	3.7670
St. Deviation	0.755	0.800	0.862	0.68490

PEtot is close to 4, which means participants tend to perceive fitness trackers as enjoyable devices. The lowest mean is found in PE3 (I would feel good by using a fitness tracker), in fact it can be seen that only the 53.5% of the respondents agree with this statement. However, 76.5% and 80.1% of respondents find fitness trackers enjoyable and entertaining to use (*see Appendix IV*).

Table 4 - *Design Aesthetics*

	DA1	DA2	DA3	DA4	DA5	DAtot
Mean	3.81	3.70	3.97	3.79	3.61	3.7755
St. Deviation	0.825	0.726	0.679	0.761	0.849	0.61985

All the means are significantly higher than 3, so the overall DA is very close to 4. Therefore, participants consider fitness trackers attractive. It is possible to notice that only 25% of respondents do not find fitness trackers aesthetically pleasing and 35.7% do not find them attractive.

Table 5 - *Price Value*

	PV1	PV2	PV3	PVtot
Mean	3.04	3.30	3.19	3.1735
St. Deviation	0.925	0.868	0.785	0.74838

The means of the different PVs are around 3, thus the perceived value of fitness trackers is neither positive nor negative. The PVtot is just slightly above 3, in fact as it is possible to notice from the frequency table of the PVs, in PV1 46.9% of the participant neither agree nor disagree, in PV2 33.2% do the same and in PV3 45.9% (*see Appendix IV*).

Table 6 - *Perceived Privacy*

	PP1	PP2	PP3	PPtot
Mean	2.78	3.37	2.63	2.9269
St. Deviation	1.012	0.893	0.996	0.60273

PPtot is below 3, which represents the level of “neither agree nor disagree”, thus it is possible to deduct that this sample do not have privacy concerns when using fitness trackers.

Although, it can be observed that 16.4% of the respondents believe they do not have the control of their data and 50.5% have no idea of who are the third parties collecting their data when using fitness trackers.

Table 7 - *Perceived Comfort*

	PC1	PC2	PC3	PCtot
Mean	3.84	3.23	3.39	3.4881
St. Deviation	0.738	1.106	1.074	0.85826

All the means are above 3, and PC1 “I believe a fitness tracker is comfortable to wear” has the highest mean, close to 4. PC2 and PC3 have means just above 3, in fact looking closely 57.6% of respondents would feel comfortable wearing a fitness tracker for a long time, only 48.5% would feel comfortable wearing it 24/7.

Table 8 – *Brand Name*

	BN1	BN2	BN3	BNtot
Mean	2.95	2.48	2.97	2.7993
St. Deviation	1.099	0.984	1.136	0.92849

All the means are below 3, indicating that the BN is not considered an important attribute for fitness trackers. In fact, 57.7% of participants do not consider brand as one of the most important features of a fitness tracker, and in general, only 35.2% of respondents consider themselves brand loyal.

Table 9 - *Attitude*

	A1	A2	Atot
Mean	3.63	3.68	3.6556
St. Deviation	0.887	0.885	0.82432

The overall Atot is higher than 3, thus the attitude toward fitness trackers is generally positive. As a matter of facts, only 10.8% of respondents showed a negative attitude toward fitness trackers, and only 10.3% would dislike the idea of using this type of device.

Table 10 - *Subjective Norm*

	SN1	SN2	SN3	SN4	SNtot
Mean	1.78	2.22	2.18	2.88	2.2653
St. Deviation	0.872	1.091	0.925	1.190	0.78717

The means for all SNs are lower than 2, especially that of SN1 “I feel the social pressure from my peers to use a fitness tracker”. This indicates that respondents do not feel external pressure

to purchase or adopt this type of device and that their behaviours are not influenced by their referents. In fact, for 66.8% of participants, referents would not influence their decision to own a fitness tracker, and even if all referents used this type of device, only 39.8% of them would be positively influenced to use one.

Table 11 - Perceived Behavioral Control

	PBC1	PBC2	PBC3	PBC4	PBCtot
Mean	4.31	3.49	4.30	3.56	3.9158
St. Deviation	0.606	0.969	0.637	0.895	0.53582

Perceived behavioral control refers to the “perceived ease or difficulty of performing a given behavior” (Ajzen, 1991); therefore, considering that the overall mean of PBC is about 4, it is possible to say that the behavior in question is perceived as easy.

Looking at the means we can see that respondents are confident in their ability to use a fitness tracker; they believe they have the skills to use it. Although lower means are showed for PBC2 and PBC4. In fact, only 56.6% of respondents believe they have enough money to purchase a fitness tracker and 59.1% believe they would be motivated to use one if they had one.

Table 12 – Purchase Intention

	PI1	PI2	PItot
Mean	3.09	3.47	3.2781
St. Deviation	1.001	1.064	0.94894

PItot is just around 3, meaning that participants do not show a high purchase intention toward fitness trackers. Only the 34.7% of the participants consider purchasing a fitness tracker in the future, but the percentage increases drastically (53%) when participants were put in the ideal situation of having the financial resources to purchase one.

4.2 Analysis of the means

4.2.1 T Test

To test whether there is statistical evidence that there is a difference between the means of the different groups, an Independent Sample T-test was conducted. This method was chosen because the groups studied are independent. Survey participants were divided into different

subgroups based on gender, whether they were students, whether they were familiar with fitness trackers, whether they owned a fitness wearable, whether they were sportive, whether they practice a healthy lifestyle, and whether they were among the first ones seeking for information about new technology. The student sub-group of includes students and students-workers. Moreover, for each of the different variables (PU, PEU, PE,...) studied through statements using a 5-point Likert scale, a unique variable was created (PUtot, PEUtot, PEtot,...).

Table 13 - *Independent Samples Test table: level of significance among different groups*

	Gender	Student	Familiarity with FT	Owners of fitness trackers	Sportive	Healthy Lifestyle	Seekers of new Technology
PU	0.142	0.066	0.551	0.032	0.192	0.572	0.054
PEU	0.365	0.914	0.646	0.106	0.965	0.659	<0.001
PE	0.022	0.005	0.586	0.084	0.166	0.774	0.003
DA	0.009	0.391	0.753	0.244	0.235	0.419	0.591
PV	0.427	0.788	0.169	0.064	0.381	0.911	0.037
PP	0.331	0.446	0.770	0.340	0.574	0.928	0.003
PC	0.480	0.132	0.742	0.021	0.887	0.613	0.122
BN	0.900	0.048	0.127	0.105	0.263	0.033	0.311
A	0.070	0.025	0.221	<0.001	0.166	0.810	0.002
PI	0.108	0.348	0.021	<0.001	0.030	0.060	<0.001
SN	0.180	0.469	0.870	0.079	0.077	0.004	0.064
PBC	0.130	0.471	0.036	<0.001	0.025	0.004	<0.001

Regarding the gender subgroup, there is a statistically significant difference in the means between males and females in terms of perceived enjoyment. As it can be noticed from *Appendix V*, females perceive greater enjoyment in using fitness trackers than males ($3.8475 > 3.6119$). In addition, there is also an important difference between the means of perceived designed aesthetic. Compared to males, females consider fitness trackers more attractive. However, for the other items analysed, there is no statistically significant difference between the behaviours of females and males.

As for the subgroup of students, there are three items with statistically significant value. The first is perceived enjoyment; in fact, students perceive fitness tracker as more enjoyable than

non-student. In addition, non-students are more influenced by the brand name than students ($3.0909 > 2.7403$).

Another important element for which student and non-students' opinions differ is Attitude. Attitude toward using a fitness tracker is higher in students (3.7147) than in non-students. The intention to purchase a fitness tracker differs between people who are familiar with this type of device and those who are not. Participants who already know what a fitness tracker is shows a higher purchase intention (3.3197) than those who are not familiar with this type of device (2.6923). In fact, the difference in the means for these two subgroups is statistically significant ($0.021 < 0.05 = p$ value).

Other important differences were found between the subgroups of users and non-users. In fact, attitudes and purchase intentions toward fitness trackers change significantly between fitness wearables owners and non-owners. Users of fitness wearables have a high positive attitude toward them (4.0750) compared to non-users (3.4706). Like attitude, purchase intention toward fitness trackers, perceived comfort, and perceived behavioral control are also higher in users than non-users.

Purchase intention is also different between sportive and non-sportive people. In fact, sportive people tend to have higher purchase intention toward fitness trackers than non-sportive people ($3.4425 > 3.1468$). Perceived behavioral control is also higher among athletes.

When considering the healthy lifestyle subgroup, it is possible to see that people who practice a healthier lifestyle have higher perceived behavioral control, higher subjective norm, and are more influenced by the brand name than people who do not practice a healthy lifestyle.

The subgroup of technology seekers has the greatest number of statistically significant differences between the means. In fact, technology seekers not only have higher positive attitudes toward fitness trackers, but also have higher purchase intentions, perceive these devices more as easy to use and useful, have a higher price value consideration, have higher privacy concerns and have higher perceived behavioral control.

4.2.2 ANOVA

To examine the differences between means of a dependent variable for several categories of a single independent factor, a One-Way ANOVA analysis was performed.

Two sub-groups were studied using this technique: Type of institution and Income.

Table 14 - *ANOVA table level of significance among different groups*

	Type of Institution	Income
PU	0.090	0.451
PEU	0.104	0.168
PE	0.047	0.007
DA	0.605	0.432
PV	0.419	0.257
PP	0.160	0.478
PC	0.193	0.528
BN	0.008	0.002
A	0.147	0.096
PI	0.532	0.102
SN	0.148	0.912
PBC	0.092	0.082

Considering that the level of significance is above 0.5 for the factor PE, it is possible to reject the null hypothesis that the means are equal for the different groups, thus at least for two of the various levels of the independent variable the means are different.

Bachelor's degree students perceived fitness trackers as more enjoyable than master's degree students (*see Appendix VI*).

Considering the factor "Brand Name", on the other hand, Master's students (2.8701) are more influenced by a product brand than bachelor's students (2.5894).

The same factors, perceived enjoyment and brand name, also have different means for different income levels. The group that perceives the fitness tracker as most enjoyable and most influenced by the brand name are respondents with incomes between €22.001 and €24.000.

4.3 Relationship among the different factors and Attitude and Purchase Intention towards fitness trackers

4.3.1 Correlation Analysis

Considering the proposed model of attitude toward fitness trackers, the factors PU, PEU, PE, DA, PV, PP, PC may potentially influence A.

Therefore, to examine a potential association between these factors and Attitude, a correlation analysis was conducted. The null hypothesis states that there is no linear association between the variables, so if the null hypothesis is rejected, this analysis would support H1, H2, H3, H4, H5, H6, H7 and H11.

Table 15 - Correlation Analysis with Attitude

A		PU	PEU	PE	DA	PV	PP	PC
	Pearson Correlation	0.570	0.294	0.655	0.352	0.415	0.192	0.549
	Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001	<0.001	0.007	<0.001
	N	196	196	196	196	196	196	196

All the variables have a statistically significant relationship with attitude at a level of 0.01 and 0.007. In particular, PE, PU, and PC show a moderate positive correlation, while PV, DA and PEU have a low positive correlation and PP and PC have only a very low correlation with A. Therefore, hypotheses H1-2-3-4-5-6-7 are supported by this analysis, since an increase of these factors would lead to an increase in Attitude.

After examined the relationship between the different factors and A, the relationship between Attitude, Subjective Norm, Perceived Behavioral Control, Brand Name and Purchase Intention was studied.

Table 16 - Correlation Analysis with Purchase Intention

PI		A	SN	PBC	BN
	Pearson Correlation	0.713	0.244	0.422	0.057
	Sig. (2-tailed)	<0.001	<0.001	<0.001	0.429
	N	196	196	196	196

Apart from Brand Name, the relationship between A, SN and PBC with PI is statistically significant, in fact Pearson Correlation values are significant at a level of 0.01 (2-tailed). Attitude has a high correlation with Purchase Intention, meaning that the higher consumers' attitude toward fitness trackers, the higher their purchase intention.

Although lower, the factors Subjective Norm and Perceived Behavioral Control also show a positive correlation with Purchase Intention. Therefore, the hypotheses H8, H9 and H10 are supported by these results.

During the Independent Sample T-test, it was found that means were statistically significant for both Attitude and Purchase Intention only for the sub-groups: Wearable Owners and Seekers of new technology.

Considering that the study is examining a new potential market, using a SplitFile method, the data were split between Non-wearable Users and Wearable Users. Analyses were conducted for the group of “Non-wearable Users”, potential new customers.

Table 17 - *Correlation Analysis (Attitude) for Non-users*

A		PU	PEU	PE	DA	PV	PP	PC
	Pearson Correlation	0.530	0.261	0.640	0.418	0.449	0.217	0.553
	Sig. (2-tailed)	<0.001	0.002	<0.001	<0.001	<0.001	0.011	<0.001
	N	136	136	136	136	136	136	136

Table 18 – *Correlation Analysis (Purchase Intention) for non-users*

PI		A	SN	PBC	BN
	Pearson Correlation	0.700	0.418	0.341	0.032
	Sig. (2-tailed)	<0.001	<0.001	<0.001	0.715
	N	136	136	136	136

As in the previous analysis, all variables have a statistically significant relationship with Attitude. PE, PU and PC show a moderate positive correlation with A, while DA, PV, PEU and PP have a smaller but still positive correlation.

Again, the only variable that does not have a statistically significant relationship with PI is Brand Name. Attitude has a high positive correlation with Purchase Intention, while SN and PBC have a positive but low correlation.

Excluding Hypothesis 11, all the other hypotheses were supported by these results.

4.3.2 Regression Analysis

A regression analysis was conducted to better understand the nature of the relationship between the different variables. Moreover, this model is useful to control, predict and describe a specific variable. At first, it was analysed how PU, PEU, PE, DA, PV, PP, and PC influence Attitude towards the use of fitness trackers.

Table 19 – *Model Summary 1*

R	R Square	Adj. R square	Durbin-Watson
0.743	0.553	0.536	1.946

R Square indicates the extent to which the model explains the variation in Attitude; in this case, the model has a fairly good explanatory power of 55.3%.

Moreover, since the Durbin-Watson value is less than 2, it means that there is a positive correlation between the variables.

The ANOVA table indicates that this model is statistically significant as it has a significant value of <0.001.

Table 20 - *Coefficients Table 1 (in respect of Attitude)*

Model	Unstandardized B	Sig.	Tolerance	VIF
Constant	- 0.642	0.091		
PU	0.225	0.012	0.498	2.010
PEU	0.054	0.393	0.834	1.198
PE	0.411	<0.001	0.430	2.325
DA	0.076	0.302	0.773	1.293
PV	0.193	0.001	0.803	1.245
PP	0.023	0.740	0.897	1.115
PC	0.210	<0.001	0.585	1.710

The coefficient table shows which of these factors contribute most to the overall Attitude toward fitness trackers. Looking at the Unstandardized Beta, it can be noticed that all these factors have a positive contribution to A. It is possible to say that only PU, PE, PV and PC are statistically significant for the model, so the higher the consumer’s perception of usefulness, enjoyment, value and comfort, the highest will be the attitude toward fitness trackers.

The factor that makes the greatest contribution to overall Attitude is PE, in fact, increasing a unit of PE will result in a 0.411 increase in Attitude.

Furthermore, there is no multicollinearity problem in the model, in fact in the Tolerance column there is no value below 0.4, and in the VIF column there are no values greater than 2.5. These results validate H1, H3, H5 and H7

Table 21 - Model Summary 2

R	R Square	Adj. R square	Durbin-Watson
0.748	0.559	0.550	1.953

This model has a 55.9% of explanatory power and the Durbin-Watson coefficient indicates that there is a positive correlation between the different variables.

With a significant value <0.001, this model can be considered statistically significant.

Table 22 - Coefficients Table 2 (in respect of Purchase Intention)

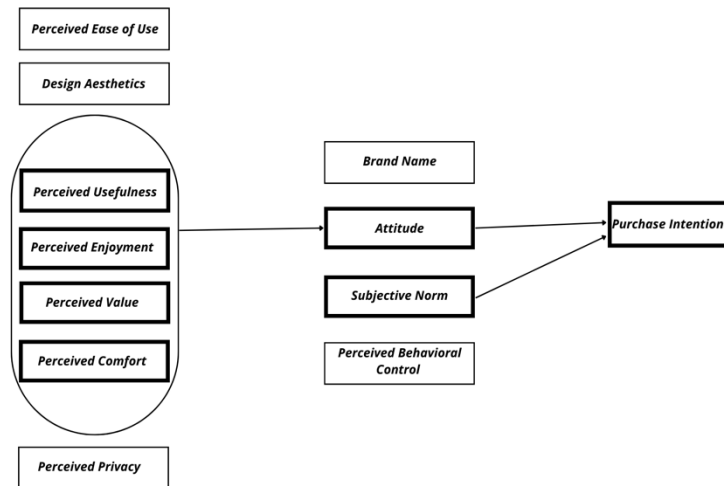
Model	Unstandardized B	Sig.	Tolerance	VIF
Constant	- 0.438	0.225		
A	0.774	<0.001	0.720	1.388
SN	0.276	<0.001	0.911	1.098
PBC	0.116	0.255	0.703	1.423
BN	-0.069	0.188	0.886	1.129

Attitude and subjective norm have a statistically significant relationship with Purchase Intention, while Perceived Behavioral Control and Brand Name do not.

Attitude strongly influences consumers' purchase intention; in fact, by increasing the attitude toward fitness trackers by one unit, the purchase intention of the consumers would increase of 0.774. The subjective norm has a positive correlation with purchase intention, although it does not make a strong contribution to overall attitude.

This model does not present any multicollinearity problem, in fact the levels of tolerance are above 0.4 and the values of VIF are all below 2.5. Thus, H8 and H9 were validated.

Figure 5 – Results Framework



As mentioned before, these analyses were also made for the **subgroups of Users and Non-Users**.

Table 23 - *Model Summary 3 (non-users)*

R	R Square	Adj. R square	Durbin-Watson
0.735	0.541	0.516	1.872

Table 24 - *Coefficients Table in respect of Attitude (non-users)*

	Unstandardized B	Sig.	Tolerance	VIF
Constant	- 0.585	0.209		
PU	0.136	0.221	0.479	2.086
PEU	- 0.026	0.773	0.802	1.246
PE	0.402	<0.001	0.410	2.441
DA	0.148	0.133	0.749	1.335
PV	0.254	0.002	0.796	1.256
PP	0.019	0.824	0.871	1.148
PC	0.228	0.004	0.577	1.734

This model has an explanatory power of 54.1%, and by looking at the value of 1.872 for Durbin-Watson, it is possible to say that there is a positive correlation between the residuals. PE, PV and PC have a significant value less than the p value of 5%, so they are statistically significant. Perceived enjoyment has a large contribution to overall Attitude toward fitness

trackers, while Perceived Value and Perceived Comfort only slightly affect attitude. The model has no problems with multicollinearity, in fact none of the Tolerance values are below 0.4, and none of the VIF values are above 2.5.

In this case, for the subgroup of non-users H1 is not validated, but H3, H5, H7 remained valid.

Table 25 - *Model Summary (non-users)*

R	R Square	Adj. R square	Durbin-Watson
0.760	0.577	0.564	1.787

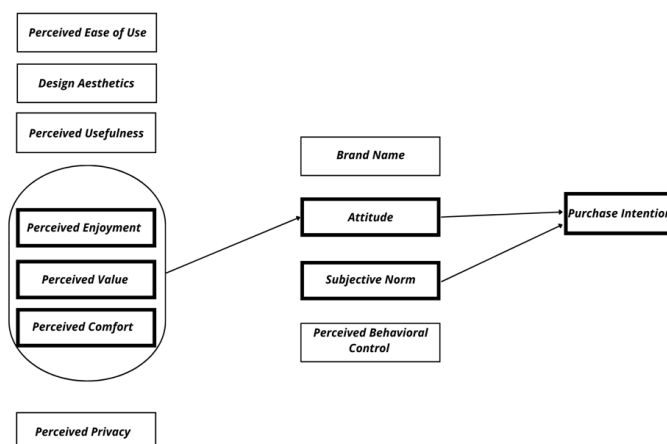
Table 26 - *Coefficient Table in respect of Purchase Intention (non-users)*

	Unstandardized B	Sig.	Tolerance	VIF
Constant	-0.103	0.812		
A	0.733	< 0.001	0.764	1.309
SN	0.406	< 0.001	0.831	1.203
PBC	- 0.049	0.700	0.746	1.341
BN	-0.113	0.092	0.867	1.153

In this case, the model for Purchase Intention has greater explanatory power than the Attitude model at 57.7%. Here, Attitude and Subjective Norm are statistically significant, while Perceived Behavioral Control and Brand Name are not. Attitude gives a great contribution to consumers' overall purchase intention; in fact, by increasing A by one unit, purchase intention increases by 0.733units. Subjective Norm also makes its contribution to purchase intention, but in this case, while still positive, its effect is not large.

Again, H8 and H9 were validated.

Figure 6 – *Research Framework considering Non-users*



5. CONCLUSIONS AND LIMITATIONS

The present research aimed to study the perception and purchase intention of the Generation Z in Italy. For this reason, three research questions were developed.

5.1 Main Findings and Conclusions

RQ1: What is the perception of the Italy's Generation Z toward wrist-worn fitness trackers?

Looking at the descriptive statistics, it can be seen that in general the respondents believe that fitness trackers are useful, very easy to use, enjoyable, and have an attractive design.

They do not have great concerns about the privacy of their data, as they do not perceive great risks. They consider trackers comfortable, but at the same time less than half of the respondents would wear it for a long period of time. Respondents do not consider the brand name of these devices to be an important attribute. Opinions on perceived value are quite mixed; only 29.6% of respondents believe that the benefits outweigh the costs, and only 36.7% believe that the price is fair, but at the same time they believe fitness trackers are a good value for money.

Although in general there is a positive attitude toward fitness trackers, their perception differs between the different subgroups. A more positive attitude toward these wearables is present among students, lovers of new technologies, and in particular, fitness trackers users.

Females have a more positive perception of enjoyment and design aesthetics.

Students have a greater perceived enjoyment, and although brand name is not considered an important factor in the adoption of fitness wearables, non-students are slightly more influenced by it.

Those who already own a fitness wearable tend to perceive fitness trackers as more useful and comfortable and have an overall higher positive attitude toward fitness trackers than non-users.

Those who seek information about new technologies not only perceive wrist-worn trackers as more useful, but also perceive them as easier to use, more enjoyable, and have a more positive attitude than non-techs. They have greater concerns for their privacy and have a higher regard for the value of price than others.

RQ2: What factors influence the purchase intention of wrist-worn fitness trackers by Generation Z in Italy?

RQ3: What are the barriers that prevent Italian Generation Z consumers from purchasing wrist-worn fitness trackers?

In order to identify the drivers and barriers to purchase intention, correlation analysis and linear regression were conducted. It could be found that the main driver of consumer purchase intention is Attitude toward fitness trackers; Subjective Norm also gives a contribution although it is very small. It is possible to conclude that the greater the attitude toward the adoption of fitness trackers, the higher the purchase intention of consumers.

In turn, Attitude is influenced by Perceived Usefulness, Perceived Enjoyment, Perceived Comfort, and Price Value. In particular, Perceived Enjoyment is the main driver of Attitude, while Price Value makes the least contribution.

However, when considering the subgroup of potential new consumers, i.e., the non-users, it can be seen that in this case Perceived Usefulness does not drive Attitude toward adoption, while Perceived Enjoyment, Price Value, and Perceived Comfort continue to influence it.

The results of the analysis showed that only 29.6% of respondents believe that the benefits of owning a fitness tracker outweigh the costs, and only 36.7% believe that the price is fair. As evidence of this, only 34.7% of respondents intend to purchase a fitness tracker. However, if they are put in the ideal position of having the financial resources to purchase one, purchase intention increases by 18.3%, reaching the 53% of the sample.

Thus, it can be said that the lower the price value, the lower the purchase intention of consumers.

In addition, familiarity with the product can greatly influence consumers' purchase intention. In fact, compared with those who know what fitness trackers are, respondents who are unfamiliar have a negative buying intention.

Enthusiasm for new technology also plays an important role in consumers' purchase intention. In fact, technology enthusiasts have a much higher and positive purchase intention than those who are not very interested in new technologies.

Furthermore, respondents have a negative subjective norm, so they do not feel the social pressure in adopting these devices.

5.2 Managerial and Academic Implications

Although several studies have already been conducted on the perception and purchase intention of fitness wearables, particularly smartwatches, most of them have focused on the Asian market, while very few focused on the European market, and even fewer on the Italian market. Moreover, not only does this study focus on a market has not been explored in depth, but also on a specific target audience such as the Generation Z.

Therefore, this research has contributed to fill a gap regarding the topic of purchase intention toward fitness trackers by the Generation Z in Italy.

From the literature review, consistent with other studies on fitness wearables, the TAM and its extensions and the TPB models were used.

As a results, most of the developed hypotheses have been validated (H1, H3, H5, H7, H8, H9) through quantitative analysis. This study showed that Attitude is the strongest driver of Purchase Intention among Gen-Zers in Italy.

Moreover, as hypothesized by the extended TAM, not only utilitarian aspects influence adoption of technology, but also individual intrinsic factors are of great importance.

In fact, although Perceived Usefulness influences Attitude toward adoption, what drives it most is Perceived Enjoyment. In addition, Price value and Perceived Comfort contribute to increase the attitude toward wrist-worn fitness trackers.

This research also presents valuable managerial implications for fitness trackers companies. It found that the higher the positive attitude toward the adoption of fitness trackers, the higher the purchase intention. Considering that attitude is mainly influenced by perceived enjoyment, it means that companies should mainly focus on this aspect.

The Generation Z find fitness trackers enjoyable to use, so the more enjoyable they are, the higher the attitude and thus the higher the purchase intention.

Companies should aim to make this product more entertaining for users by adding features that enhance gamification and connection with other users. As the in-depth interviews revealed, consumers like to stay connected with other users and enjoy the internal competition with family and friends. This also implies that marketing campaigns should be built around the “enjoyment” factor to make the products more appealing to consumers. Companies should also invest resources to make consumers better perceive the usefulness of their devices. At present, in fact, the category of consumers who perceive the usefulness of these devices the most are those who are knowledgeable and up-to-date on the latest technologies (technology enthusiasts) and those who already own a fitness wearable (users). Therefore, to attract new potential users who are not experts in the field, it is important to provide more concisely the

benefits and advantages of using fitness trackers. As revealed during in-depth interviews, non-users show little knowledge of the features included in fitness trackers; in fact, when asked which product features would increase their purchase intention, features already present in most fitness trackers available in the market were cited. Companies should focus on showing the benefits of these devices not only for improving fitness performance, but also for improving overall health. In fact, only 53% of respondents believe that a fitness tracker can improve their general health. Furthermore, there is currently a perception among non-users that these devices are only useful for a specific niche target audience, so it would be important to demonstrate that fitness trackers are no longer a niche product but are a mass product that everyone can use to improve their daily lives.

In addition, considering that females consider wrist-worn wearables not only a functional but also a fashion product, and since they value more than males the design, companies should develop diverse alternatives for the genders.

Although, fitness trackers (Fitbit Charge 5, was taken as representative) are considered aesthetically pleasing by the majority of respondents, females are interested in having the opportunity to costume their wearables.

In conclusion, fitness trackers are considered expensive, and consumers do not believe that the benefits outweigh the costs. Therefore, marketing campaigns should focus on enhancing the benefits of owning this wearable, so that consumers understand all the advantages they could gain from owning one. In addition, although consumers tend to believe that fitness trackers are expensive, there are many lower-priced options on the market. Therefore, companies that provide these types of devices should focus on raising their awareness about their products to attract more consumers.

5.3 Limitations and Future Research

Limitations must be addressed for this research. Some of the limitations found related to the responses obtained from the survey.

First, this study lack of accuracy, as the survey collected only 196 valid responses that may not be sufficiently representative for the entire target group. In addition, 65.8% of the participants were females, so there was not a fair representation of both sexes. Not only that, but also considering that most of the respondents were university students, ranging in age from 18 to 26, younger members of the Generation Z were not represented in this study.

In addition, there was not an equal representation of users and non-users of fitness wearables, and among the users, the majority were smartwatch owners rather than fitness trackers. Furthermore, because the sample obtained is relatively small, when it was divided into additional subgroups, these subgroups were too small to be considered fully representative.

During the survey, and for this study, to give the participants a context, the latest Fitbit product was shown. Therefore, judgements on some factors, such as designed aesthetics, may have been influenced by the images shown and may differ with other products.

In addition, responses collected through the in-depth interviews could be biased by the fact that respondents were chosen for convenience.

For future research, a larger sample should be considered, and the different subgroups should be represented equally so as to highlight the main differences between them. The sample for in-depth interviews should be more diverse and larger.

In addition, younger members of Generation Z should be included to explore other possible differences between members of the same cohort.

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APPENDICES

Appendix I: Interview Script

For wearable users:

Hello, my name is Valeria Lujan and I'm currently conducting a study regarding the perception and purchase intention toward wrist-worn fitness trackers, which is the subject of my Master thesis. I understand that you are already a fitness wearable users, thus I'd like to ask you some questions about this topic.

1. How do you perceive fitness wearable? (e.g. useful, a functional product, a fashion product, etc.)
2. Which type of fitness wearable do you own?
3. What brought you to buy a fitness wearable? Could you please tell me more about your motivations behind your purchase?
4. What are the main characteristics you looked for when deciding to buy a fitness wearable?
5. Are you satisfied with your current fitness wearable? If yes, could you please specify what makes you happy about the product? If no, could you please specific what dissatisfy you?

For non-wearable users:

Hello, my name is Valeria Lujan and I'm currently conducting a study regarding the perception and purchase intention toward wrist-worn fitness trackers, which is the subject of my Master thesis. I understand that you are not a current users of fitness wearables, thus let me start by asking you some questions.

1. What is your general opinion regarding fitness wearables? (e.g. useful, un-useful, fashionable/functional, etc.)
2. Have you ever thought about buying a fitness wearable (such as smartwatch, WFT)?
 - If yes, could you please explain me what brought you to not purchasing it at the end? How was your decision-making process?
 - If no, could you please explain me why you have never thought about buying one?
3. Are there some characteristics a fitness wearable could have for you to consider buying it? If yes, which ones?

Appendix II: Online Questionnaire

Block 1: Introduction

Dear participant,

The following survey is being conducted within the scope of a Master thesis regarding Italian GenZ perception about wrist-worn fitness trackers.

The survey is available in both Italian and English, so please select your preferred language.

This survey will take approximately 7 minutes to complete. Please keep in mind that your participation in this survey is entirely voluntary and that all your information will be kept confidential. The survey is anonymous and will only be used for the purpose of the thesis. Your responses are very relevant for this study, thus I kindly ask you to answer truthfully.

Block 2: Screening Questions

Q1) What's your nationality?

- Italian (1)
- Other (2) ____

Q2) Do you know what a wrist-worn fitness tracker is? (smart fitness wristbands)

- Yes (1)
- No (2)

Q3) Do you own a fitness wearable?

- Yes (1)
- No (2)

If selecting yes:

Q4) Do type of fitness wearable do you own?

- Smartwatch (1)
- Wrist-worn fitness tracker (2)
- Another type of Fitness wearable (3)

If selecting wrist-worn fitness tracker:

Q5) What brand of fitness tracker do you own?

- Fitbit (1)
- Garmin (2)
- Jawbone (3)
- Xiaomi (4)
- Other: ____

Block 3: Influencing factors

In this study, the brand Fitbit will be considered as representative for the category of fitness trackers. In specific, for this survey the Fitbit Charge 5 will be investigated (find the pictures in the following page).

Fitbit Charge 5 is the latest and most advanced fitness tracker by Fitbit, it includes a heart rate monitor, GPS, water resistance until 50meters, a display 0.86x0.58 inches AMOLED touchscreen, 20 exercises mode, smart wake, do not disturb mode, and 7-day of battery life. The product is available in 3 different colours: black, lunar white and steel blue. The price for this device is €179.95.

Thanks to its sensors, such as the EDA scan app and ECG app, the wristband is able to elaborate precise data about one's health and fitness activity.

This smart wearable is able track the level of oxygen in one's blood, skin temperature, breathing and heartbeat rate, sleeping phases, menstrual cycle, activity and rest periods, calories burned, steps, stress levels and much more.

Users have the access to Fitbit Premium app, a subscription service that offers additional features, insights and data. One of the unlocked features are personalized exercise recommendations, which are notifications that users will receive based on their activity, heart rate, sleep and overall general conditions. The fitness tracker will notify them when it is better for them to prioritize a rest day or when it is better to have an intense workout.

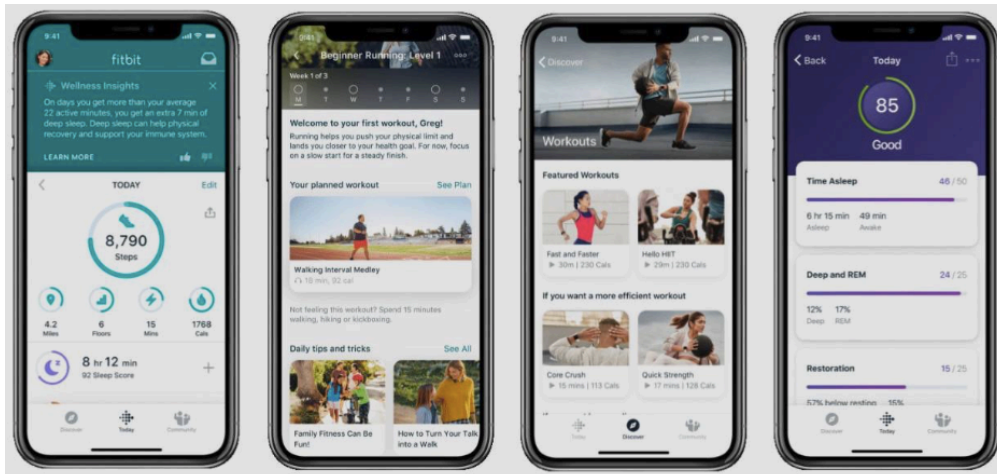
Apart from the fitness and health related features, the Fitbit Charge 5 will also allow users to make contactless payments and have the smart notifications features.

For more information check the Fitbit website: <https://www.fitbit.com/global/eu/home>

FITBIT CHARGE 5



FITBIT PREMIUM APP



A 5-point Likert scale ranging from “1=strongly disagree to 5= strongly agree” was used.

PERCEIVED USEFULNESS

Q6) Please read the following statements regarding fitness trackers and indicate your level of agreement

- I believe a fitness tracker would help me to strengthen my fitness performances
- I believe a fitness tracker would help me to better reach my fitness goals
- I believe a fitness tracker would help me to improve my health
- I believe a fitness tracker would be useful

PERCEIVED EASE OF USE

Q7) Please read the following statements regarding fitness trackers and indicate your level of agreement

- I believe using a fitness tracker would be effortless
- I believe it would be easy to understand how to use a fitness tracker

PERCEIVED ENJOYMENT

Q8) Please read the following statements regarding fitness trackers and indicate your level of agreement

- I would find enjoyable to use a fitness tracker
- I would find entertaining to use a fitness tracker
- I would feel good by using a fitness tracker

AESTHETICS

Q9) Please read the following statements regarding fitness trackers and indicate your level of agreement

- The design of the fitness tracker is aesthetically pleasing
- The texture of the fitness tracker is aesthetically pleasing
- The colours of the fitness tracker are aesthetically pleasing
- The size of the fitness tracker is aesthetically pleasing
- The fitness tracker looks attractive

PRICE VALUE

Q10) Please read the following statements regarding fitness trackers and indicate your level of agreement

- In my opinion the benefits of owning a fitness tracker outweigh the cost
- I believe that a fitness tracker is a good value for the money
- I believe fitness trackers have a fair price
- Please select the option neither agree nor disagree

PERCEIVED PRIVACY

Q11) Please read the following statements regarding fitness trackers and indicate your level of agreement

- I have concerns about the use of my personal data when using a fitness tracker
- I believe I would have the control of my personal information when using a fitness tracker
- I know who are the third parties that collect my data when using a fitness tracker

PERCEIVED COMFORT

Q12) Please read the following statements regarding fitness trackers and indicate your level of agreement

- I believe a fitness tracker is comfortable to wear
- I would feel comfortable in wearing a fitness tracker 24/7
- I would feel comfortable in wearing a fitness tracker for a long period

BRAND NAME

Q13) Please read the following statements regarding fitness trackers and indicate your level of agreement

- I am very brand loyal
- One of the most important characteristics of a fitness tracker is brand
- My purchasing decisions are influenced by the brand of the product

ATTITUDE

Q14) Please read the following statements regarding fitness trackers and indicate your level of agreement

- In general, I have a positive attitude towards fitness trackers
- I like the idea of using a fitness tracker

SUBJECTIVE NORM

Q15) Please read the following statements regarding fitness trackers and indicate your level of agreement

- I feel the social pressure from my peers to use a fitness tracker
- People that I take as referents would influence my decision of owning a fitness tracker

- People that influence me encourage me to use a fitness trackers
- If all the people I take as referents would use a fitness tracker I would be positively influenced in using one too

PERCEIVED BEHAVIORAL CONTROL

Q16) Please read the following statements regarding fitness trackers and indicate your level of agreement

- I believe I would be able to use a fitness tracker
- I believe I would have enough money to buy a fitness tracker
- I believe I would have the skills to use a fitness tracker
- I believe I would be motivated to use a fitness tracker

PURCHASE INTENTION

Q17) Please read the following statements regarding fitness trackers and indicate your level of agreement

- I intent to buy a fitness tracker in the future
- If I had the financial resources to buy a fitness tracker, I would purchase one

LIFESTYLE

Q18) Please read the following statements regarding fitness trackers and indicate your level of agreement

- I practice a health-conscious lifestyle
- I practice sport regularly
- Being physically active is important to me
- I am among the first ones to seek information about new technologies

Block 4: Demographics

Q19) Where do you currently live?

- Italy (1)
- Other (2)

Q18) In which are you born?

- After 2010 (1)
- Between 2010 and 1996 (2)

- After 1996 (3)

Q19) Which gender do you identify with?

- Male (1)
- Female (2)
- Other (3)

Q20) What is your occupation?

- Student (1)
- Employed (2)
- Unemployed (3)
- Other (4)
- Student-Worker (5)

If selecting Student or Student-Worker:

Q21) Which type of institution are you attending?

- Middle School (1)
- High School (2)
- University (Bachelor) (3)
- University (Master) (4)

Q22) What is your annual family income?

- < €20.000 (1)
- €20.000- €22.000 (2)
- €22.001 - €24.000 (3)
- €24.001 – €26.000 (4)
- €26.001 – 30.000€ (5)
- > 30.000€ (6)

Conclusion

Thank you for your time spent taking this survey. Your response has been recorded.

If you have any questions or feedback, please don't hesitate to contact me by email: s-vcruzado@ucp.pt

Appendix III: Sample Characteristics

Gender		
	Frequency	Percent
Male	67	34.2
Female	129	65.8
Total	196	100.0

Familiarity with FT		
	Frequency	Percent
Yes	183	93.4
No	13	6.6
Total	196	100.0

Do you own a fitness wearable?		
	Frequency	Percent
Yes	60	30.6
No	136	69.4
Total	196	100.0

Where do you currently live?		
	Frequency	Percent
Yes	174	88.8
No	22	11.2
Total	196	100.0

WFT Owners		
	Frequency	Percent
0	172	87.8
FT	24	12.2
Total	196	100.0

Other type of fitness wearable		
	Frequency	Percent
0	194	99
Other	2	1
Total	196	100.0

Occupation		
	Frequency	Percent
Student	122	62.2
Employed	30	15.3
Unemployed	1	0.5
Other	2	1.0
Student-Worker	41	20.9
Total	196	100.0

Family Income		
	Frequency	Percent
0	65	33.2
Middle School	23	11.7
High School	16	8.2
University (Bachelor)	19	9.7
University (Master)	26	13.3
Total	47	24.0
Total	196	100.00

Type of Institution		
	Frequency	Percent
0	33	16.8
Middle School	1	0.5
High School	3	1.5
University (Bachelor)	82	41.8
University (Master)	77	39.3
Total	196	100.00

For the variables Sportive, Healthy Lifestyle, Physical Active and Early Seekers of Info about New Technology: 0 represents the respondents who selected 1,2 or 3 (strongly disagree, disagree, neither agree nor disagree). 1 represents the respondents who selected 4 or 5 (agree, strongly agree)

Sportive		
	Frequency	Percent
0	109	55.6
1	87	44.4
Total	196	100.0

Healthy Lifestyle		
	Frequency	Percent
0	86	43.9
1	110	56.1
Total	196	100.0

Physical Active		
	Frequency	Percent
0	64	32.7
1	132	67.3
Total	196	100.0

Early Seekers of Info about New Technologies		
	Frequency	Percent
0	109	55.6
1	87	44.4
Total	196	100.0

0 represents the respondents who in the question “what is your occupation?” selected Employed, Unemployed or Other-
1 represents the respondents who in the question “what is your occupation?” selected Student or Student-Worker.

Student		
	Frequency	Percent
0	86	43.9
1	110	56.1
Total	196	100.0

Appendix IV: Descriptive Statistics and Frequencies Tables

Descriptives

Perceived Usefulness					
	PU1	PU2	PU3	PU4	PUtot
Mean	3.633	3.77	3.43	3.91	3.6862

Perceived Ease of Use			
	PEU1	PEU2	PEUtot
Mean	3.96	4.14	4.0485

Perceived Enjoyment				
	PE1	PE2	PE3	PEtot
Mean	3.88	3.89	3.53	3.7670

Designed Aesthetics						
	DA1	DA2	DA3	DA4	DA5	DAtot
Mean	3.81	3.70	3.97	3.79	3.61	3.7755

Perceived Value				
	PV1	PV2	PV3	PVtot
Mean	3.04	3.30	3.19	3.1735

Perceived Privacy				
	PP1	PP2	PP3	PPtot
Mean	2.78	3.37	2.63	2.9269

Perceived Comfort				
	PC1	PC2	PC3	PCtot
Mean	3.84	3.23	3.39	3.4881

Brand Name				
	BN1	BN2	BN3	BNtot
Mean	2.95	2.48	2.97	2.7993

Attitude			
	A1	A2	Atot
Mean	3.63	3.68	3.6556

Subjective Norm					
	SN1	SN2	SN3	SN4	SNtot
Mean	1.78	2.22	2.18	2.88	2.2653

Purchase Intention			
	PI1	PI2	PItot
Mean	3.09	3.47	3.2781

Frequency Percentages

Perceived Usefulness				
	PU1	PU2	PU3	PU4
Strongly Disagree	1.0	1.0	3.1	1.5
Disagree	6.1	6.1	11.7	5.1
Neither Agree nor Disagree	30.6	18.9	32.1	12.2
Agree	53.1	62.8	45.4	62.8
Strongly Agree	9.2	11.2	7.7	18.4

Perceived Ease of Use		
	PEU1	PEU2
Strongly Disagree	0.5	0.5
Disagree	7.7	2.6
Neither Agree nor Disagree	16.3	11.7
Agree	46.4	53.1
Strongly Agree	29.1	32.1

Perceived Enjoyment			
	PE1	PE2	PE3
Strongly Disagree	1.5	1.5	1.5
Disagree	2.0	5.1	8.7
Neither Agree nor Disagree	19.9	13.3	36.2
Agree	60.2	62.8	42.3
Strongly Agree	16.3	17.3	11.2

Designed Aesthetics					
	DA1	DA2	DA3	DA4	DA5
Strongly Disagree	1.0	0.5	0.5	1.0	1.5
Disagree	7.7	4.6	2.6	5.1	9.7
Neither Agree nor Disagree	16.3	28.6	13.8	20.4	24.5
Agree	59.7	56.6	65.8	61.2	54.6
Strongly Agree	15.3	9.7	17.3	12.2	9.7

Perceived Value			
	PV1	PV2	PV3
Strongly Disagree	6.6	2.6	2.0
Disagree	16.8	16.3	15.3
Neither Agree nor Disagree	46.9	33.2	45.9
Agree	25.5	44.9	35.2
Strongly Agree	4.1	3.1	1.5

Perceived Privacy			
	PP1	PP2	PP3
Strongly Disagree	10.2	2.6	11.7
Disagree	30.6	13.8	38.3
Neither Agree nor Disagree	33.2	34.7	26.0
Agree	23.0	42.3	23.0
Strongly Agree	3.1	6.6	1.0

Perceived Comfort			
	PC1	PC2	PC3
Strongly Disagree	0	5.1	4.6
Disagree	7.1	26.0	20.4
Neither Agree nor Disagree	14.8	20.4	17.3
Agree	64.8	37.8	46.4
Strongly Agree	13.3	10.7	11.2

Brand Name			
	BN1	BN2	BN3
Strongly Disagree	9.2	13.8	11.2
Disagree	28.6	43.9	27.0
Neither Agree nor Disagree	27.0	25.5	20.4
Agree	28.6	14.3	36.2
Strongly Agree	6.6	2.6	5.1

Attitude		
	A1	A2
Strongly Disagree	2.6	2.6
Disagree	8.2	7.7
Neither Agree nor Disagree	24.5	21.9
Agree	53.1	55.1
Strongly Agree	11.7	12.8

Subjective Norm				
	SN1	SN2	SN3	SN4
Strongly Disagree	44.4	29.6	26.0	15.8
Disagree	38.8	37.2	38.8	24.0
Neither Agree nor Disagree	13.8	16.3	27.0	21.9
Agree	1.0	14.8	7.7	32.7
Strongly Agree	2.0	2.0	0.5	5.6

Perceived Behavioral Control				
	PBC1	PBC2	PBC3	PBC4
Strongly Disagree	0	2.6	0.5	1.0
Disagree	1.5	14.3	1.0	12.8
Neither Agree nor Disagree	3.1	26.5	3.6	27.0
Agree	58.7	44.4	57.7	47.4
Strongly Agree	36.7	12.2	37.2	11.7

Purchase Intention		
	PI1	PI2
Strongly Disagree	7.7	5.1
Disagree	16.8	12.2
Neither Agree nor Disagree	40.8	29.6
Agree	28.6	36.7
Strongly Agree	6.1	16.3

Lifestyle				
	LS1	LS2	LS3	LS4
Strongly Disagree	0.5	9.7	1.0	7.7
Disagree	9.7	28.6	9.2	27.0
Neither Agree nor Disagree	33.7	17.3	22.4	26.0
Agree	48.0	32.1	46.4	29.1
Strongly Agree	8.2	12.2	20.9	10.2

Appendix V: T-test Group statistics (Means)

MEANS														
	Gender		Student		Familiarity with FT		Owners of Ft		Sportive		Healthy Lifestyle		Seekers of new tech.	
	M	F	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
PU	3.5933	3.7345	3.7239	3.5000	3.6790	3.7885	3.8333	3.6213	3.7529	3.6330	3.7091	3.6570	3.7955	3.6155
PEU	4.1119	4.0155	4.0460	4.0606	4.0546	3.9615	4.1833	3.9890	4.0460	4.0505	4.0682	4.0233	4.2727	3.9034
PE	3.6119	3.8475	3.8282	3.4646	3.7741	3.6667	3.8944	3.7108	3.8429	3.7064	3.7545	3.7829	3.9481	3.6499
DA	3.6149	3.8589	3.7926	3.6909	3.7792	3.7231	3.8533	3.7412	3.8345	3.7284	3.8073	3.7349	3.8052	3.7563
PV	3.1144	3.2041	3.1800	3.1414	3.1931	2.8974	3.3222	3.1078	3.2261	3.1315	3.1788	3.1667	3.3117	3.0840
PP	2.9851	2.8966	2.9121	3.0000	2.9235	2.9744	2.9889	2.8995	2.9540	2.9052	2.9303	2.9225	3.0866	2.8235
PC	3.4279	3.5194	3.5297	3.2828	3.4827	3.5641	3.7000	3.3946	3.4981	3.4801	3.4606	3.5233	3.6061	3.4118
BN	2.8109	2.7933	2.7403	3.0909	2.7723	3.1795	2.9722	2.7230	2.8851	2.7309	2.9242	2.6395	2.8831	2.7451
A	3.5075	3.7326	3.7147	3.3636	3.6749	3.3846	4.0750	3.4706	3.7471	3.5826	3.6682	3.6395	3.8766	3.5126
SN	2.1604	2.3198	2.2469	2.3561	2.2678	2.2308	2.1167	2.3309	2.3764	2.1766	2.4068	2.0843	2.4026	2.1765
PBC	3.9963	3.8740	3.9034	3.9773	3.9372	3.6154	4.2000	3.7904	4.0115	3.8394	4.0114	3.7936	4.1364	3.7731
PI	3.1269	3.3566	3.3067	3.1364	3.3197	2.6923	3.6833	3.0993	3.4425	3.1468	3.3909	3.1337	3.8766	3.0168

Appendix VI: ANOVA table - Group statistics (Means)

MEANS		
TYPE OF INSTITUTION		
PU	0	3.5000
	Middle School	5.0000
	High School	3.5000
	University (Bachelor)	3.6951
	University (Master)	3.7468
PEU	0	4.0606
	Middle School	4.50000
	High School	5.0000
	University (Bachelor)	3.9573
	University (Master)	4.0974
PE	0	3.4646
	Middle School	4.6667
	High School	3.8889
	University (Bachelor)	3.8496
	University (Master)	3.7922
DA	0	3.6909
	Middle School	4.4000
	High School	4.0000
	University (Bachelor)	3.8244
	University (Master)	3.7429
PV	0	3.1414
	Middle School	4.0000
	High School	3.4444
	University (Bachelor)	3.2561
	University (Master)	3.0779
PP	0	3.0000
	Middle School	4.3333
	High School	3.1111
	University (Bachelor)	2.9065
	University (Master)	2.8918
PC	0	3.2828
	Middle School	4.6667
	High School	3.7778
	University (Bachelor)	3.6057
	University (Master)	3.4242
BN	0	3.0909
	Middle School	5.0000
	High School	2.7778
	University (Bachelor)	2.5894
	University (Master)	2.8701
A	0	3.3636
	Middle School	4.5000
	High School	4.0000
	University (Bachelor)	3.7500
	University (Master)	3.6558
PI	0	3.1364
	Middle School	4.5000
	High School	3.3333

	University (Bachelor)	3.3598
	University (Master)	3.2338
SN	0	2.3561
	Middle School	3.2500
	High School	2.4167
	University (Bachelor)	2.1098
	University (Master)	2.3734
PBC	0	3.9773
	Middle School	4.0000
	High School	4.4167
	University (Bachelor)	3.8049
	University (Master)	3.9870

MEANS		
LEVEL OF FAMILY INCOME		
PU	< €20.000	3.7885
	€20.000 - €22.000	3.6413
	€22.001 - €24.000	3.7656
	€24.001 - €26.000	3.6447
	€26.001 - €30.000	3.7212
	> €30.000	3.5372
PEU	< €20.000	4.0615
	€20.000 - €22.000	3.9130
	€22.001 - €24.000	4.4063
	€24.001 - €26.000	3.8421
	€26.001 - €30.000	4.1731
	> €30.000	3.9894
PE	< €20.000	3.9231
	€20.000 - €22.000	3.7536
	€22.001 - €24.000	4.1042
	€24.001 - €26.000	3.5614
	€26.001 - €30.000	3.7949
	> €30.000	3.5106
DA	< €20.000	3.8492
	€20.000 - €22.000	3.8000
	€22.001 - €24.000	3.8000
	€24.001 - €26.000	3.7684
	€26.001 - €30.000	3.8615
	> €30.000	3.6085
PV	< €20.000	3.1282
	€20.000 - €22.000	3.2029
	€22.001 - €24.000	3.5208
	€24.001 - €26.000	3.2632
	€26.001 - €30.000	3.2692
	> €30.000	3.0142
PP	< €20.000	3.0359
	€20.000 - €22.000	3.8261
	€22.001 - €24.000	3.0000
	€24.001 - €26.000	2.9474

	€26.001 - €30.000	2.8333
	> €30.000	2.8440
PC	< €20.000	3.6000
	€20.000 - €22.000	3.5072
	€22.001 - €24.000	3.6458
	€24.001 - €26.000	3.2807
	€26.001 - €30.000	3.5128
	> €30.000	3.3404
BN	< €20.000	2.4872
	€20.000 - €22.000	2.5797
	€22.001 - €24.000	3.3542
	€24.001 - €26.000	2.9298
	€26.001 - €30.000	2.9487
	> €30.000	3.0142
A	< €20.000	3.7308
	€20.000 - €22.000	3.6957
	€22.001 - €24.000	4.0625
	€24.001 - €26.000	3.6842
	€26.001 - €30.000	3.6346
	> €30.000	3.3936
SN	< €20.000	2.2538
	€20.000 - €22.000	2.1413
	€22.001 - €24.000	2.2344
	€24.001 - €26.000	2.4079
	€26.001 - €30.000	2.2212
	> €30.000	2.3191
PBC	< €20.000	3.8462
	€20.000 - €22.000	3.8152
	€22.001 - €24.000	4.2656
	€24.001 - €26.000	3.9079
	€26.001 - €30.000	3.8558
	> €30.000	3.9787
PI	< €20.000	3.4462
	€20.000 - €22.000	3.1739
	€22.001 - €24.000	3.5938
	€24.001 - €26.000	3.3158
	€26.001 - €30.000	3.2885
	> €30.000	2.9682

Appendix VII: Correlations Matrix (Attitude related)

Pearson Correlation Coefficient	A	PU	PEU	PE	DA	PV	PP	PC	
	A	1.000	0.570	0.294	0.655	0.352	0.415	0.192	0.549
	PU	0.570	1.000	0.139	0.673	0.248	0.361	0.172	0.360
	PEU	0.294	0.139	1.000	0.300	0.148	0.245	0.161	0.307
	PE	0.655	0.673	0.300	1.000	0.295	0.275	0.112	0.528
	DA	0.352	0.248	0.148	0.295	1.000	0.238	0.152	0.454
	PV	0.415	0.361	0.245	0.275	0.238	1.000	0.199	0.247
	PP	0.192	0.172	0.161	0.112	0.152	0.199	1.000	0.253
	PC	0.549	0.360	0.307	0.528	0.454	0.247	0.253	1.000
Sig. (1-tailed)	A	.	<0.001	<0.001	<0.001	<0.001	<0.001	0.004	<0.001
	PU	0.000	.	0.026	0.000	0.000	0.000	0.008	0.000
	PEU	0.000	0.026	.	0.000	0.019	0.000	0.012	0.000
	PE	0.000	0.000	0.000	.	0.000	0.000	0.059	0.000
	DA	0.000	0.000	0.019	0.000	.	0.000	0.017	0.000
	PV	0.000	0.000	0.000	0.000	0.000	.	0.003	0.000
	PP	0.004	0.008	0.012	0.059	0.017	0.003	.	0.000
	PC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	.

Appendix VIII: Correlation Matrix (Purchase Intention Related)

Pearson Correlation	PI	A	BN	SN	PBC	
	PI	1.000	0.713	0.057	0.244	0.422
	A	0.713	1.000	0.067	0.047	0.528
	BN	0.057	0.067	1.000	0.298	0.173
	SN	0.244	0.047	0.298	1.000	0.059
	PBC	0.422	0.528	0.173	0.059	1.000
Sig. (1-tailed)	PI	.	<0.001	0.214	<0.001	<0.001
	A	0.000	.	0.176	0.258	0.000
	BN	0.214	0.176	.	0.000	0.008
	SN	0.000	0.258	0.000	.	0.208
	PBC	0.000	0.000	0.008	0.208	.

Appendix IX: Correlation Matrix Attitude Related (Non-Users)

Pearson Correlation Coefficient	A	PU	PEU	PE	DA	PV	PP	PC	
	A	1.000	0.530	0.261	0.640	0.418	0.449	0.217	0.553
	PU	0.530	1.000	0.114	0.688	0.293	0.356	0.206	0.347
	PEU	0.261	0.114	1.000	0.282	0.260	0.261	0.119	0.379
	PE	0.640	0.688	0.282	1.000	0.352	0.311	0.146	0.535
	DA	0.418	0.293	0.260	0.352	1.000	0.293	0.241	0.438
	PV	0.449	0.356	0.261	0.311	0.293	1.000	0.185	0.278
	PP	0.217	0.206	0.119	0.146	0.241	0.185	1.000	0.296
	PC	0.553	0.347	0.379	0.535	0.438	0.278	0.296	1.000
Sig. (1-tailed)	A	.	<0.001	0.001	<0.001	<0.001	<0.001	0.006	<0.001
	PU	0.000	.	0.093	0.000	0.000	0.000	0.008	0.000
	PEU	0.001	0.093	.	0.000	0.001	0.001	0.085	0.000
	PE	0.000	0.000	0.000	.	0.000	0.000	0.045	0.000
	DA	0.000	0.000	0.001	0.000	.	0.000	0.002	0.000
	PV	0.000	0.000	0.001	0.000	0.000	.	0.015	0.001
	PP	0.006	0.008	0.085	0.045	0.002	0.015	.	0.000
	PC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	.

Appendix X: Correlation Matrix Purchase Intention Related (Non-Users)

Pearson Correlation	PI	A	BN	SN	PBC	
	PI	1.000	0.700	0.032	0.418	0.341
	A	0.700	1.000	0.042	0.209	0.470
	BN	0.032	0.042	1.000	0.345	0.170
	SN	0.418	0.209	0.345	1.000	0.244
	PBC	0.341	0.470	0.170	0.244	1.000
Sig. (1-tailed)	PI	.	<0.001	0.358	<0.001	<0.001
	A	0.000	.	0.313	0.007	0.000
	BN	0.358	0.313	.	0.000	0.024
	SN	0.000	0.007	0.000	.	0.002
	PBC	0.000	0.000	0.024	0.002	.