

**NOVA**

**IMS**

Information  
Management  
School

# MDDDM

Master Degree Program in  
**Data-Driven Marketing**

**How can non-fungible tokens “NFT” bring value to luxury  
brands**

Mohamed Faraj Mo Hderi

Dissertation

presented as partial requirement for obtaining the Master Degree Program in Data-Driven Marketing

**NOVA Information Management School**  
**Instituto Superior de Estatística e Gestão de Informação**

Universidade Nova de Lisboa

**NOVA Information Management School**  
**Instituto Superior de Estatística e Gestão de Informação**  
Universidade Nova de Lisboa

# **HOW CAN NON-FUNGIBLE TOKENS “NFT” BRING VALUE TO LUXURY BRANDS**

By

Mohamed Faraj Mo Hderi

Master Thesis presented as partial requirement for obtaining the Master’s degree in Data-Driven Marketing, with a specialization in Marketing Intelligence

**Supervisor:** Professor Teodóra Szabó-Douat, Ph.D.

November 2023

## **STATEMENT OF INTEGRITY**

I hereby declare having conducted this academic work with integrity. I confirm that I have not used plagiarism or any form of undue use of information or falsification of results along the process leading to its elaboration. I further declare that I have fully acknowledge the Rules of Conduct and Code of Honor from the NOVA Information Management School.

*Lisbon, June 15, 2023*

## **DEDICATION**

I dedicate this master thesis to my loving parents. Your unwavering support, encouragement, and sacrifices have been the cornerstone of my academic journey. This achievement would not have been possible without your constant belief in me and your endless words of encouragement.

## ACKNOWLEDGEMENTS

I would like to express my sincere gratitude and appreciation to all those who have supported and contributed to the completion of my master thesis.

First and foremost, I would like to thank my supervisor, Professor Teodóra Szabó-Douat, for their invaluable guidance, expertise, and unwavering support throughout this research journey. Their insightful feedback, constructive criticism, and encouragement have been instrumental in shaping the direction and quality of this thesis.

I am deeply grateful to the faculty members of Nova IMS / Data-Driven Marketing department for providing a conducive academic environment and fostering a culture of intellectual growth and learning. Their dedication to teaching and research has enriched my knowledge and inspired me to pursue excellence in my work.

I extend my heartfelt appreciation to the participants who generously dedicated their time and shared their insights for this research. Their contributions have been invaluable in shaping the findings and conclusions of this study.

I would like to acknowledge the support and assistance received from Academic service staff. Their prompt responses to my queries, access to resources, and administrative support have been crucial in facilitating the smooth progression of my research.

My heartfelt thanks go to my friends and classmates who have provided moral support, engaging discussions, and a sense of camaraderie throughout this challenging academic journey. Their encouragement and friendship have made this experience more enjoyable and memorable.

Lastly, I am forever indebted to my loving family for their unconditional love, constant encouragement, and belief in my abilities. Their unwavering support and understanding have been the foundation of my success. I am grateful for their sacrifices and the countless ways in which they have stood by me during the ups and downs of this journey.

Completing this thesis has been a challenging but rewarding endeavor, and I am humbled and grateful for the support and contributions of all those who have been a part of this journey.

## **ABSTRACT**

The transparency and authenticity provided by NFTs address the challenge of counterfeit products in the luxury industry. NFTs create a verifiable and tamper-proof record of ownership and provenance, ensuring the authenticity and integrity of digital assets. This fosters consumer trust and strengthens the luxury brand's reputation for delivering genuine and high-quality products. Luxury brands can integrate NFTs into the customer journey, offering unlockable content, rewards, and special privileges. This gamified approach incentivizes customer engagement and fosters loyalty, contributing to a deeper connection between luxury brands and their customers. Therefore, it is crucial to understand how can NFTs bring value to the luxury brands by determine the effect of Knowledge, Popularity, Creativity, Experience, Regularity Support, System Accessibility, through Trust, Perceived Usefulness, Perceived Ease of Use, and depending of the mediation of Attitude, on Intention to use NFTs by using the Technology Acceptance Model (TAM) to highlight on the future of NFTs with luxury brands. This research was conducted on the audience who deal with luxury brand to study if the NFTs can bring value and improve the performance of the luxury brands. Data was collected by questionnaire and the total number of samples in this study were 129 respondents. The hypotheses were tested using PLS to determine the effect of the factors on Intention to use NFTs. The results showed that there is a positive relationship for the external factors mentioned on Intention to use NFTs, mediated by the situation that plays the mediating role in this deductive process. NFTs bring significant value to luxury brands by creating limited edition digital collectibles, engaging with a digitally native audience, addressing authenticity concerns, and enhancing the overall customer experience. While challenges exist, luxury brands that strategically embrace NFTs can extend their brand presence, and strengthen customer relationships. This study contributes to the understanding of NFTs' potential impact on luxury brands and highlights areas for further research and exploration in this evolving field.

## **KEYWORDS**

Non-Fungible Tokens; Knowledge; Popularity; Creativity; Experience; Regularity Support; System Accessibility; Trust; Technology Acceptance Model

# INDEX

<b>1. Introduction .....</b>	<b>1</b>
1.1. Research Question.....	2
1.2. Research Objective .....	3
<b>2. Literature review.....</b>	<b>4</b>
2.1. Non-Fungible Tokens (NFTs) .....	4
2.2. Knowledge.....	4
2.3. Popularity .....	4
2.4. Creativity .....	4
2.5. Experience .....	5
2.6. Regulatory Support.....	5
2.7. System Accessibility.....	5
2.8. trust .....	5
2.9. Technology Acceptance Model (TAM) .....	6
2.9.1. PERCEIVED USEFULLNESS.....	6
2.9.2. PERCEIVED EASE OF USE .....	6
2.9.3. ATTITUDE.....	7
2.9.4. BEHAVIORAL INTENTION.....	7
<b>3. methodology.....</b>	<b>8</b>
3.1. research model .....	8
3.2. Research hypothesis .....	9
3.3. research method.....	9
3.3.1. RESEARCH DESIGN .....	9
3.3.2. RESEARCH LOCATION.....	10
3.3.3. POPULATION AND SAMPLE .....	10
3.3.4. UNIT OF ANALYSIS .....	10
3.3.5. DATA COLLECTING METHOD .....	10
3.3.6. Data Analysis .....	10
3.3.7. MEASUREMENT .....	11
<b>4. Results.....</b>	<b>15</b>
4.1. Univariate analysis.....	15
4.1.1. The demographic data of responses.....	15
4.2. Research variables .....	16
4.2.1. Measurement Model Testing (Outer Model) .....	19

<b>4.3. Hypothesis Testing.....</b>	<b>23</b>
4.3.1. Influence direct effect from exogenous variables to endogenous variables.....	24
4.3.2. Influence of indirect effect from exogenous to endogenous variables.....	26
<b>4.4. Structural Model Testing (Inner Model).....</b>	<b>30</b>
<b>5. Conclusion.....</b>	<b>32</b>
<b>6. Limitation and future research .....</b>	<b>33</b>

## LIST OF FIGURES

Figure 1 - TAM .....	6
Figure 2 – RESEARSCH MODEL.....	9
Figure 3 - DEMOGRAPHIC DATA OF RESPONSES .....	23

## LIST OF TABLES

Table 1 - demographic data of responses .....	16
Table 2 - QUESTIONNAIRE ANSWER RESULTS FOR EACH VARIABLE INSTRUMENT ITEM .....	17
Table 3 – CROSS LOADING .....	19
Table 4 – AVERAGE VARIANCE EXTRACTED (AVE) .....	22
Table 5 – COMPOSITE RELIABILITY.....	22
Table 6 – Influence of direct effect .....	24
Table 7– Influence of indirect effect .....	27
Table 8 – R-square value .....	30

## 1. INTRODUCTION

In our time today, ways of life are evolving and tend to rely more on contemporary technology and the Internet, by improving the process of reaching individual needs with great speed and accuracy. The expansion of the scope of digital platforms via the Internet has made it easier to obtain our total needs at anytime and anywhere, and today it is difficult to live or work without relying on these digital platforms. Many areas of business have changed through the recent digital transformation, and this change has become valuable for brands as well as consumers. Artificial intelligence or digital transformation is the main element in the commercial future (Boni, n.d. 2022). This change creates new challenges and changes in the balance of purchasing power to move from the stage of traditional purchase to full dependence on the Internet and digital platforms.

This research deals with the study of the concept of NFTs and their importance in the field of business, especially luxury brands. The idea of NFTs comes from art, and it is an investment tool for aesthetic pleasure, as the role throughout history has been dominant among several artists such as Pablo Picasso, Gerhard Richter, Jean-Michel Basquiat, and Andy Warhol, their artworks were presented in the art auction, and their sales reached hundreds of millions of dollars (Aletha & Radityasakti, 2021). NFTs are cryptographic assets of the blockchain that possess unique identification codes and have special data that distinguishes them from each other. NFTs have projects that develop daily, called the digital art market, and it enables users to easily collect and trade them, a famous example being NBA Top Shot by Dapper Labs selling tokenized video moments of basketball players in action (Dalai, 2022). From a brand perspective, NFTs are the components of a brand in the form of an introductory design for a product, logo, or image (Colicev, 2022).

Luxury brands seek to provide the best modern services to their customers, as they tend to rely on selling through digital platforms more than physical stores, but the matter is still limited to how to provide those services in a way that facilitates the process for customers to use these digital platforms to order products with the specifications they want. Therefore, luxury brands tend to introduce NFTs in their marketing path to achieve value and also rely on them as stand-alone brand assets (Colicev, 2022).

Through the above explanation, the current study was based on some previous studies in which the relationship of NFTs with brands was understood in different fields and different insights were presented on the subject. For example, Colicev (2022) study aimed to suggest the possibility of NFTs becoming stand-alone brand assets and how NFTs can create value for brands. It was concluded that there is an exponential growth of digital tokens and their importance is expected to increase with the expected development of Web3. It was also concluded that the NFTs can be considered representative of the components of the brand. Importantly, NFTs can allow brands to form a highly engaging brand community that can support the brand, blend online and offline product ownership, and potentially create a bond between the brand and consumers.

Kirjavainen (2022) study aims to understand how the luxury fashion industry can benefit from NFTs and, what should be taken into consideration when implementing these digital assets into their current business model. The study applies theoretical models from both NFT and the luxury fashion industry and deals with concepts of luxury fashion consumption, changes in consumer behavior and

needs as well as the metaverse, to provide both theoretical as well as managerial implications on luxury fashion NFTs. The results showed that luxury fashion brands should start experimenting with NFTs. It also showed the different options there are for utilizing these digital assets to improve one's brand image and to further reach the growing target audience of the younger affluent clientele.

Brun (2021) study sheds light on the future of NFT in the fashion luxury industry which is predicted based on the current trend of sales of NFT along with the concluding remarks regarding the analysis of NFT and its applications. Finds that due to the extensive use of social media, luxury brands have brought forth the opportunity of virtual shopping where customers buy garments, take a photo, and post it on their profiles without any urge to purchase them physically. Fashion luxury NFTs contribute to sustainable development in terms of ethical production which cuts down the use of natural resources.

**Through previous studies, the research gap can be formulated as:**

What was concluded in the previous studies is that there is a great importance of NFTs on the brands, but it was limited and focused on studying that relationship in certain areas, including the brands of fashion and shoes, while this research tries to study the application of NFTs on luxury brands in general without specifying a specific field. Lastly, this research will conduct a quantitative approach to luxury brand consumers through an online survey. This research will be explanatory research, it aims to analyze the relationships between variables or in another way how one variable affects the other one (Kotler, 2000). It is highlighted to analyzing the effect of some variables of NFTs on the part of the consumer, which are Knowledge, popularity, creativity, experience, Regularity support, and system accessibility by using Technology Acceptance Model (TAM) also including the trust, as it is important variable to understand the intention to use NFTs to bring value to the luxury brands.

The study of this analysis lies in the following questions:

### **1.1. RESEARCH QUESTION**

The questions can be formulated based on the research objective as follows:

1. Is there a significant effect of knowledge through perceived usefulness depending on the mediation of the attitude on intention to use NFTs?
2. Is there a significant effect of popularity through perceived usefulness depending on the mediation of the attitude on intention to use NFTs?
3. Is there a significant effect of popularity through perceived ease of use depending on the mediation of the attitude on intention to use NFTs?
4. Is there a significant effect of creativity through perceived ease of use depending on the mediation of the attitude on intention to use NFTs?
5. Is there a significant effect of experience through perceived usefulness depending on the mediation of the attitude on intention to use NFTs?

6. Is there a significant effect of experience through trust depending on the mediation of the attitude on intention to use NFTs?
7. Is there a significant effect of regularity support through trust depending on the mediation of the attitude on intention to use NFTs?
8. Is there a significant effect of system accessibility through trust depending on the mediation of the attitude on intention to use NFTs?

## **1.2. RESEARCH OBJECTIVE**

The research objective of this study is to investigate the effects of the mentioned external variables on TAM variables. By carefully designing experiments, collecting relevant data, and employing appropriate statistical analyses, we aim to identify and quantify the relationships between these variables. The objective is to contribute to the existing body of knowledge by providing empirical evidence of how changes in one variable impact another. Through this research, we seek to enhance our understanding of the underlying mechanisms and dynamics at play, enabling us to make informed predictions, develop effective interventions, and inform decision-making in various fields, ultimately leading to improved outcomes and advancements in the respective domains.

## 2. LITERATURE REVIEW

This chapter will mention some studies related to NFTs, usability, usefulness, trust, and brand loyalty.

### 2.1. NON-FUNGIBLE TOKENS (NFTs)

NFTs are unique assets generated from the reality of Blockchain that is issued by the creators of the underlying asset (Aletha & Radityasakti, 2021). NFTs are unique digital certificates that cannot be exchanged with any other item, sold and traded over the Internet, and protected and maintained in a digital ledger known as Blockchain (Dhruv, 2022). The value of NFTs is analyzed only by its original owner, and its rights are reserved as its creator, and the owner is only the person who owns and trades it because he is the first catalyst every time ownership is transferred (Dalai, 2022). NFTs provide an even playing field for users that can be owned as a decentralized piece referred to as Metaverse. NFTs are anything numeric, for example, a song, virtual character, picture, video, or virtual costume (Kirjavainen, 2022). Digital tokens can be thought of as digital proof or identification of ownership of a particular item that is traded over the Internet.

### 2.2. KNOWLEDGE

Knowledge is defined as a set of information that the individual's mind possesses to distinguish it from others, which consists of patterns, facts, and concepts to interpret ideas and judgments (Alavi & Leidner, 2001). It is a state of mind or a condition for accessing certain information (Simões & Fontinha, 2019). The services provided by NFTs depend on how its methods are combined and applied, which in the end are translated into knowledge (Alavi & Leidner, 2001). From this concept, knowledge expresses the essential role in helping to understand the nature of using NFTs, and it is the first means that users rely on.

### 2.3. POPULARITY

It is based on a normative path according to positive expectations and predictions that are approved by others (Cialdini & Trost, 1998). People look at the opinions of others about the usability of a particular technology in order to create a certain impression about the rejection or acceptance of that technology (Goedegebure et al., 2022). Whether or not to use NFTs depends on its popularity and the public's tendency to follow behavior, whether it is positive or negative towards it. The popularity of NFTs may be an inspiration for determining social approval and assessing the likelihood that the public will respond to its use.

### 2.4. CREATIVITY

Creativity expresses the skill that an individual enjoys in producing amazing self-artwork, as it generates a completely new business model and market patterns (Reisman, 2015). Creativity lies in the best way to produce or create new and distinct solutions and ideas (Henriksen et al., 2016).

Creativity represents the moral value and the cornerstone in building NFTs by relying on a unique record of digital creativity that is distinguished by originality and premonition. Creativity in NFTs expresses self-creative behavior that relies on unique digital art (Hoffmann et al., 2016).

## **2.5. EXPERIENCE**

Using the system requires that its users have a certain level of knowledge and experience in order to deal positively with it (Alalwan et al., 2018). Experience expresses the level of knowledge of users and the extent of their experience in supporting their use of a particular system or technology (Hackbarth et al., 2003).

The level of experience of NFTs has a strong influence on the extent of its usability, as the experience enables NFTs to rely on an innovative and sensitive application to know the experience of its users and influence the behavior they follow during use to know the extent of their confidence and belief in accepting the use of NFTs (Albayati et al., 2020).

## **2.6. REGULATORY SUPPORT**

The regulatory framework expresses the foundations and laws that governments establish to monitor and ensure that providers of services and technologies may comply with the obligations and regulations established to avoid violations (Albayati et al., 2020). Governments issue regulations and laws to deal with any new technology to ensure quality control of their services and authorization for safe use (Peters et al., 2015).

The same is the case with regard to NFTs, especially with regard to users' behavior towards its usability, as it needs to follow government laws and regulations to ensure gaining the users' intention to trust it and secure the use process, which helps raise their confidence and ensure continuity (Albayati et al., 2020).

## **2.7. SYSTEM ACCESSIBILITY**

Accessibility is a measure of the extent of accessibility for the optimal and easier use of information and communication tools for a particular system, which means that the easier the system is to deal with, the more there is a high possibility of increasing the use (Lazar et al., 2003).

People, especially people with disabilities, may use certain techniques that help them use the systems and deal with them. The same applies to NFTs, it must follow an easy and flexible system that enables all users to have quick and optimal access, and its seeds help increase the intention of use by the public and also gain high confidence during use (Sambhanthan & Good, 2012).

## **2.8. TRUST**

It is difficult to define trust, especially when we talk about the world of the Internet and NFTs, because it is a very important element because of its uncertainty and dependency (Aljazzaf et al., 2010). Trust has several different definitions, and as defined by Rousseau et al (1998) that one is willing to rely on another party or entity because of certain characteristics that characterize it. In another sense, trust expresses tendencies to the reliable use of a particular technology (McKnight et al., 2009). NFTs can win the loyalty of their customers by increasing their degree of trust, by securing and encrypting their data, and for their sake, the degree of use can be increased and also obtain a competitive advantage in the digital market.

Trust is built on the uncertainty of information consistency, and to avoid this, NFTs must build a secure infrastructure to ensure that information is not leaked and to gain optimal use and security by its

customers (Schneider, 2017). It is considered the only external primary factor that complements TAM in this research due to its importance in determining the intention of users towards NFTs.

### 2.9. TECHNOLOGY ACCEPTANCE MODEL (TAM)

TAM aims to understand and explain the adoption of a particular technology, in which it relies on determining people's behavior through their intention to implement their desires, as it expresses the users' intention, which in turn expresses the attitude towards the use of new technology (Davis, 1989). TAM is relied upon in this research because it is considered the first model to explain the behavior of users towards their intention to use NFTs, with its importance in providing value to luxury brands.

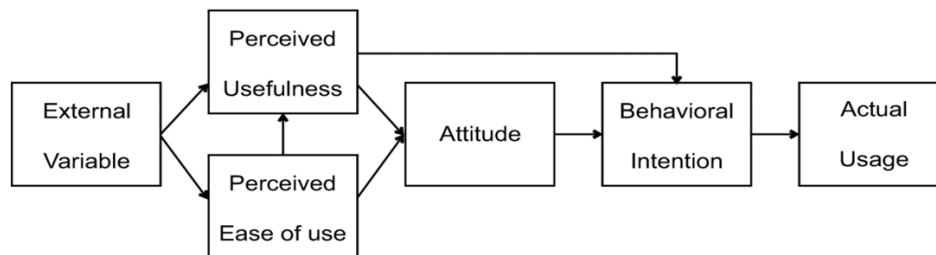


Figure 1 - TAM

Davis's model (TAM) is based on the following elements, which were adopted in the analysis of this research:

#### 2.9.1. PERCEIVED USEFULNESS

It expresses the degree that the user relies on, which directs him toward achieving the desired return. Or as defined by Davis (1989) as the degree of a person's belief that the use of a particular system can enhance his job performance. It is also the main determinant of any system to adopt user behavior because the success of any system depends on the value of the benefit it provides to its customers (Setyo Iriani & Lestari Andjarwati, 2020).

From this perspective, it can be said that NFTs depend on the extent of value or usefulness that they provide to users, to ensure their existence and continuity, and to gain positive interaction from their customers.

#### 2.9.2. PERCEIVED EASE OF USE

It expresses the degree to which individuals believe that the use of a particular technology will be free of effort and obstacles (Davis, 1989). It is considered one of the basic components of the technology acceptance model. It also indicates the level of belief or expectation of users that the use of a particular system can be flexible and easy to deal with (Albayati et al., 2020).

From this point of view, ease of use is a key element in analyzing the public's intention to use NFTs, which in turn gives an impression of how easy it is to deal with and the ability of NFTs to create value for luxury brands.

### **2.9.3. ATTITUDE**

It refers to feelings, whether positive or negative, towards the use of new technology (Davis, 1989). It determines the administrative adoption of new technology (Austermann & Mertins, 2014a). Users' attitudes towards the new technology are considered through a specific attitude when forming their behavioral intentions, and this lies as a result of the targeted behavior through the reasons behind the desire (Albayati et al., 2020).

In this research, the attitude is adopted as a mediator that mediates the relationship between the intention to use NFTs and other elements, as it has an important role in determining that intention.

### **2.9.4. BEHAVIORAL INTENTION**

It expresses of predicting intentions and behaviors (Austermann & Mertins, 2014a). It is the pre-expression shown by the behavior of the individual and which determines the first impression of the behavior. It also considers the direct influence on the behavior of individuals, provided that there is a relationship between the result and the specific behavior (Sun & Wang, 2020).

The intention to use NFTs refers to the desire of individuals to use it through their direct interests and behaviors, and this is done by studying some other factors that have an impact on showing that intention, and this is what is dealt with in this research.

### 3. METHODOLOGY

#### 3.1. RESEARCH MODEL

The study developed a model shown in Figure 2. This model is derived from the studies and assumptions of previous researchers on the mentioned factors to examine whether NFTs will bring value the luxury brands.

Six external variables were adopted to measure NFTs in addition to TAM. For NFTs, we considered knowledge as the first variable to present NFTs which defined as a set of information that the individual's mind possesses to distinguish it from others, which consists of patterns, facts, and concepts to interpret ideas and judgments (Alavi & Leidner, 2001). Popularity is the second variable of NFTs which is based on a normative path according to positive expectations and predictions that are approved by others (Cialdini & Trost, 1998). The third variable to present NFTs is creativity which expresses the skill that an individual enjoys in producing amazing self-artwork, as it generates a completely new business model and market patterns (Reisman, 2015). Experience is the fourth variable to present NFTs which expresses the level of knowledge of users and the extent of their experience in supporting their use of a particular system or technology (Hackbarth et al., 2003). Regulatory support is the fifth representative of NFTs which expresses the foundations and laws that governments establish to monitor and ensure that providers of services and technologies may comply with the obligations and regulations established to avoid violations (Albayati et al., 2020). The last external variable that represents NFTs is system accessibility which is a measure of the extent of accessibility for the optimal and easier use of information and communication tools for a particular system, which means that the easier the system is to deal with, the more there is a high possibility of increasing the use (Lazar et al., 2003).

As for the other variables adopted by TAM, which is considered the first basis in analyzing the value that provides by NFTs to luxury brands, presented as: Perceived usefulness which represents the effectiveness of a particular activity in achieving benefits and returns that depend on the benefit that users get from using a particular service (Bolodeoku et al., 2022). Perceived Ease of Use which expresses the degree to which individuals believe that the use of a particular technology will be free of effort and obstacles (Davis, 1989). The third variable in TAM is attitude, which occupies the field of the mediator in this analytical process, in order to study what it is in mediating the relationship between the variables. It refers to feelings, whether positive or negative, towards the use of new technology (Davis, 1989). While trust occupies the complementary factor of TAM, with its direct importance in measuring the relationship of external variables to the intention to use the new technology. Which represents a multidimensional behaviour that depends on the way the service is provided in terms of its provider and the willingness to be accepted by the users (Zsigmondová et al., 2021). The intention to use NFTs was adopted as a dependent factor, in turn, to reach the desired goal, which is to understand the intention of the users of NFTs in order to reach how it bring value to the luxury brands. It is the pre-expression shown by the behaviour of the individual and which determines the first impression of the behaviour. It also considers the direct influence on the behaviour of individuals, provided that there is a relationship between the result and the specific behavior (Sun & Wang, 2020).

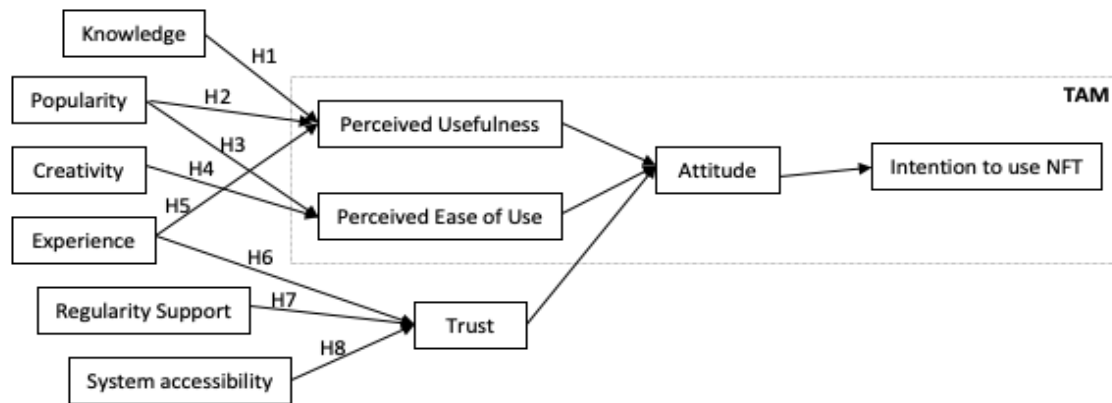


Figure 2 – RESEARSCH MODEL

### 3.2. RESEARCH HYPOTHESIS

According to the model in Figure 000, this research has eight hypotheses. which are:

**H1:** Knowledge has a positive influence through perceived usefulness depending on the mediation of the attitude on intention to use NFTs.

**H2:** Popularity has a positive influence through perceived usefulness depending on the mediation of the attitude on intention to use NFTs.

**H3:** Popularity has a positive influence through perceived ease of use depending on the mediation of the attitude on intention to use NFTs.

**H4:** Creativity has a positive influence through perceived ease of use depending on the mediation of the attitude on intention to use NFTs.

**H5:** Experience has a positive influence through perceived usefulness depending on the mediation of the attitude on intention to use NFTs.

**H6:** Experience has a positive influence through trust depending on the mediation of the attitude on intention to use NFTs.

**H7:** Regularity support has a positive influence through trust depending on the mediation of the attitude on intention to use NFTs.

**H8:** System accessibility has a positive influence through trust depending on the mediation of the attitude on intention to use NFTs.

### 3.3. RESEARCH METHOD

#### 3.3.1. RESEARCH DESIGN

This research applied a quantitative approach, and it would be Explanatory research. Explanatory research is the one that aims to analyze the relationships between variables or how one variable affects the other (Kotler, 2000). This method was chosen because it is through research that wanted to access the effect of knowledge, popularity, creativity, experience, Regularity support, and system

accessibility indirect on intention to use NFTs through perceived usefulness, perceived ease of use and trust mediated by attitude. And through this way, we can analyze the data statically.

### **3.3.2. RESEARCH LOCATION**

This research aims to examine the effect of external variables of NFT on intention to use NFTs by using TAM model. It is located Lisbon, Portugal.

### **3.3.3. POPULATION AND SAMPLE**

#### **3.3.3.1. POPULATION**

The population is the area consisting of the process of characteristics sets by the researcher to extract in conclusion (F. Hair JR et al., 1998). In this research, the luxury brands customers will be taken as a unit of analysis to test their opinions on whether NFTs play a role to bring value to the luxury brands.

#### **3.3.3.2. SAMPLE**

In this research, we have 11 variables each variable has an indicator totaling 29 indicators, a totally of 129 samples 45.7% of women and 54.3% of men with average age between 20 to 50 years old.

### **3.3.4. UNIT OF ANALYSIS**

According to Malhotra & Birks (2007), the unit of analysis is the individual, the company as well as other parties who respond to treatment or research actions carried out in the research. So, this research applied individual unit analysis of the customers of luxury brands.

### **3.3.5. DATA COLLECTING METHOD**

Data Collecting Method in this research is the Questionnaire. It is the main tool in data collection. The questionnaire presented in English.

### **3.3.6. Data Analysis**

In quantitative research, the process of implementation in a linear fashion begins from the background of the research problem, formulation of the problem, the formulation of the hypothesis, preparation of subject instrument, data collection and analysis of data, finally the research result (Dey, 1993).

#### **3.3.6.1. Analysis Using PLS**

The current research used PLS to analyze data according to the conceptual framework and to do the estimates in the measurement model. PLS is the method of choice to success factor studies in marketing (Albers, 2008). The PLS methodology had also achieved an increasingly popular mission in practical research in international marketing, which may represent an appreciation of distinctive methodological features of PLS.

##### **3.3.6.1.1. Inner Model (Structural Model)**

Inner models describe the relationship between latent variables based on substantive theory. Also, will test the hypothesis to measure if accepted or accept (Ho). The limit to accept the hypothesis is clear with ( $\alpha$ )=5% or 0.05. It is resulted t-table value of 1.96. Therefore:

- If t-statistic is more than  $t$ -table [ > 1.96] then  $H_0$  is rejected while  $H_a$  is accepted.
- If t-statistic is less than  $t$ -table [ < 1.96] then  $H_0$  is accepted while  $H_a$  is rejected.

### 3.3.6.2. Outer Model (Measurement Model)

This model will be used to know validity and reliability which bridge indicator and its latent variable. It needs to be measured by Convergent and Discriminant.

- Convergent Validity

Convergent validity measures the value of correlation within the construct and latent variable. A valid correlation is equal to the value of >0.5 (Wegelin, 2000).

- Discriminant Validity

The measurement model is examined based on cross loading calculation with the construct. If construct with each indicator bigger than any other value, then latent construct its indicator is better than another construct.

If the AVE value higher than other correlation values, then this will result in a good discriminant validity. According to Wegelin (2000) AVE, more than 0.05 is higher recommended.

### 3.3.7. MEASUREMENT

Given the need to understand the intention to use NFTs to bring a value to the luxury brands, a survey was developed in Qualtrics. The survey included a little description about the study also a condition "agree and disagree" was added to continue participate if agree or end the survey if disagree. The first question was to indicate about have you ever known about NFTs as a component of luxury brands?

The measurement of the questions is (Linkert scale) considering seven points from strongly disagree (1) to strongly agree (7).

**Knowledge;** it plays a crucial role in shaping the use and impact of NFTs. The level of understanding and awareness about NFTs among creators, collectors, and the general public can significantly influence how NFTs are utilized and perceived (Alavi & Leidner, 2001). Moreover, as NFTs continue to evolve, it becomes increasingly important to foster and disseminate accurate and comprehensive knowledge about the technology, its potential benefits, and any associated risks or challenges. By doing so, we can ensure that NFTs are used ethically and responsibly, maximizing their positive impact in the digital world. In this study, knowledge effect is measured by **creation** which assesses the ability to generate innovative and original ideas or solutions, **capture** which evaluates the ability to effectively acquire, gather, or comprehend information and concepts, and **share** which assesses the ability to effectively communicate and disseminate information or ideas with others.

**Popularity;** The popularity of NFTs has skyrocketed in recent years, captivating the attention of individuals, artists, collectors, and investors around the globe. One key factor behind the surge in popularity is the unique nature of NFTs, which provide a novel way to establish ownership and scarcity in the digital realm. NFTs have opened up a world of possibilities for artists, enabling them to monetize their digital creations directly and gain recognition in a decentralized and borderless market

(Goedegebure et al., 2022). The popularity of NFTs has also raised questions and concerns, such as sustainability, copyright infringement, and market volatility. The future of NFTs will depend on how these challenges are addressed and how the technology continues to evolve to meet the needs and expectations of its users. This variable measured by **aided awareness** which quantifies the likelihood of respondents recognizing or recalling information with assistance or cues, and **memory of contact** gauges the probability of individuals recalling or remembering previous interactions or experiences.

**Creativity;** The advent of NFTs has unleashed a wave of unprecedented creativity in the digital landscape. The unique nature of NFTs allows for the creation and sale of digital assets that were previously difficult to monetize, such as digital art, virtual fashion, and virtual real estate (Hoffmann et al., 2016). NFTs have become a playground for experimentation and imagination. The creative possibilities offered by NFTs continue to evolve as artists and creators push the boundaries of what is possible, shaping the future of digital art and cultural expression. It measured by **originality** which assesses the extent to which a concept, idea, or solution is novel and unique, and the **enjoyment** evaluates the level of pleasure or satisfaction experienced during the creative process.

**Experience;** The experience of using NFTs is a dynamic and transformative journey for both creators and collectors alike, it allows them to showcase their work on decentralized platforms, gain recognition, and connect directly with their audience (Alalwan et al., 2018). Moreover, NFTs offer a new dimension of storytelling and context, allowing collectors to delve into the history and significance of the asset they own. The experience of using NFTs brings a sense of excitement, discovery, and connection to the digital realm. This variable measured by the **satisfaction** which quantifies the level of contentment or fulfillment derived from a particular experience, **skill** evaluates the level of proficiency or competence attained in a specific domain or activity, and the **restintion** which quantifies the level of relaxation or rejuvenation experienced during an activity or period of downtime.

**Regulatory Support;** The regulatory landscape surrounding NFTs is still evolving, with various jurisdictions grappling to establish frameworks that address the unique characteristics and challenges of this emerging technology (Albayati et al., 2020). Regulatory bodies are starting to recognize the potential of NFTs and are taking steps to provide clarity and protect market participants. Striking the right balance between fostering innovation and providing a regulatory framework that protects the interests of all stakeholders will be crucial for the sustainable growth and acceptance of NFTs in the broader financial and creative industries. It measured by **expect** which assesses individuals' anticipated level of consistent assistance or reliability in a given context, and the **enhance** which is evaluating the perceived ability to improve or optimize the consistency and effectiveness of support received.

**System Accessibility;** The system accessibility of using NFTs has been a key factor in their widespread adoption and appeal. Unlike traditional art markets or financial systems, NFTs have significantly lowered barriers to entry, allowing anyone with an internet connection to participate (Sambhanthan & Good, 2012). Furthermore, the programmable features of NFTs allow for dynamic and interactive experiences, enhancing the accessibility and enjoyment for users. As the infrastructure supporting NFTs continues to develop and evolve, the accessibility of the system will likely expand even further, opening up new opportunities and experiences for creators and collectors alike. This variable

measured by the **privacy assesses** the level of control and protection of personal information within a system, and the **available** which evaluates the extent to which a system is accessible and operational for users.

**Trust;** it is a fundamental aspect of using NFTs, this immutability and transparency provide a high level of trust in the authenticity and provenance of NFTs. This trust is further bolstered by smart contracts, which automatically execute and enforce the terms of the transaction, eliminating the need for intermediaries and reducing the risk of fraud or disputes (Schneider, 2017). As the ecosystem evolves, there will be a continued focus on establishing best practices, standards, and regulatory measures to further enhance trust and protect the interests of all participants in the NFT market. It measured by the **promise and commitment** which are the assess of a party to fulfill obligations and expectations, the **interest** which evaluates the degree of curiosity, attention, and investment in a trusting relationship or entity, and the **safeguard** to assess the perceived level of protection and security in a trusted relationship or system.

**Perceived Usefulness;** The perceived usefulness of using NFTs stems from their ability to revolutionize the way we interact with and value digital assets. NFTs have opened up new avenues for creators to monetize their digital work, providing a direct and decentralized platform for showcasing and selling their creations (Setyo Iriani & Lestari Andjarwati, 2020). The perceived usefulness of NFTs may vary depending on individual perspectives and specific use cases, the overarching notion is that they offer a transformative way to engage with and derive value from digital assets in a manner that was previously unimaginable. It measured by the **facilitate** to evaluate the extent to which a system or service aids and simplifies tasks or processes, the **frequent** which assesses the perceived frequency or regularity of beneficial interactions or experiences with a system, and the **provide** to evaluate the extent to which a system offers valuable and relevant features or resources.

**Perceived Ease of Use;** The perceived ease of use of using NFTs has played a significant role in their widespread adoption and appeal. Minting and listing NFTs have become relatively straightforward, with step-by-step guides and user-friendly interfaces that simplify the process (Albayati et al., 2020). As the ecosystem continues to evolve, the perceived ease of use is likely to improve even further, driving greater adoption and engagement with NFTs. This variable measured by **expert** which is the assess the perception of proficiency and confidence in utilizing a system or product, the **dynamic** evaluates the perception of flexibility and adaptability in interacting with a system or interface, and the **convenient** which assesses the perception of practicality and user-friendly aspects in utilizing a system or product.

**Attitude;** The attitude towards using NFTs is multifaceted and varies among different individuals and communities. Some see NFTs as a means for artists and creators to gain recognition, and some question the long-term value and sustainability of digital assets that are based on an inherently volatile market (Albayati et al., 2020). As the ecosystem matures and more use cases emerge, the attitudes towards NFTs are likely to continue evolving, shaped by technological advancements, regulatory developments, and societal attitudes towards the value of digital assets. It measured by the **positive** to evaluate the degree of favorable feelings, opinions, or predispositions towards a subject or entity, the **wise** to assess the perception of wisdom, discernment, or sound judgment

towards a particular subject or entity, and the **pleasant** to evaluate the degree of enjoyment, satisfaction, or positive emotional response towards a subject or entity.

Lastly, **Intention to use NFTs**; The behavioral intention of using NFTs revolves around the underlying motivations and attitudes that drive individuals to engage with and participate in the NFTs ecosystem (Sun & Wang, 2020). The behavioral intention of using NFTs is complex and can vary widely among individuals, reflecting a combination of artistic, financial, social, and personal motivations. This variable measured by the **worthwhile** to assess the perception of value, significance, or benefits associated with pursuing a particular course of action, the **planned** which is evaluating the degree of deliberate or premeditated decision to engage in a specific behavior or action, and the **adoption** to assess the willingness or readiness to embrace and incorporate a new behavior, idea, or technology.

## 4. RESULTS

This research was conducted on the audience who deal with luxury brand to study if the NFTs can bring value and improve the performance of the luxury brands. The total number of samples in this study were 129 respondents.

Data is processed according to the research objectives, namely to determine the effect of Knowledge, Popularity, Creativity, Experience, Regularity Support, System Accessibility, through Trust, Perceived Usefulness, Perceived Ease of Use, and depending of the mediation of Attitude, on intention to use NFTs by using the Technology Acceptance Model (TAM) to highlight on the future of NFTs by bringing value to the luxury brands.

### 4.1. UNIVARIATE ANALYSIS

Univariate analysis is an analysis conducted to determine the frequency distribution of several demographic characteristics of the respondents, as well as the characteristics of the independent variables (independent) and the dependent variable (dependent) in this study, which includes demographic characteristics, as well as the categories of the observed variables, where the results of the analysis of the variables above can be presented as following:

#### 4.1.1. The demographic data of responses

Construct	Frequency	Percent
<b>Gender</b>		
Male	70	54.3%
Female	59	45.7%
<b>Age</b>		
<20 years old	11	8.5%
20-29 years old	63	48.8%
30-39 years old	45	34.9%
40-49 years old	6	4.7%
>= 50 years old	4	3.1%
<b>What is your highest level of education?</b>		
High School	18	14.0%
Master's Degree	59	45.7%
Bachelor's Degree	27	20.9%
PHD	16	12.4%
Other	9	7.0%

Have you ever known about NFTs as a component of luxury brands?		
No	50	38.8%
Yes	79	61.2%

Table 1 - demographic data of responses

Based on table 1 above, it can be seen that for the gender of the 129 respondents, there were 70 people (54.3%) male respondents, and the other 45.7% were female respondents. For the age range of 129 respondents, there were 11 people (8.5%) who were under 20 years old, 48.8% aged between 20-29 years, 34.9% aged between 30-39 years, 4.7% aged between 40-49 years, and another 3.1% aged 50 years and over. For the respondent's last education, 14.0% had a high school education, 45.7% had a Master's Degree education, 20.9% had a Bachelor's Degree education, 12.4% had a PHD education, and 7.0% had other levels of education.

#### 4.2. RESEARCH VARIABLES

Based on the answers from 129 respondents, then obtained results for each variable namely Knowledge (K), Popularity (P), Creativity (C), Experience (E), Regularity Support (RS), System Accessibility (SA), on Trust (T), Perceived Usefulness (PU), Perceived Ease of Use (PEU), Attitude (A), and intention to use NFTs (I), which can be presented as following:

Construct	Strongly Disagree		Disagree		Somewhat Disagree		Neither agree nor disagree		Somewhat Agree		Agree		Strongly Agree		Mean Valid
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
<b>K 1</b>	4	3.1%	6	4.7%	9	7.0%	18	14.0%	36	27.9%	38	29.5%	18	14.0%	5.0310
<b>K 2</b>	3	2.3%	6	4.7%	15	11.6%	12	9.3%	40	31.0%	37	28.7%	16	12.4%	4.9767
<b>K 3</b>	3	2.3%	8	6.2%	12	9.3%	14	10.9%	34	26.4%	42	32.6%	16	12.4%	5.0000
<b>P 1</b>	6	4.7%	14	10.9%	13	10.1%	18	14.0%	29	22.5%	35	27.1%	14	10.9%	4.6357
<b>P 2</b>	7	5.4%	14	10.9%	10	7.8%	14	10.9%	36	27.9%	33	25.6%	15	11.6%	4.6822
<b>C 1</b>	2	1.6%	5	3.9%	9	7.0%	11	8.5%	30	23.3%	48	37.2%	24	18.6%	5.3411
<b>C 2</b>	0	0.0%	5	3.9%	8	6.2%	17	13.2%	27	20.9%	47	36.4%	25	19.4%	5.3798
<b>E 1</b>	5	3.9%	9	7.0%	7	5.4%	16	12.4%	32	24.8%	39	30.2%	21	16.3%	5.0310
<b>E 2</b>	2	1.6%	7	5.4%	9	7.0%	16	12.4%	30	23.3%	42	32.6%	23	17.8%	5.1938
<b>E 3</b>	2	1.6%	10	7.8%	5	3.9%	8	6.2%	37	28.7%	42	32.6%	25	19.4%	5.2791
<b>RS 1</b>	2	1.6%	5	3.9%	6	4.7%	26	20.2%	43	33.3%	27	20.9%	20	15.5%	5.0465
<b>RS 2</b>	2	1.6%	4	3.1%	5	3.9%	24	18.6%	37	28.7%	34	26.4%	23	17.8%	5.2016

<b>SA 1</b>	2	1.6%	10	7.8%	8	6.2%	20	15.5%	39	30.2%	33	25.6%	17	13.2%	4.9457
<b>SA 2</b>	0	0.0%	4	3.1%	5	3.9%	21	16.3%	32	24.8%	49	38.0%	18	14.0%	5.3256
<b>T 1</b>	3	2.3%	8	6.2%	8	6.2%	17	13.2%	37	28.7%	38	29.5%	18	14.0%	5.0388
<b>T 2</b>	1	0.8%	7	5.4%	5	3.9%	22	17.1%	30	23.3%	47	36.4%	17	13.2%	5.1860
<b>T 3</b>	1	0.8%	6	4.7%	8	6.2%	23	17.8%	26	20.2%	39	30.2%	26	20.2%	5.2326
<b>PU 1</b>	0	0.0%	4	3.1%	7	5.4%	18	14.0%	45	34.9%	34	26.4%	21	16.3%	5.2481
<b>PU 2</b>	0	0.0%	5	3.9%	6	4.7%	18	14.0%	35	27.1%	43	33.3%	22	17.1%	5.3256
<b>PU 3</b>	1	0.8%	1	0.8%	4	3.1%	18	14.0%	39	30.2%	41	31.8%	25	19.4%	5.4496
<b>PEU 1</b>	2	1.6%	4	3.1%	5	3.9%	15	11.6%	34	26.4%	40	31.0%	29	22.5%	5.4109
<b>PEU 2</b>	0	0.0%	1	0.8%	7	5.4%	20	15.5%	42	32.6%	37	28.7%	22	17.1%	5.3411
<b>PEU 3</b>	0	0.0%	1	0.8%	5	3.9%	23	17.8%	32	24.8%	42	32.6%	26	20.2%	5.4496
<b>A 1</b>	0	0.0%	1	0.8%	7	5.4%	17	13.2%	41	31.8%	36	27.9%	27	20.9%	5.4341
<b>A 2</b>	0	0.0%	2	1.6%	6	4.7%	20	15.5%	34	26.4%	37	28.7%	30	23.3%	5.4574
<b>A 3</b>	0	0.0%	2	1.6%	5	3.9%	16	12.4%	37	28.7%	38	29.5%	31	24.0%	5.5271
<b>I 1</b>	1	0.8%	8	6.2%	7	5.4%	16	12.4%	44	34.1%	36	27.9%	17	13.2%	5.0930
<b>I 2</b>	1	0.8%	4	3.1%	8	6.2%	18	14.0%	34	26.4%	36	27.9%	28	21.7%	5.3256
<b>I 3</b>	1	0.8%	5	3.9%	10	7.8%	15	11.6%	38	29.5%	31	24.0%	29	22.5%	5.2713

Table 2 - QUESTIONNAIRE ANSWER RESULTS FOR EACH VARIABLE INSTRUMENT ITEM

Based on the data in table 2 above, it is clear that the highest average is 5.52, with 29.5% agree to think positively by using NFTs for innovation processes and productivity when dealing with luxury brands. On the other hand, the lowest average is 4.63, with 27.1% agree that they were able to properly try to use NFTs before.

Moreover, the results indicate for the knowledge variable from 129 responses with an average level 5.03, with 29.5% agree that they can learn how to use NFTs easily for dealing with luxury brands. Also, the average level 4.97, and 31% of somewhat agree that to learn how to use NFTs is simple for dealing with luxury brands. And, the average level 5.0, with 32.6% of them agree that they would have no difficulty telling others about the results of using NFTs for dealing with luxury brands.

For the Popularity variable, average level of 4.68, with 27.9% of somewhat agree that they know where they can go to achieve satisfaction trying out NFTs for dealing with luxury brands.

For the Creativity variable, the average level of 5.34, with 37.2% agree that they would be a better learner if they knew how to use NFTs for dealing with luxury brands. And, average level of 5.37, with 36.4% agree that they enjoy learning how to use NFTs for dealing with luxury brands.

For the Experience variable, the average level of 5.03, with 30.2% agree that their interaction with NFTs would be clear and understandable. And, the average level of 5.19, with 32.6% agree that would be easy for them to become skillful at using NFTs for dealing with luxury brands. Also, the average level of 5.27, with 32.6% agree that they would like to be a participant member of using NFTs for dealing with luxury brands.

For the Regularity Support variable, the average level of 5.04, with 33.3% somewhat agree that NFTs adoption results in more efficiency for dealing with luxury brands. And, the average level of 5.20, with 28.7% somewhat agree that the portability of NFTs enhance the effectiveness of their usage for dealing with luxury brands.

For the System Accessibility variable, the average level of 4.94, with 30.2% somewhat agree that the dealing with NFTs is safe and secure when using personal data. And, the average level of 5.32, with 38% agree that NFTs develop creativity based alternative and new ideas on established values.

For the Trust variable, the average level of 5.03, with 29.5% agree that NFTs give the impression that it keeps promises and commitments when dealing with luxury brands. And, the average level of 5.18, with 36.4% agree that they believe that NFTs have their best interests in mind when dealing with luxury brands. Also, the average level of 5.23, with 30.2% agree that NFTs have enough safeguards to make them feel comfortable when dealing with luxury brands.

For the Perceived Usefulness variable, the average level of 5.24, with 34.9% somewhat agree that the use of NFTs facilitate a direct interaction with luxury brands. And, the average level of 5.32, with 33.3% agree that NFTs are frequently used for smart dealing with luxury brands. Also, the average level of 5.44, with 31.8% agree that NFTs provide useful platforms for dealing with luxury brands.

For the Perceived Ease of Use variable, the average level of 5.41, with 31% agree that experienced person is needed whenever NFTs are used for dealing with luxury brands. And, the average level of 5.34, with 32.6% somewhat agree that NFTs are dynamic is usage for dealing with luxury brands. Also, the average level of 5.44, with 32.6% agree that the use of NFTs is more convenient to access information anywhere and anytime.

For the Attitude variable, the average level of 5.43, with 31.8% somewhat agree that they think positively by using NFTs for innovation processes and productivity when dealing with luxury brands. And, the average level of 5.45, with 28.7% agree that the using NFTs for dealing with luxury brands is a wise idea.

For the Intention to use variable, the average level of 5.09, with 34.1% somewhat agree that they believe it is worthwhile for them to use NFTs for dealing with luxury brands. And, the average level of 5.32, with 27.9% agree that they plan to use NFTs very often in the future for dealing with luxury brands. Also, the average level of 5.27, with 29.5% somewhat agree that given that they have access to NFTs when dealing with luxury brands, they predict that they would adopt it.

#### 4.2.1. Measurement Model Testing (Outer Model)

It is a model that specifies the relationship between latent variables and their indicators or it can be said that the outer model defines how each indicator relates to its latent variables (Ghozali & Januarti, 2013). Following below is the output in the form of the Outer Loading value of each variable when running PLS for the overall model.

The measurement model (outer model) shows the role of indicators in reflecting the variables formed or shows the relationship between variables and their constituent indicators (Suryawardani, 2018). The outer model value is the highest in each variable can interpreted as most representative indicator variable constituent. Significance value from connection This obtained via bootstrap of 500 sub-samples and 5% significance.

Output from model measurement on the variable Knowledge Use is reflected of the 3 item indicators (X1.1, X1.2, X1.3), Popularity is reflected of the 2 item indicators (X2.1 and X2.2), Creativity is reflected of the 2 item indicators (X3.1 and X3.2), Experience is reflected of the 2 item indicators (X4.1 and X4.2), Regularity Support is reflected of the 2 item indicators (X5.1 and X5.2), System Accessibility is reflected of the 2 item indicators (X6.1 and X6.2), Trust is reflected of the 3 item indicators (Z3.1, Z3.2, and Z3.3), Perceived Usefulness is reflected of the 3 item indicators (Z1.1, Z1.2, and Z1.3), Perceived Ease of Use is reflected of the 3 item indicators (Z2.1, Z2.2, and Z2.3), Attitude is reflected of the 3 item indicators (Y1.1, Y1.2, and Y1.3), and Behavioral Intention is reflected of the 3 item indicators (Y2.1, Y2.2, and Y2.3).

##### 4.2.1.1. Convergent Validity Value

Validity test convergent can be measured through two criteria that is based on evaluation on outer loading coefficient and Average Variance Extracted (AVE) value. Indicator reflexive said have correlation with the variable being measured If have loading factor coefficient > 0.7 (Ghozali & Januarti, 2013). According to Tomass M Hultt (2021) outer loading value 0.5-0.6 can be long enough.

	Attitude	Behavioral Intention	Creativity	Experience	Knowledge	Perceived Ease of Use	Perceived Usefulness	Popularity	Regularity support	System accessibility	Trust
X1.1	0.585	0.628	0.602	0.794	0.928	0.591	0.628	0.709	0.670	0.658	0.660
X1.2	0.560	0.589	0.529	0.742	0.914	0.500	0.560	0.754	0.615	0.633	0.594
X1.3	0.638	0.614	0.585	0.715	0.869	0.506	0.594	0.552	0.504	0.586	0.635
X2.1	0.519	0.572	0.470	0.589	0.715	0.444	0.531	0.943	0.587	0.562	0.601
X2.2	0.498	0.518	0.472	0.642	0.691	0.480	0.566	0.950	0.598	0.591	0.639
X3.1	0.586	0.548	0.894	0.559	0.485	0.608	0.643	0.348	0.554	0.514	0.532
X3.2	0.606	0.689	0.909	0.723	0.653	0.652	0.721	0.543	0.680	0.593	0.706
X4.1	0.590	0.599	0.639	0.846	0.747	0.508	0.600	0.585	0.597	0.636	0.592
X4.2	0.539	0.635	0.592	0.912	0.755	0.517	0.567	0.595	0.554	0.572	0.620
X4.3	0.598	0.687	0.636	0.861	0.679	0.596	0.680	0.529	0.546	0.572	0.659
X5.1	0.604	0.654	0.673	0.611	0.630	0.650	0.728	0.580	0.951	0.714	0.714
X5.2	0.558	0.636	0.630	0.618	0.625	0.589	0.730	0.609	0.947	0.723	0.683
X6.1	0.586	0.660	0.570	0.644	0.650	0.596	0.630	0.571	0.724	0.928	0.727
X6.2	0.540	0.581	0.575	0.618	0.637	0.603	0.691	0.561	0.683	0.929	0.731
Z1.1	0.660	0.691	0.724	0.641	0.614	0.661	0.881	0.532	0.722	0.699	0.726
Z1.2	0.648	0.644	0.680	0.602	0.540	0.698	0.897	0.510	0.642	0.585	0.726
Z1.3	0.575	0.641	0.597	0.632	0.587	0.667	0.868	0.492	0.669	0.593	0.635
Z2.1	0.484	0.499	0.502	0.394	0.393	0.779	0.613	0.233	0.508	0.438	0.451
Z2.2	0.659	0.648	0.635	0.565	0.568	0.886	0.675	0.500	0.629	0.646	0.625
Z2.3	0.570	0.626	0.629	0.600	0.520	0.874	0.659	0.472	0.518	0.535	0.624
Z3.1	0.580	0.578	0.553	0.501	0.518	0.489	0.609	0.506	0.646	0.657	0.833
Z3.2	0.534	0.651	0.626	0.605	0.560	0.605	0.661	0.571	0.574	0.632	0.851
Z3.3	0.578	0.760	0.585	0.715	0.694	0.632	0.741	0.595	0.657	0.711	0.869
Y1.1	0.952	0.654	0.610	0.608	0.624	0.655	0.692	0.522	0.618	0.586	0.626
Y1.2	0.963	0.640	0.617	0.610	0.602	0.646	0.652	0.508	0.582	0.563	0.638
Y1.3	0.930	0.696	0.654	0.660	0.645	0.634	0.684	0.496	0.543	0.574	0.623
Y2.1	0.535	0.881	0.530	0.582	0.526	0.621	0.619	0.443	0.600	0.628	0.661
Y2.2	0.679	0.923	0.679	0.723	0.672	0.635	0.686	0.577	0.598	0.577	0.730
Y2.3	0.692	0.943	0.667	0.703	0.644	0.677	0.740	0.546	0.670	0.638	0.751

Table 3 – CROSS LOADING

Based on the outer loading for **Knowledge**, it is known that all three indicators have more outer loading big of 0.7 with  $p$  values  $< 0.05$ , so can concluded that all three indicators from the Knowledge variable meets convergent validity, meaning that it is good at measuring the Knowledge Variable. The X1.1 indicator is known has an outer loading factor the largest is 0.928, and the X1.3 indicator has a smallest outer loading factor i.e. 0.869.

Based on the outer loading for **Popularity**, it is known that both indicators have more outer loading big of 0.7 with  $p$  values  $< 0.05$ , so can concluded that both indicators from the Popularity variable meets convergent validity, meaning that it is good at measuring the Popularity variable. The X2.2 indicator is known has an outer loading factor the largest is 0.950, and the X2.1 indicator has a smallest outer loading factor that is 0.943.

Based on the outer loading for **Creativity**, it is known that both indicators have more outer loading big of 0.7 with  $p$  values  $< 0.05$ , so can concluded that both indicators from the Creativity variable meets convergent validity, meaning that it is good at measuring the Creativity variable. The X3.2 indicator is known has an outer loading factor the largest is 0.909, and the X3.1 indicator has a smallest outer loading factor that is 0.894.

Based on the outer loading for **Experience**, it is known that all three indicators have more outer loading big of 0.7 with  $p$  values  $< 0.05$ , so can concluded that all three indicators from the Experience variable meets convergent validity, meaning that it is good at measuring the Experience variable. The X4.2 indicator is known has an outer loading factor the largest is 0.912, and the X4.1 indicator has a smallest outer loading factor that is 0.846.

Based on the outer loading for **Regularity Support**, it is known that both indicators have more outer loading big of 0.7 with  $p$  values  $< 0.05$ , so can concluded that both indicators from the Regularity support variable meets convergent validity, meaning that it is good at measuring the Regularity support variable. The X5.1 indicator is known has an outer loading factor the largest is 0.951, and the X5.2 indicator has a smallest outer loading factor that is 0.947.

Based on the outer loading for **System Accessibility**, it is known that both indicators have more outer loading big of 0.7 with  $p$  values  $< 0.05$ , so can concluded that both indicators from the System accessibility variable meets convergent validity, meaning that it is good at measuring the System accessibility variable. The X6.2 indicator is known has an outer loading factor the largest is 0.929, and the X6.1 indicator has a smallest outer loading factor that is 0.928.

Based on the outer loading for **Trust**, it is known that all three indicators have more outer loading big of 0.7 with  $p$  values  $< 0.05$ , so can concluded that all three indicators from the Trust variable meets convergent validity, meaning that it is good at measuring the Trust variable. The Z3.3 indicator is known has an outer loading factor the largest is 0.869, and the Z3.1 indicator has a smallest outer loading factor that is 0.833.

Based on the outer loading for **Perceived Usefulness**, it is known that all three indicators have more outer loading big of 0.7 with  $p$  values  $< 0.05$ , so can concluded that all three indicators from the Perceived Usefulness variable meets convergent validity, meaning that it is good at measuring the

Perceived Usefulness variable. The Z1.2 indicator is known has an outer loading factor the largest is 0.987, and the Z1.3 indicator has a smallest outer loading factor that is 0.868.

Based on the outer loading for **Perceived Ease of Use**, it is known that all three indicators have more outer loading big of 0.7 with  $p$  values  $< 0.05$ , so can concluded that all three indicators from the Perceived Ease of Use variable meets convergent validity, meaning that it is good at measuring the Perceived Ease of Use variable. The Z2.2 indicator is known has an outer loading factor the largest is 0.886, and the Z2.1 indicator has a smallest outer loading factor that is 0.779.

Based on the outer loading for **Attitude**, it is known that all three indicators have more outer loading big of 0.7 with  $p$  values  $< 0.05$ , so can concluded that all three indicators from the Attitude variable meets convergent validity, meaning that it is good at measuring the Attitude variable. The Y1.2 indicator is known has an outer loading factor the largest is 0.963, and the Y1.3 indicator has a smallest outer loading factor that is 0.930.

Based on the outer loading for **Intention to use NFTs**, it is known that all three indicators have more outer loading big of 0.7 with  $p$  values  $< 0.05$ , so can concluded that all three indicators from the Intention to use NFTs variable meets convergent validity, meaning that it is good at measuring the Intention use NFTs variable. The Y2.3 indicator is known has an outer loading factor the largest is 0.943, and the Y2.1 indicator has a smallest outer loading factor that is 0.881.

#### 4.2.1.2. Discriminant Value (Discriminant Validity)

It will be tested by looking at the average variance extracted (AVE) root value for each construct and comparing it to the correlation between constructs.

The discriminant validity test is used to see whether an indicator of a certain latent variable is really different from indicators of other latent variables, so that the indicator is considered appropriate to explain the latent variable. Discriminant validity testing is done by comparing values average variance extracted (AVE) with 0.5.

To check the discriminant validity value is with evaluate validity from construct based on AVE value, where a good model is required if AVE each construct value bigger from 0.5.

	Average Variance Extracted (AVE)
Knowledge	0.817
Popularity	0.896
Creativity	0.812
Experience	0.763
Regularity support	0.900
System accessibility	0.863

Perceived Usefulness	0.778
Perceived Ease of Use	0.719
Trust	0.725
Attitude	0.900
Intention to use NFTs	0.839

Table 4 – AVERAGE VARIANCE EXTRACTED (AVE)

Based on the output results, the AVE value for each construct is greater than 0.5, so it can be concluded that the Knowledge, Popularity, Creativity, Experience, Regularity Support, System Accessibility, Trust, Perceived Usefulness, Perceived Ease of Use, Attitude, and Intention to use NFTs constructs are good models, so all construct in the estimated model fulfil criteria discriminant validity.

#### 4.2.1.3. Composite Reliability

The third part of the outer model is to test the composite reliability. Composite reliability tests the reliability value between the indicator blocks of the constructs that form them. The construct is declared reliable if the value of composite reliability or **Cronbach alpha** is above 0.7. The following is a table of composite reliability output results from PLS:

Construct	Composite Reliability
Knowledge	0.931
Popularity	0.945
Creativity	0.896
Experience	0.906
Regularity support	0.948
System accessibility	0.926
Perceived Usefulness	0.913
Perceived Ease of Use	0.884
Trust	0.888
Attitude	0.964
Intention to use NFTs	0.940

Table 5 – COMPOSITE RELIABILITY

Composite reliability is good if the value is above 0.70. Based on the table above, it can be seen that the Composite reliability value for the Knowledge is 0.931, Popularity is 0.945, Creativity is 0.896,

Experience is 0.906, Regularity Support is 0.948, System Accessibility is 0.926, Trust is 0.888, Perceived Usefulness is 0.913, Perceived Ease of Use is 0.884, Attitude is 0.964, and Intention to use NFTs is 0.940, where the value of Composite reliability is the 11th construct in the model all are greater than 0.70, so it can be said that the measurement model or the outer model with reflexive indicators has a very high level of validation. Because the validity of an indicator can be known for its loading value, for exploratory research 0.5 to 0.6 is considered sufficient (Chin Wynne W. et al, 1996). Thus, it can be said that the mentioned indicators are really reinforce each other's latent variables or are really able to measure their latent variables.

### 4.3. HYPOTHESIS TESTING

Testing is done by *t*-statistic, when obtained *t*-statistic > *t*-table, then concluded significantly, and vice versa. When the results of testing hypothesis on models outer significantly, it indicates that the indicator is viewed can be used as a measuring instrument latent variable. Meanwhile, when the test results in inner models is significant, it means that there is a significant effect of latent variables to other latent variables.

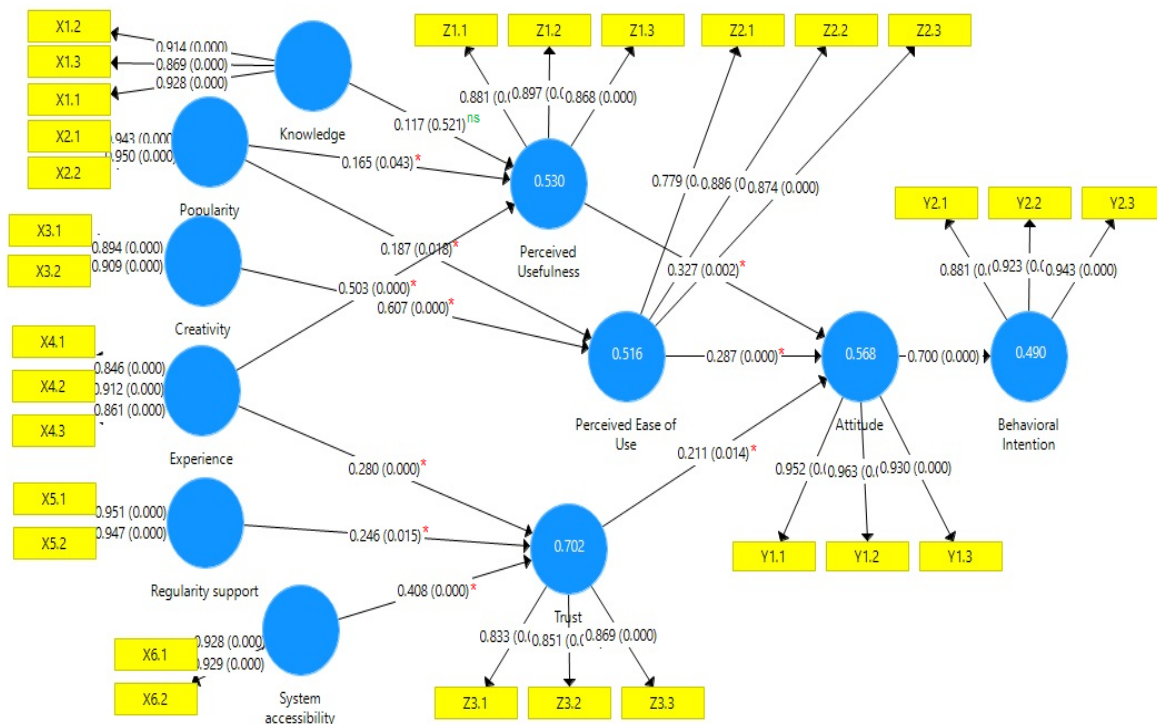


Figure 3 - DEMOGRAPHIC DATA OF RESPONSES

#### Information:

- \* = significant effect; *ns* = not significant
- Blue circle = construct variable; yellow box = indicator
- numbers outside sign ( ) = coefficient of loading factor
- numbers inside sign ( ) = p-value
- numbers inside circle blue = R-square

#### 4.3.1. Influence direct effect from exogenous variables to endogenous variables

It shows the magnitude influence direct from exogenous to endogenous without involve mediating variables.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
Attitude -> Intention to use NFTs	0.700	0.701	0.037	18.892	< 0.001
Creativity -> Perceived Ease of Use	0.607	0.615	0.066	9.223	< 0.001
Experience -> Perceived Usefulness	0.503	0.498	0.127	3.954	< 0.001
Experience -> Trust	0.280	0.275	0.075	3.713	< 0.001
Knowledge -> Perceived Usefulness	0.117	0.131	0.183	0.642	0.521
Perceived Ease of Use -> Attitude	0.287	0.288	0.080	3.595	< 0.001
Perceived Usefulness -> Attitude	0.327	0.335	0.103	3.187	0.002
Popularity -> Perceived Ease of Use	0.187	0.183	0.079	2.379	0.018
Popularity -> Perceived Usefulness	0.165	0.164	0.081	2.033	0.043
Regularity support -> Trust	0.246	0.252	0.101	2.446	0.015
System accessibility -> Trust	0.408	0.410	0.106	3.855	< 0.001
Trust -> Attitude	0.211	0.204	0.085	2.466	0.014

Table 6 – Influence of direct effect

The inner model estimation results for the direct effect between Attitudes to Intentions to use NFTs shows a  $p$  value of < 0.001, which it can conclude that there is significant direct effect between Attitudes to Intention to use NFTs of 0.700. The positive influence between Attitudes to Intentions to use NFTs can be interpreted that the better of Attitudes, then it will increase Intention to use NFTs. And vice versa, the less good the attitude, then it will decrease Intention to use NFTs.

The inner model estimation results for the direct effect between Creativity to Perceived Ease of Use shows a  $p$  value of < 0.001, which it can conclude that there is significant direct effect between Creativity to Perceived Ease of Use of 0.607. The positive influence between Creativity to Perceived Ease of Use can be interpreted that the better of Creativity, then it will increase Perceived Ease of Use. And vice versa, the less good of Creativity, then it will decrease Perceived Ease of Use.

The inner model estimation results for the direct effect between Experience to Perceived Usefulness shows a  $p$  value of < 0.001, which it can conclude that there is significant direct effect between Experience to Perceived Usefulness of 0.503. The positive influence between Experience to Perceived

Usefulness can be interpreted that the better of Experience, then it will increase Perceived Usefulness. And vice versa, the less good of Experience, then it will decrease Perceived Usefulness.

The inner model estimation results for the direct effect between Experience to Trust shows a  $p$  value of  $< 0.001$ , which it can conclude that there is significant direct effect between Experience to Trust of 0.280. The positive influence between Experience to Trust can be interpreted that the better of Experience, then it will increase Trust. And vice versa, the less good of Experience, then it will decrease Trust.

The inner model estimation results for the direct effect between Knowledge to Perceived Usefulness shows a  $p$  value of 0.521, where the value is greater of alpha 0.05, so it can conclude that direct effect between Knowledge to Perceived Usefulness is **not significant**, because has a weak influence i.e. 0.117. In other words, the better or less good Knowledge does not influence to increase or decrease in Perceived Usefulness.

The inner model estimation results for the direct effect between Perceived Ease of Use to Attitude shows a  $p$  value of  $< 0.001$ , which it can conclude that there is significant direct effect between Perceived Ease of Use to Attitude of 0.287. The positive influence between Perceived Ease of Use to Attitude can be interpreted that the better of Perceived Ease of Use, then it will increase Attitude. And vice versa, the less good of Perceived Ease of Use, then it will decrease Attitude.

The inner model estimation results for the direct effect between Perceived Usefulness to Attitude shows a  $p$  value of 0.002, which it can conclude that there is significant direct effect between Perceived Usefulness to Attitude of 0.327. The positive influence between Perceived Usefulness can be interpreted that the better of Usefulness, then it will increase Attitude. And vice versa, the less good of Usefulness, then it will decrease Attitude.

The inner model estimation results for the direct effect between Popularity to Perceived Ease of Use shows a  $p$  value of 0.018, which it can conclude that there is significant direct effect between Popularity to Perceived Ease of Use of 0.187. The positive influence between Popularity to Perceived Ease of Use can be interpreted that the better of Popularity, then it will increase Perceived Ease of Use. And vice versa, the less good of Popularity, then it will decrease Perceived Ease of Use.

The inner model estimation results for the direct effect between Popularity to Perceived Usefulness shows a  $p$  value of 0.043, which it can conclude that there is significant direct effect between Popularity to Perceived Usefulness of 0.165. The positive influence between Popularity to Perceived Usefulness can be interpreted that the better of Popularity, then it will increase Perceived Usefulness. And vice versa, the less good of Popularity, then it will decrease Perceived Usefulness.

The inner model estimation results for the direct effect between Regularity support to Trust shows a  $p$  value of 0.015, which it can conclude that there is significant direct effect between Regularity support to Trust of 0.246. The positive influence between Regularity support to Trust can be interpreted that the better of Regularity support, then it will increase Trust. And vice versa, the less good of Regularity support, then it will decrease Trust.

The inner model estimation results for the direct effect between System accessibility to Trust shows a  $p$  value of  $< 0.001$ , which it can conclude that there is significant direct effect between System accessibility to Trust of 0.408. The positive influence between System accessibility to Trust can be interpreted that the better of System accessibility, then it will increase Trust. And vice versa, the less good of System accessibility, then it will decrease Trust.

The inner model estimation results for the direct effect between Trust to Attitude shows a  $p$  value of 0.014, which it can conclude that there is significant direct effect between Trust to Attitude of 0.211. The positive influence between Trust to Attitude can be interpreted that the better of Trust, then it will increase Attitude. And vice versa, the less good of Trust, then it will decrease Attitude.

#### 4.3.2. Influence of indirect effect from exogenous to endogenous variables

This indirect effect shows the magnitude of the direct influence of exogenous on endogenous variables by involving mediating variables.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
Creativity -> Perceived Ease of Use -> Attitude	0.174	0.178	0.056	3.133	<b>0.002</b>
Popularity -> Perceived Ease of Use -> Attitude	0.054	0.052	0.027	2.005	<b>0.046</b>
Experience -> Perceived Usefulness -> Attitude	0.165	0.167	0.068	2.437	<b>0.015</b>
Knowledge -> Perceived Usefulness -> Attitude	0.038	0.046	0.066	0.580	<b>0.562</b>
Popularity -> Perceived Usefulness -> Attitude	0.054	0.055	0.032	1.678	<b>0.094</b>
Experience -> Trust -> Attitude	0.059	0.057	0.031	1.927	<b>0.055</b>
Regularity support -> Trust -> Attitude	0.052	0.050	0.029	1.806	<b>0.072</b>
System accessibility -> Trust -> Attitude	0.086	0.084	0.043	1.993	<b>0.047</b>
Creativity -> Perceived Ease of Use -> Attitude -> Intention to use NFTs	0.122	0.125	0.040	3.031	<b>0.003</b>
Perceived Ease of Use -> Attitude -> Intention to use NFTs	0.201	0.202	0.057	3.507	<b>&lt; 0.001</b>
Popularity -> Perceived Ease of Use -> Attitude -> Intention to use NFTs	0.038	0.037	0.019	1.994	<b>0.047</b>
Experience -> Perceived Usefulness -> Attitude -> Intention to use NFTs	0.115	0.117	0.049	2.352	<b>0.019</b>
Knowledge -> Perceived Usefulness -> Attitude -> Intention to use NFTs	0.027	0.032	0.047	0.569	<b>0.570</b>

Perceived Usefulness -> Attitude -> Intention to use NFTs	0.229	0.236	0.075	3.034	<b>0.003</b>
Popularity -> Perceived Usefulness -> Attitude -> Intention to use NFTs	0.038	0.038	0.023	1.658	<b>0.098</b>
Experience -> Trust -> Attitude -> Intention to use NFTs	0.041	0.040	0.022	1.889	<b>0.059</b>
Regularity support -> Trust -> Attitude -> Intention to use NFTs	0.036	0.035	0.020	1.794	<b>0.073</b>
Trust -> Attitude -> Intention to use NFTs	0.148	0.143	0.061	2.425	<b>0.016</b>
System accessibility -> Trust -> Attitude -> Intention to use NFTs	0.060	0.059	0.031	1.961	<b>0.050</b>

Table 7– Influence of indirect effect

The path coefficient value for the indirect effect between Creativity through Perceived Ease of Use on Attitude is 0.174 indicating a  $p$  value of 0.002 which it can be concluded that the indirect effect between Creativity through Perceived Ease of Use on Attitude is significant. In other words, the better Creativity is, it will affect the increase in Perceived Ease of Use, so that with an increase in Perceived Ease of Use it will increase Attitude. And vice versa, the less good Creativity is, it will affect the decrease in Perceived Ease of Use, so that with a decrease in Perceived Ease of Use it will also decrease Attitude.

The path coefficient value for the indirect effect between Popularity through Perceived Ease of Use on Attitude is 0.054 indicating a  $p$  value of 0.046 which it can be concluded that the indirect effect between Popularity through Perceived Ease of Use on Attitude is significant. In other words, the better Popularity is, it will affect the increase in Perceived Ease of Use, so that with an increase in Perceived Ease of Use it will increase Attitude. And vice versa, the less good Popularity is, it will affect the decrease in Perceived Ease of Use, so that with a decrease in Perceived Ease of Use it will also decrease Attitude.

The path coefficient value for the indirect effect between Experience through Perceived Usefulness on Attitude is 0.165 indicating a  $p$  value of 0.015 which it can be concluded that the indirect effect between Experience through Perceived Usefulness on Attitude is significant. In other words, the better Experience is, it will affect the increase in Perceived Usefulness, so that with an increase in Perceived Usefulness it will increase Attitude. And vice versa, the less good Experience is, it will affect the decrease in Perceived Usefulness, so that with a decrease in Perceived Usefulness it will also decrease Attitude.

The path coefficient value for the indirect effect between Knowledge on Attitude through Perceived Usefulness as the intervening variable is 0.038 indicating a  $p$  value of 0.562 which it can be concluded that the indirect effect between Knowledge on Attitude through Perceived Usefulness as the intervening variable is not significant. In other words, the high or low of Knowledge will not affect the high or low of Perceived Usefulness, so this will not affect the high or low of Attitude either.

The path coefficient value for the indirect effect between Popularity on Attitude through Perceived Usefulness as the intervening variable is 0.054 indicating a  $p$  value of 0.094 which it can be concluded that the indirect effect between Popularity on Attitude through Perceived Usefulness as the intervening variable is not significant. In other words, the high or low of Popularity will not affect the high or low of Perceived Usefulness, so this will not affect the high or low of Attitude either.

The path coefficient value for the indirect effect between Experience on Attitude through Trust as the intervening variable is 0.059 indicating a  $p$  value of 0.055 which it can be concluded that the indirect effect between Experience on Attitude through Trust as the intervening variable is not significant. In other words, the high or low of Experience will not affect the high or low of Trust, so this will not affect the high or low of Attitude either.

The path coefficient value for the indirect effect between Regularity support on Attitude through Trust as the intervening variable is 0.052 indicating a  $p$  value of 0.072 which it can be concluded that the indirect effect between Regularity support on Attitude through Trust as the intervening variable is not significant. In other words, the high or low of Regularity support will not affect the high or low of Trust, so this will not affect the high or low of Attitude either.

The path coefficient value for the indirect effect between System accessibility through Trust on Attitude is 0.086 indicating a  $p$  value of 0.047 which it can be concluded that the indirect effect between System accessibility through Trust on Attitude is significant. In other words, the better System accessibility is, it will affect the increase in Trust, so that with an increase in Trust it will increase Attitude. And vice versa, the less good System accessibility is, it will affect the decrease in Trust, so that with a decrease in Trust it will also decrease Attitude.

The path coefficient value for the indirect effect between Creativity through Perceived Ease of Use and Attitude on Intention to use NFTs is 0.122 indicating a  $p$  value of 0.003 which it can be concluded that the indirect effect between Creativity through Perceived Ease of Use and Attitude on Intention to use NFTs is significant. In other words, the better Creativity is, it will affect the increase in Perceived Ease of Use and Attitude, so it will increase Intention to use NFTs. And vice versa, the less good Creativity is, it will affect the decrease in Perceived Ease of Use and Attitude, so it will also decrease Intention to use NFTs.

The path coefficient value for the indirect effect between Perceived Ease of Use through Attitude on Intention to use NFTs is 0.201 indicating a  $p$  value of 0.000 which it can be concluded that the indirect effect between Perceived Ease of Use through Attitude on Intention to use NFTs is significant. In other words, the better Perceived Ease of Use is, it will affect the increase in Attitude, so that with an increase in Attitude it will increase Intention to use NFTs. And vice versa, the less good Perceived Ease of Use is, it will affect the decrease in Attitude, so that with a decrease in Attitude it will also decrease Intention to use NFTs.

The path coefficient value for the indirect effect between Popularity through Perceived Ease of Use and Attitude on Intention to use NFTs is 0.038 indicating a  $p$  value of 0.047 which it can be concluded that the indirect effect between Popularity through Perceived Ease of Use and Attitude on Intention to use NFTs is significant. In other words, the better Popularity is, it will affect the increase in Perceived Ease of Use and Attitude, so it will increase Intention to use NFTs. And vice versa, the less good

Popularity is, it will affect the decrease in Perceived Ease of Use and Attitude, so that with a decrease in Perceived Ease of Use and Attitude it will also decrease Intention to use NFTs.

The path coefficient value for the indirect effect between Experience through Perceived Usefulness and Attitude on Intention to use NFTs is 0.115 indicating a  $p$  value of 0.019 which it can be concluded that the indirect effect between Experience through Perceived Usefulness and Attitude on Intention to use NFTs is significant. In other words, the better Experience is, it will affect the increase in Perceived Usefulness and Attitude, so that with an increase in Perceived Usefulness and Attitude it will increase Intention to use NFTs. And vice versa, the less good Experience is, it will affect the decrease in Perceived Usefulness and Attitude, so that with a decrease in Perceived Usefulness and Attitude it will also decrease Intention to use NFTs.

The path coefficient value for the indirect effect between Knowledge on Intention to use NFTs through Perceived Usefulness and Attitude as the intervening variable is 0.027 indicating a  $p$  value of 0.570 which is greater than 0.05, so it can be conclude that the indirect effect between Knowledge on Intention to use NFTs through Perceived Usefulness and Attitude as the intervening variable is not significant. In other words, the high or low of Knowledge will not affect the high or low of Perceived Usefulness and Attitude, so this will not affect the high or low of Intention to use NFTs either.

The path coefficient value for the indirect effect between Perceived Usefulness through Attitude on Intention to use NFTs is 0.229 indicating a  $p$  value of 0.003 which it can be concluded that the indirect effect between Perceived Usefulness through Attitude on Intention to use NFTs is significant. In other words, the better Perceived Usefulness is, it will affect the increase in Attitude, so that with an increase in Attitude it will increase Intention to use NFTs. And vice versa, the less good Perceived Usefulness is, it will affect the decrease in Attitude, so that with a decrease in Attitude it will also decrease Intention to use NFTs.

The path coefficient value for the indirect effect between Popularity on Intention to use NFTs through Perceived Usefulness and Attitude as the intervening variable is 0.038 indicating a  $p$  value of 0.098 which is greater than 0.05, so it can be concluded that the indirect effect between Popularity on Intention to use NFTs through Perceived Usefulness and Attitude as the intervening variable is not significant. In other words, the high or low of Popularity will not affect the high or low of Perceived Usefulness and Attitude, or even of Intention to use NFTs either.

The path coefficient value for the indirect effect between Experience on Intention to use NFTs through Trust and Attitude as the intervening variable is 0.041 indicating a  $p$  value of 0.059 which is greater than 0.05, so it can be concluded that the indirect effect between Experience on Intention to use NFTs through Trust and Attitude as the intervening variable is not significant. In other words, the high or low of Experience will not affect the high or low of Trust and Attitude, or Intention to use NFTs either.

The path coefficient value for the indirect effect between Regularity support on Intention to use NFTs through Trust and Attitude as the intervening variable is 0.036 indicating a  $p$  value of 0.073 which is greater than 0.05, so it can be concluded that the indirect effect between Regularity support on Intention to use NFTs through Trust and Attitude as the intervening variable is not significant. In other words, the high or low of Regularity support will not affect the high or low of Trust and Attitude, and Intention to use NFTs either.

The path coefficient value for the indirect effect between Trust through Attitude on Intention to use NFTs is 0.148 indicating a  $p$  value of 0.016 which it can be concluded that the indirect effect between Trust through Attitude on Intention to use NFTs is significant. In other words, the better Trust is, it will affect the increase in Attitude, so that with an increase in Attitude it will increase Intention to use NFTs. And vice versa, the less good Trust is, it will affect the decrease in Attitude, so that with a decrease in Attitude it will also decrease Intention to use NFTs.

The path coefficient value for the indirect effect between System accessibility on Intention to use NFTs through Trust and Attitude as the intervening variable is 0.060 indicating a  $p$  value of 0.050 which is greater than 0.05, so it can be concluded that the indirect effect between System accessibility on Intention to use NFTs through Trust and Attitude as the intervening variable is not significant. In other words, the high or low of System accessibility will not affect the high or low of Trust and Attitude, or Intention to use NFTs either.

#### 4.4. STRUCTURAL MODEL TESTING (INNER MODEL)

Evaluation of the model using  $R$ -square ( $R^2$ ) for the dependent construct. The  $R$ -square value reflects the predictive power of the entire model (Falk, 2014) with the limitation that the  $R$ -square value is greater than 0.10 or greater than 10 percent (or the goodness-fit of the model). Based on data processing with PLS, the value of the coefficient of determination ( $R$ -square) is generated as follows:

	<b><math>R</math> Square</b>
<b>Attitude</b>	0.568
<b>Intention to use NFTs</b>	0.490
<b>Perceived Ease of Use</b>	0.516
<b>Perceived Usefulness</b>	0.530
<b>Trust</b>	0.702

Table 8 –  $R$ -square value

Based on the model it is known that the  $R$ -square for Attitude is 0.568, which means that Attitude is influenced by Perceived Usefulness, Perceived Ease of Use, Perceived Risk, and Trust of 56.8 %. While the other 43.2%. influenced by other factors.

The  $R$ -square for Intention to use NFTs is 0.490, which means that Intention to use NFTs is influenced by Attitude of 49.0 %. While the other 51.0%. influenced by other factors.

The  $R$ -square for Perceived Ease of Use is 0.516, which means that Perceived Ease of Use is influenced by Popularity and Creativity of 51.6%. While the other 48.4%. influenced by other factors.

The  $R$ -square for Perceived Usefulness is 0.530, which means that Perceived Usefulness is influenced by Knowledge, Popularity, and Experience of 53.0%. While the other 47.0%. influenced by other factors.

The *R*-square for Trust is 0.702, which means that Trust is influenced by Experience, Regularity Support, and System Accessibility of 70.2%. While the other 29.8% influenced by other factors.

Meanwhile for Knowledge, Popularity, Creativity, Experience, Regularity Support, System Accessibility are independent variables that affect the dependent variable, so they don't have an *R* square.

The goodness of fit in PLS can be seen from the  $Q^2$  value. The  $Q^2$  value has the same meaning as the coefficient of determination (*R*-square /  $R^2$ ) in the regression analysis. The higher  $R^2$ , the model can be said to be more fit with the data. A *Q*-Square value greater than 0 (zero) indicates that the model has predictive relevance, while a *Q*-Square value less than 0 (zero) indicates that the model lacks predictive relevance (Ghozali & Januarti, 2013). From the model above, it can be seen the value of  $Q^2$  as follows:

$$Q^2 \text{ value} = 1 - (1 - R_{21}) (1 - R_{22}) (1 - R_{23}) \dots (1 - R_{2n})$$

$$= 1 - (1 - 0.568) (1 - 0.490) (1 - 0.516) (1 - 0.530) (1 - 0.702)$$

$$= 1 - 0.0149 = 0.9851 = 98.51\%$$

In this research model the *Q*-square value ( $Q^2$ ) generated in the overall model equation is 98.51%, which is of very high value, so this means that the structural model has very high predictive relevance, the model is classified as very good and feasible to be used in predictions.

## 5. CONCLUSION

The research intends to understand how NFTs bring value to the luxury brands. It is unique for the topic under discussion, whereas NFTs bring immense value to luxury brands in the digital landscape, offering unique opportunities for engagement, monetization, and brand differentiation.

Moreover, NFTs allow luxury brands to connect with the younger, digitally native audience. By embracing NFTs, luxury brands can offer innovative and immersive digital experiences that resonate with the preferences and behaviours of this tech-savvy demographic. This engagement can lead to increased brand relevance, customer retention, and market expansion.

Through the conclusions researched by this research through the study of the mentioned variables noted that they have a positive effect on the behavioural intentions to use NFTs to bring value to the luxury brands, offering unique opportunities for brand differentiation, engagement, and monetization.

In summary, NFTs bring immense value to luxury brands as digital images, enabling brand differentiation, engagement, and monetization in the digital landscape. By leveraging NFT technology, luxury brands can create exclusive, visually captivating artworks that resonate with their audience, collaborate with digital artists, ensure authenticity, and tap into new revenue streams. Embracing NFTs as digital images allows luxury brands to stay at the forefront of digital innovation and connect with consumers in a visually compelling and technologically advanced manner.

## 6. LIMITATION AND FUTURE RESEARCH

This research helps to fill the large gap in the literature on how can NFTs bring value to the luxury brands. The main contribution of the current study is to investigate the effect of non-independent factors on the behavioral intention. Despite, the legal and intellectual property considerations surrounding NFTs remain a complex and evolving area. Luxury brands must ensure that their NFT initiatives comply with intellectual property laws and that proper licensing and rights management are in place. As the legal landscape continues to evolve, luxury brands need to stay informed and adapt their strategies accordingly to protect their brand assets and avoid potential legal issues.

In order to further explore the value of NFTs for luxury brands, there are several avenues for future research. Firstly, examining consumer perceptions and behaviors towards luxury brand NFTs would provide valuable insights into the acceptance and adoption of these digital assets. Understanding how consumers perceive the value, authenticity, and desirability of luxury brand NFTs would help brands tailor their strategies and offerings to better meet consumer expectations.

Another area of research could focus on the impact of NFT collaborations with digital artists on brand image and customer engagement. Investigating the effects of these collaborations on brand perception, customer loyalty, and the overall brand narrative would provide valuable insights for luxury brands considering partnerships with digital artists in the NFT space.

## BIBLIOGRAPHICAL REFERENCES

- Alalwan, A. A., Baabdullah, A. M., Rana, N. P., Tamilmani, K., & Dwivedi, Y. K. (2018). Examining adoption of mobile internet in Saudi Arabia: Extending TAM with perceived enjoyment, innovativeness and trust. *Technology in Society, 55*, 100–110. <https://doi.org/10.1016/j.techsoc.2018.06.007>
- Alavi, M., & Leidner, D. E. (2001). Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues. In *Source: MIS Quarterly* (Vol. 25, Issue 1).
- Albayati, H., Kim, S. K., & Rho, J. J. (2020). Accepting financial transactions using blockchain technology and cryptocurrency: A customer perspective approach. *Technology in Society, 62*. <https://doi.org/10.1016/j.techsoc.2020.101320>
- Albers, S. (2008). *Munich Personal RePEc Archive Three Failed Attempts of Joint Rankings of Research in Economics and Business*.
- Aletha, N. O., & Radityasakti, N. A. (2021). *Understanding Non-Fungible Token (NFTs) in CryptoArt Industry*.
- Aljazzaf, Z. M., Perry, M., & Capretz, M. A. M. (2010). Online trust: Definition and principles. *Proceedings - 5th International Multi-Conference on Computing in the Global Information Technology, ICCGI 2010*, 163–168. <https://doi.org/10.1109/ICCGI.2010.17>
- Alzahrani, A. I., Mahmud, I., Ramayah, T., Alfarraj, O., & Alalwan, N. (2019). Modelling digital library success using the DeLone and McLean information system success model. *Journal of Librarianship and Information Science, 51*(2), 291–306. <https://doi.org/10.1177/0961000617726123>
- Ashrafzadeh, A., & Sayadian, S. (2015). University instructors' concerns and perceptions of technology integration. *Computers in Human Behavior, 49*, 62–73. <https://doi.org/10.1016/j.chb.2015.01.071>
- Austermann, J., & Mertins, B. (2014a). *Technology Acceptance Model Revised-An Investigation on the Managerial Attitudes towards Using Social Media in Innovation Processes*.
- Austermann, J., & Mertins, B. (2014b). *Technology Acceptance Model Revised-An Investigation on the Managerial Attitudes towards Using Social Media in Innovation Processes*.
- Balaskas, S., Panagiotarou, A., & Rigou, M. (2022). The Influence of Trustworthiness and Technology Acceptance Factors on the Usage of e-Government Services during COVID-

- 19: A Case Study of Post COVID-19 Greece. *Administrative Sciences*, 12(4). <https://doi.org/10.3390/admsci12040129>
- Bolodeoku, P. B., Igbinoba, E., Salau, P. O., Chukwudi, C. K., & Idia, S. E. (2022). Perceived usefulness of technology and multiple salient outcomes: the improbable case of oil and gas workers. *Heliyon*, 8(4). <https://doi.org/10.1016/j.heliyon.2022.e09322>
- Boni, E. K. (2022). *Smart Retailing and the Challenges of AI Ethics: A Systematic Literature Review*. <https://orcid.org/0000-0001-6476-5588>
- Brun, A. (2021). *SCHOOL OF INDUSTRIAL AND INFORMATION ENGINEERING MSc. in Management Engineering Applications of Non-fungible tokens (NFTs) and the Intersection with fashion luxury industry*.
- Chin Wynne W. et al. (1996). *PROCEEDINGS OF THE SEVENTEENTH INTERNATIONAL CONFERENCE ON INFORMATION SYSTEMS A PARTIAL LEAST SQUARES LATENT VARIABLE MODELING APPROACH FOR MEASURING INTERACTION EFFECTS: RESULTS FROM A MONTE CARLO SIMULATION STUDY AND VOICE MAIL EMOTION/ADOPTION STUDY*.
- Cialdini, R. B., & Trost, M. B. (1998). *social\_influence\_-\_social\_norms\_conformity\_and\_compliance\_1998*.
- Colicev, A. (2022). How can non-fungible tokens bring value to brands. *International Journal of Research in Marketing*. <https://doi.org/10.1016/j.ijresmar.2022.07.003>
- Dalai, S. S. (2022). *A study of NFTs (Non-Fungible Tokens) (Non-Fungible Tokens)*. <http://www.teknik.uu.se/education/>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, 13(3), 319–339. <https://doi.org/10.2307/249008>
- Dey, I. (1993). *Qualitative Data Analysis: A User-Friendly Guide for Social Scientists*.
- Dhruv, S. (2022). Best design practices & strategy to launch your own NFT project. *Trends in Computer Science and Information Technology*, 7(1), 007–009. <https://doi.org/10.17352/tcsit.000045>
- F. Hair JR, J., C. Black, W., J. Babin, B., & E. Andreson, R. (1998). *Multivariate Data Analysis*.
- Falk, R. F. (2014). *A Primer for Soft Modeling Effects of Intellectual Ability and Personality on Self-Concepts of Gifted Children using PLS View project Partial Least Squares Path Modeling View project*. <https://www.researchgate.net/publication/232590534>
- Field, A. P. (2009). *Discovering statistics using SPSS : (and sex and drugs and rock “n” roll)*. SAGE Publications.

- Gholami, Z., Abdekhoda, M., & Gavgani, V. Z. (2018). Determinant factors in adopting mobile technology-based services by academic librarians. *DESIDOC Journal of Library and Information Technology*, 38(4), 271–277. <https://doi.org/10.14429/djlit.38.4.12676>
- Ghozali, I., & Januarti, I. (2013). Supervisor Power and Auditor Experience Influencing Auditor's Response The Effect of Comprehensive Performance Measurement System of Managerial Performance: Distributive and Directional Justice as Mediators View project Supervisor Power and Auditor Experience Influencing Auditor's Response. In *Research Journal of Finance and Accounting www.iiste.org ISSN* (Vol. 4, Issue 2). Online. <https://www.researchgate.net/publication/289671750>
- Goedegebure, R. P. G., Tijssen, I. O. J. M., van der Laan, L. N., & van Trijp, H. C. M. (2022). The Subjective Value of Product Popularity: A Neural Account of How Product Popularity Influences Choice Using a Social and a Quality Focus. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.738095>
- Hackbarth, G., Grover, V., & Yi, Y. (2003). *Computer playfulness and anxiety: positive and negative mediators of the system experience effect on perceived ease of use.*
- Henriksen, D., Mishra, P., & Fisser, P. (2016). Infusing Creativity and Technology in 21st Century Education: A Systemic View for Change. In *Educational Technology & Society* (Vol. 19, Issue 3).
- Hoffmann, J., Ivcevic, Z., & Brackett, M. (2016). Creativity in the Age of Technology: Measuring the Digital Creativity of Millennials. *Creativity Research Journal*, 28(2), 149–153. <https://doi.org/10.1080/10400419.2016.1162515>
- Kirjavainen, E. (2022). *The future of luxury fashion brands through NFTs.*
- Kotler, P. (2000). *Marketing Management, Millenium Edition.* [www.pearsoncustom.com](http://www.pearsoncustom.com)
- Lazar, J., Beere, P., Greenidge, K. D., & Nagappa, Y. (2003). Web accessibility in the mid-atlantic united states: A study of 50 homepages. *Universal Access in the Information Society*, 2(4), 331–341. <https://doi.org/10.1007/s10209-003-0060-z>
- Lewis, J. R., & Hf, S. (2019). Comparison of Four TAM Item Formats: Effect of Response Option Labels and Order. In *Journal of Usability Studies* (Vol. 14).
- Malhotra, N. K., & Birks, D. F. (2007). *Marketing research : an applied approach.* Prentice Hall/Financial Times.
- McKnight, H., Carter, M., & Clay, P. (2009). Association for Information Systems AIS Electronic Library (AISeL) TRUST IN TECHNOLOGY: DEVELOPMENT OF A SET OF CONSTRUCTS AND MEASURES Recommended Citation. In *TRUST IN TECHNOLOGY: DEVELOPMENT OF A SET OF CONSTRUCTS AND MEASURES* (Vol. 10). <http://aisel.aisnet.org/digit2009/10>

- Ottenbreit-Leftwich, A. T., Ertmer, P. A., & Tondeur, J. (2015). 7.2 *Interpretation of Research on Technology Integration in Teacher Education in the USA: Preparation and Current Practices* (pp. 1239–1262). [https://doi.org/10.1007/978-94-017-9282-0\\_61](https://doi.org/10.1007/978-94-017-9282-0_61)
- Peters, G. W., Panayi, E., & Chapelle, A. (2015). *Trends in cryptocurrencies and blockchain technologies: a monetary theory and regulation perspective* *Trends in cryptocurrencies and blockchain technologies: a monetary theory and regulation perspective* *Trends in cryptocurrencies and blockchain technologies: a monetary theory and regulation perspective*.  
<https://ssrn.com/abstract=3084011><https://ssrn.com/abstract=3084011>Electronic copy available at: <https://ssrn.com/abstract=3084011>
- Reisman, F. (2015). *Creativity in Business 2014*.
- Reyna, J., & Meier, P. (2018). Using the Learner-Generated Digital Media (LGDM) framework in tertiary science education: A pilot study. *Education Sciences*, 8(3). <https://doi.org/10.3390/educsci8030106>
- Robinson, H. S., Carrillo, P. M., Anumba, C. J., & Al-Ghassani, A. M. (2004). Developing a business case for knowledge management: The IMPaKT approach. *Construction Management and Economics*, 22(7), 733–743. <https://doi.org/10.1080/0144619042000226306>
- Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. In *Academy of Management Review* (Vol. 23, Issue 3, pp. 393–404). <https://doi.org/10.5465/AMR.1998.926617>
- Sambhanthan, A., & Good, A. (2012). *Implications for Improving Accessibility to E-Commerce Websites in Developing Countries-A Study of Hotel Websites*.
- Samuel, N., Onasanya, S. A., & Olumorin, C. O. (2018). Perceived usefulness, ease of use and adequacy of use of mobile technologies by Nigerian university lecturers. In *International Journal of Education and Development using Information and Communication Technology (IJEDICT)* (Vol. 14).
- Schneider, E. (2017). *DIGITAL TRUST FOR SMART ICT White Paper*.
- Setyo Iriani, S., & Lestari Andjarwati, A. (2020). ANALYSIS OF PERCEIVED USEFULNESS, PERCEIVED EASE OF USE, AND PERCEIVED RISK TOWARD ONLINE SHOPPING IN THE ERA OF COVID-19 PANDEMIC. In *Systematic Reviews in Pharmacy* (Vol. 11, Issue 12).
- Simões, J., & Fontinha, R. G. (2019). *HOW DOES TECHNOLOGY INFLUENCE KNOWLEDGE SHARING AND APPLICATION AMONG TEAM MEMBERS?*

- Sun, Y., & Wang, S. (2020). Understanding consumers' intentions to purchase green products in the social media marketing context. *Asia Pacific Journal of Marketing and Logistics*, 32(4), 860–878. <https://doi.org/10.1108/APJML-03-2019-0178>
- Suryawardani, G. A. O. (2018). *Evaluation of Marketing Strategy of Sanurvillage Festtvat Based on Visitors' Behaviour*.
- Tang, L. L., & Hanh Nguyen, T. H. (2013). Common causes of trust, satisfaction and TAM in online shopping: An integrated model. *Journal of Quality*, 20(5), 483–501. <https://doi.org/10.6220/joq.2013.205.01>
- TomassMHultt, G. (2021). *Classroom Companion: Business Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R AAWorkbook*. <http://www>.
- Wegelin, M. . et. al. (2000). *Does sunlight change the material and content of polyethylene terephthalate (PET) bottles?*
- Zsigmondová, A., Zsigmond, T., & Machová, R. (2021). Theoretical Background to the Role of Trust in Marketing. *SHS Web of Conferences*, 115, 03019. <https://doi.org/10.1051/shsconf/202111503019>

## Appendix A: Measures

Constructs	Items	Questions	References
Knowledge	K1	I can learn how to use NFTs easily for dealing with luxury brands	(Robinson et al., 2004)
	K2	Learn how to use NFTs is simple for dealing with luxury brands	(Ashrafzadeh & Sayadian, 2015)
	K3	I would have no difficulty telling others about the results of using NFTs for dealing with luxury brands	(Ashrafzadeh & Sayadian, 2015)
Popularity	P1	Before deciding whether to use NFTs, I was able to properly try it out	(Ashrafzadeh & Sayadian, 2015)
	P2	I know where I can go to achieve satisfaction trying out NFTs for dealing with luxury brands	(Ashrafzadeh & Sayadian, 2015)
Creativity	C1	I would be a better learner if I knew how to use NFTs for dealing with luxury brands	(Reyna & Meier, 2018)
	C2	I enjoy learning how to use NFTs for dealing with luxury brands	(Reyna & Meier, 2018)
Experience	E1	My interaction with NFTs would be clear and understandable	(Lewis & Hf, 2019)
	E2	It would be easy for me to become skillful at using NFTs for dealing with luxury brands	(Lewis & Hf, 2019)
	E3	I would like to be a participant member of using NFTs for dealing with luxury brands	(Ottenbreit-Leftwich et al., 2015)
Regularity Support	RS1	NFTs adoption results in more efficiency for dealing with luxury brands	(Gholami et al., 2018)

	RS2	Portability of NFTs enhance the effectiveness of their usage for dealing with luxury brands	(Samuel et al., 2018)
System Accessibility	SA1	Dealing with NFTs is safe and secure when using personal data.	(Ottenbreit-Leftwich et al., 2015)
	SA2	NFTs develop creativity based alternative and new ideas on established values.	(Ottenbreit-Leftwich et al., 2015)
Trust	T1	NFTs give the impression that it keeps promises and commitments when dealing with luxury brands.	(Tang & Hanh Nguyen, 2013)
	T2	I believe that NFTs have my best interests in mind when dealing with luxury brands.	(Tang & Hanh Nguyen, 2013)
	T3	NFTs have enough safeguards to make me feel comfortable when dealing with luxury brands.	(Balaskas et al., 2022)
Perceived Usefulness	PU1	The use of NFTs facilitate a direct interaction with luxury brands.	(Austermann & Mertins, 2014b)
	PU2	NFTs are frequently used for smart dealing with luxury brands.	(Austermann & Mertins, 2014b)
	PU3	NFTs provide useful platforms for dealing with luxury brands.	(Austermann & Mertins, 2014b)
Perceived Ease of Use	PEU1	Experienced person is needed whenever NFTs are used for dealing with luxury brands	(Austermann & Mertins, 2014b)

	PEU2	NFTs are dynamic is usage for dealing with luxury brands.	(Austermann & Mertins, 2014b)
	PEU3	The use of NFTs is more convenient to access information anywhere and anytime.	(Austermann & Mertins, 2014b)
Attitude	A1	I think positively by using NFTs for innovation processes and productivity when dealing with luxury brands	(Austermann & Mertins, 2014b)
	A2	Using NFTs for dealing with luxury brands is a wise idea.	(Austermann & Mertins, 2014b)
	A3	Using NFTs for dealing with luxury brands is pleasant.	(Alzahrani et al., 2019)
Intention to use NFTs	I1	I believe it is worthwhile for me to use NFTs for dealing with luxury brands.	(Alzahrani et al., 2019)
	I2	I plan to use NFTs very often in the future for dealing with luxury brands.	(Alzahrani et al., 2019)
	I3	Given that I have access to NFTs when dealing with luxury brands, I predict that I would adopt it.	(Austermann & Mertins, 2014b)

**APPENDIX B: MODERATORS**

Constructs	Question Items	Answers
Awareness	Have you ever known about NFTs as a component of luxury brands?	Yes No
Demographics	What is your gender?	Male Female Prefer not to say
	What is your age?	Numerical values input
	What is your highest level of education?	High school Bachelor's degree Master's degree PHD Other