Frida: more profitable than S&P 500?

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The objective of this research is to determine the constructs of regret, pleasure and purchase frequency of an art consumer. A Partial Least Squares and Structural Equations methodology was used for their virtues as second-generation models. The results show that regret bias was statistically explained through financial motivation, passion for art, and alternative offers; therefore, people may have feelings of regret or anxiety due to the fear of missing out on an opportunity by not buying a work of art, as well as that passion for art was an exogenous variable influential in the explanation of loss-regret, the pleasure, and frequency of purchase. The limitation of the research is the subjectivity, historical context, culture of the sample used, the historical context the implications of studying art as an alternative asset are that it improves the culture of investment and the market. The research takes an original approach since it studies a behavioral finance bias such as regret and what determines the passion for art.

JEL Classification: G41, G11, G58, C39, C51, D49.

Keywords: Alternative Assets, Art profit, Art investment, PLS-SEM, structural equation models.

Frida: ¿Más rentable que el S&P 500?

El objetivo de esta investigación es determinar los constructos de arrepentimiento, placer y frecuencia de compra de un consumidor de arte. Se utilizó una metodología de Mínimos Cuadrados Parciales y Ecuaciones Estructurales por sus virtudes como modelos de segunda generación. Los resultados muestran que el sesgo de arrepentimiento se explicó estadísticamente a través de la motivación financiera, la pasión por el arte y las ofertas alternativas; las personas pueden tener sentimientos de arrepentimiento o ansiedad por el miedo a perderse una oportunidad por no comprar una obra de arte, así también que la pasión por el arte fue una variable exógena influyente en la explicación de la pérdida-arrepentimiento, el placer y la frecuencia de compra. La limitación de la investigación es la subjetividad, el contexto histórico, la cultura de la muestra utilizada, las implicaciones es estudiar el arte como activo alternativo son que mejora la cultura de la inversión y el mercado. La investigación realiza una aproximación original ya que estudia un sesgo de finanzas conductuales como lo es el arrepentimiento y lo que determina la pasión por el arte.

Clasificación JEL: G41, G11, G58, C39, C51, D49.

Palabras clave: Activos alternativos, Beneficios del arte, Inversión en arte, PLS-SEM, modelos de ecuaciones estructurales.

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1. Introduction

The importance of understanding the different markets has been emphasised by economists and other social scientists for many years. A significant body of research has been devoted to analysing the behaviour of the market and its efficiency or inefficiency (Fama, 1965; Shiller, 2000; Werner F. M. De Bondt & Thaler, 1986; Wurgler & Baker, 2006). Other approaches, including those concerning asymmetries, moral hazard and market information failures, have been the focus of significant research by numerous prominent scholars (Akerlof, 1970; Grossman & Stiglitz, 1980). Both approaches examine the prices of diverse financial assets, including stocks, with the advantage that the relevant data are recorded on numerous prominent platforms. The extensive availability of data permits the examination of markets with diverse indexes, encompassing both those in which prices are expected to align with the current value of an asset and those in which such adjustments may not occur. However, the question remains as to whether the same principles can be applied to the art market.

Art can be conceptualised as an emotional representation of an individual or a society, a technological artefact or an investment vehicle. Artistic expression reflects to us the culture and emotions of the artist and of society at large. Those with a strong grasp of financial literacy tend to invest in tangible art pieces, as they offer a tangible return on investment in the form of revenue, profit, and return on investment. The benefits of art are manifold and difficult to quantify due to the paucity of available data. Consequently, researchers must devise methods for generating data through questionnaires and other techniques that are rarely employed in the field of finance. Consequently, there is a prevalent opinion that art cannot be valued, or indeed that it is challenging to do so. However, it can be argued that art should adhere to the same principles as any other market, where price and value are also reflected. This market is strongly influenced by individual perceptions, utilities, supply and demand.

The value of an artwork is contingent upon a multitude of internal and external factors that can potentially elevate the asset's perceived value. In the context of the art market, there are instances of price bubbles, periods of volatility, undervaluations, and other phenomena. In order to facilitate a more coherent economic framework for analysing art prices, it is essential to establish a set of assumptions that are analogous to those typically employed in other financial domains. This would entail defining the value of a painting as the efficient frontier between the marginal benefit curve (MB) and the marginal cost curve (MC) assuming there are no externalities, so there should also be a relationship between consumer loss and producer surplus. Furthermore, art can also give rise to a number of additional effects, including those pertaining to demand, bandwagon, conspicuous consumption, and the presence of problems associated with inelasticity. The emergence of behavioural finance shifts the focus of analysis from certainty and uncertainty to the emotional states of loss and gain. This approach challenges the long-held belief that humans are primarily risk averse and instead suggests that we are loss averse. Furthermore, this concept in the field of art can also give rise to biases, such as regret aversion, fashion and herd analysis, which have the potential to influence investors' expectations.

1.1.1. What about Cryptos in Pandemics?

The recent pandemic periods provide an explanation of the evolution of prices in critical markets. The examination of historical time series can facilitate an understanding of the impact of pandemics on markets. In the aftermath of pandemics, there have been observed instances of inflation, elevated interest rates, shifts in country risk, and anomalous fluctuations in a range of assets, including cryptocurrencies and commodities.

Graph 1: *(a)Historical prices of: SP500, NASDAQ COMPOSITE, FTSE100, GOLD*
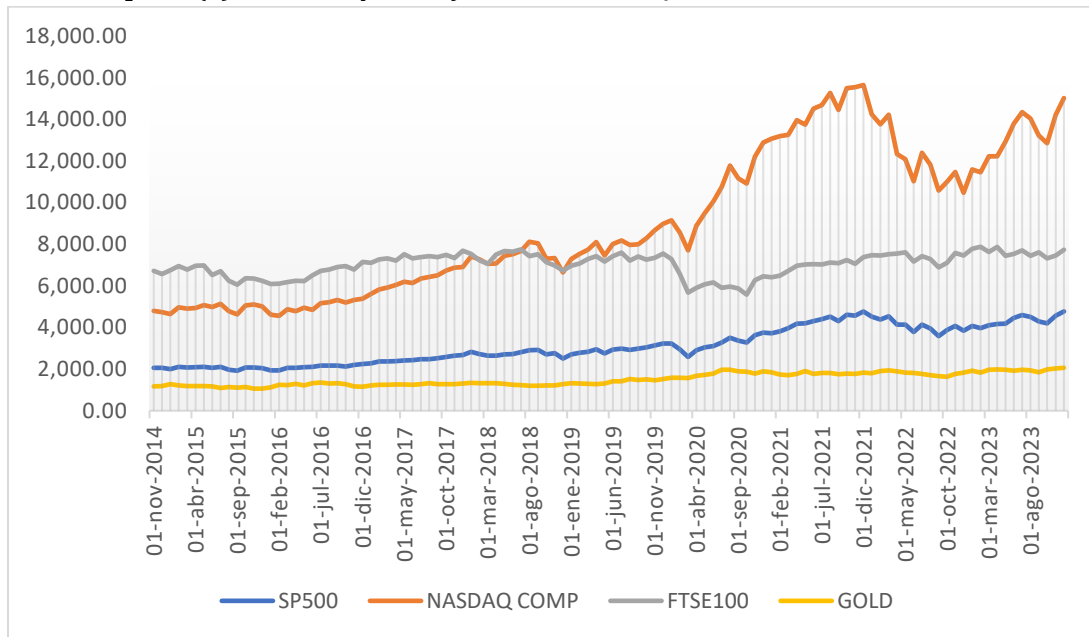
(b)Historical prices of: HANG SENG, BOVESPA, NIFTY 50, IPC (b)
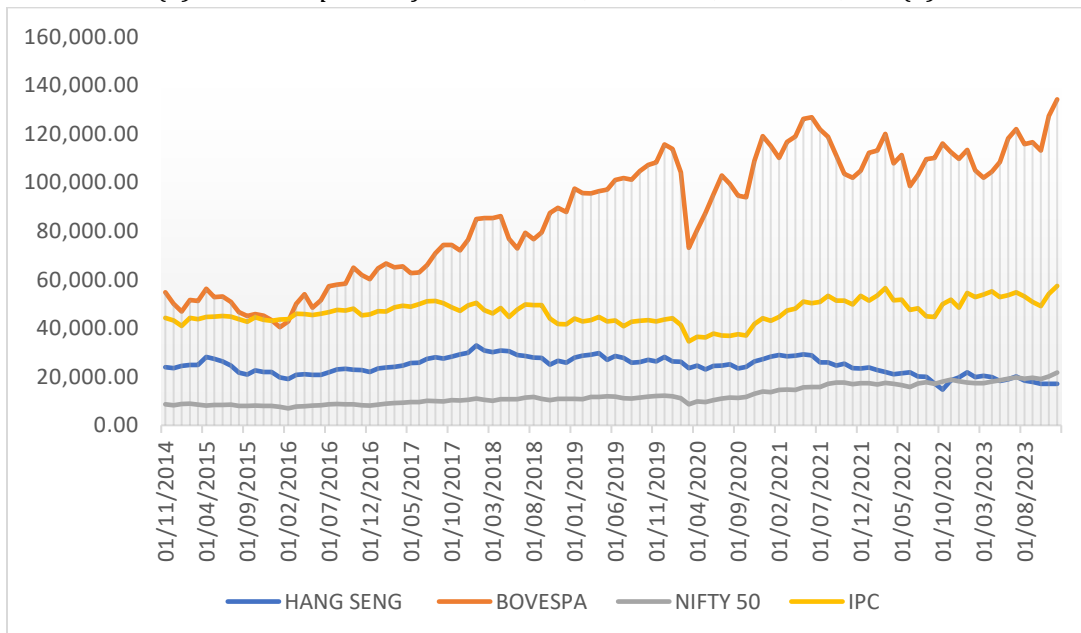
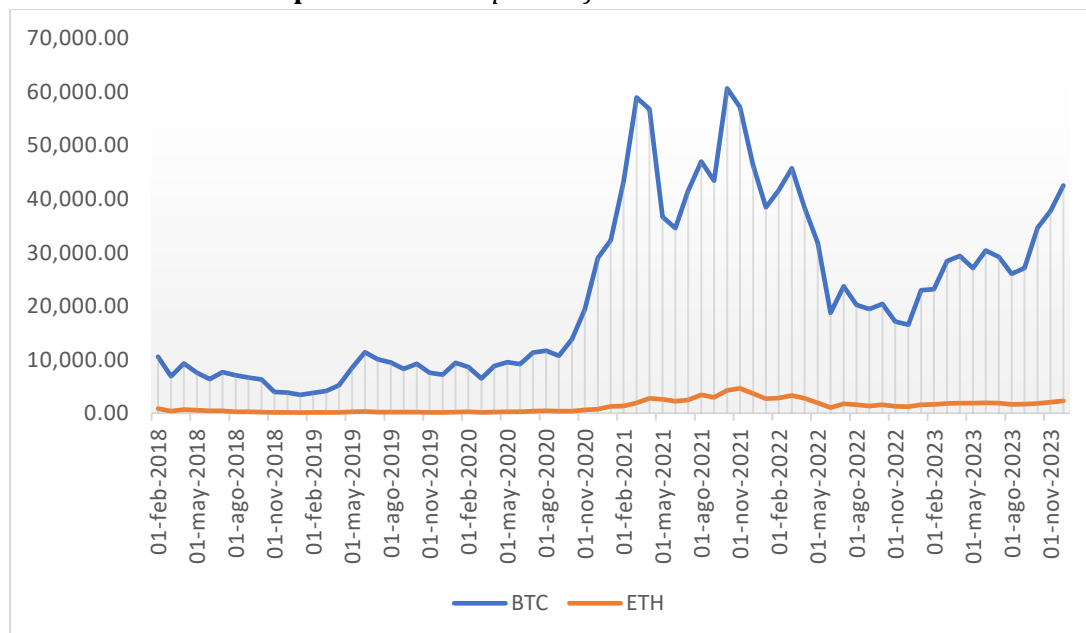Source: (a) and (b) own elaboration with Eikon Reuters.

Graph 1(a) illustrates the correlation between the American and UK stock markets and the price of gold. The S&P 500 is the most significant index for measuring returns in the US economy. It comprises the 500 most prominent companies in the US market. Another significant US index is the NASDAQ Composite, which is the second largest index in the US. This index encompasses approximately 3,000 of the largest companies operating in the telecommunications, hardware, and software sectors. This graph also includes the FSTE 100 Index, the most significant index in the UK, and the time evolution of gold prices. As illustrated, since the onset of the COVID-19 pandemic, most prices have undergone a substantial decline, in the year 2020; and global price volatility has exhibited a persistent increase. The second graph 1 (b) depicts the historical prices in Latin American markets, represented by the Mexican IPC Index and the BOVESPA São Paulo State Stock Exchange.

The Asian markets are represented by the HANG SENG Index, which serves as the official index of the Hong Kong Stock Exchange, and the NIFTY 50, which is the official index of the National Stock Exchange of India. The NIFTY 50 is composed of 50 stocks of the most profitable companies in India. In both graphs, the occurrence of a pandemic has been shown to have a detrimental impact on the stock market, leading to a downturn.

1.1.2. What about Cryptos in Pandemics?

A cryptocurrency is defined as a digital asset that is not physically stored in a digital wallet. Furthermore, cryptographic encryption is employed to substantiate ownership, guarantee the integrity of transactions, and regulate the generation of additional units.

Graph 2: *Historical prices of BITCOIN & ETEREUM*


Source: own elaboration with Eikon Reuters

Graph 2 illustrates the status of some of the world's most significant cryptocurrencies at the time of the global pandemic. Two cryptocurrencies are represented by their respective market values: Bitcoin and Ethereum. As can be observed, the prices of cryptocurrencies increased during the pandemic period, with some recent reversals. As can be observed, there was a notable surge in the demand for bitcoins during the period of the pandemic.

In many instances, this could be attributed to the halving process, which generates a reduction in supply, and the highest demand for crypto's of some companies in 2020 and 2021. The introduction of cryptocurrency exchange-traded funds led to a surge in demand, reaching its peak. However, as a consequence of the increase in interest rates observed in 2022, which was caused by the supply shock resulting from the pandemic, there was a decline in prices.

1.2. Approach

Based on economic analysis, art is a luxury good that is also a financial asset whose value can fluctuate. It is interesting because there are expected values, income effects, substitutes in other ways, market trends, and passion in art. It is also susceptible to scarcity, whether of works by deceased artists or unique pieces, and to high insurance and maintenance costs.

Graph 3: *Art versus other financial assets*

Source: Retrieved from https://www.artindex.com.au/
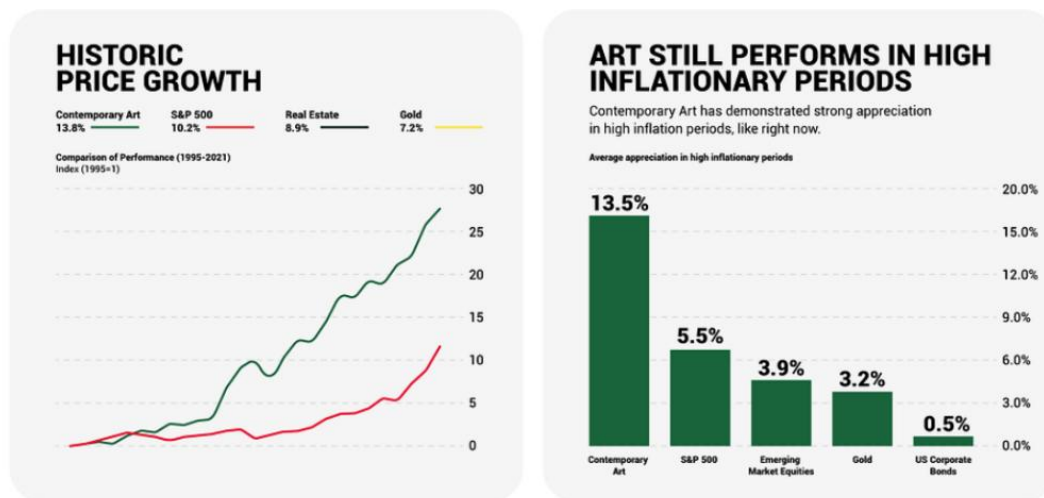
On the Art Index page it says, "85% of Deloitte's wealth managers agree that fine art is an essential part of the wealth management strategy". Why is this idea? They show on the left side of Graph 3 that when you compare the return of contemporary art to the average of the S&P500, there is a substantial gain in return in the price of contemporary art. The right side of the chart shows that contemporary art has outperformed other assets by 13.5% in inflationary periods, such as the recent past. So why bother investing in art? Why do asset managers agree to invest in art? Why do people and Mexicans with a great culture and colossal art representatives not consider art as a strong investment market, when people know that solid investments are long-term?

Graph 4: Value-Weighted Art Indices vs. S&P500
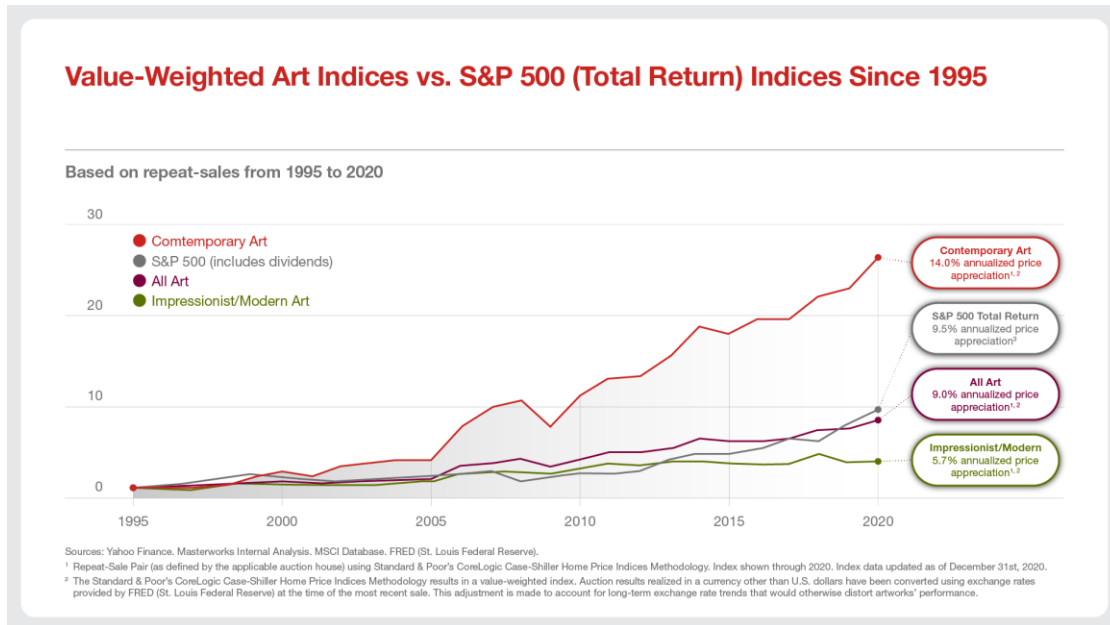
Source: Retrieved from Investing in the Art and Collectables Market: A $1.7 Trillion Asset Class | Nomura Connects

The distinctive nature of the art market can be attributed to the intrinsic value of art, which is subjective in addition to its strong capital preservation. This is evidenced by the low relation between the previous graph and the contemporary art trendline, which diverges from that of other asset classes. The value of a work of art is determined by both relative variables, such as the physical characteristics of the work, and subjective variables, such as the motivations of potential buyers. Relative value refers to comparative economic terms. The value is determined in relation to the reference point at which the artist is quoted in the market and the current market price of a similar work, considering the technique used and other technical data such as dimensions, year, and other factors. Then the intrinsic factors of the work are considered: rarity, style, status, visibility or documentary value, while subjective value is based on subjective or personal considerations.

Many aspects are based on feelings and personal taste. It is a subjective value, measurable in terms of aesthetic enjoyment, which depends on the satisfaction a person derives from contemplating it. This is where the valuation of works of art differs from that of any other asset because of the importance of aesthetic criteria. For most assets, quantitative aspects can be measured and approached through an econometric model, reducing the subjectivity of the person valuing it. In the context of art paintings, the quantitative variables that can be measured are relatively limited. These include the size of the painting, the age of the painter, or the date of death. However, there are also a number of subjective variables that depend on aesthetic perception. In order to conduct an appraisal of a work of art, it is essential to consider a number of leading aesthetic values, including sensory, formal, cultural, vital, and pleasure values. These values can be measured using a structural

equation model, as this methodology is capable of handling perceptions, emotions, and culture as latent variables. In comparison to typical econometric OLS models, this approach is therefore preferred. The objective of this paper is to establish the essential concepts and background information required for the analysis of the factors influencing consumer behaviour within the context of art market valuation and pricing processes. In addition, it will examine the current state of the art market in Mexico, including an analysis of market behaviour and the definition of art as both a subjective and cultural phenomenon, as well as an investment asset with an objective value. Consequently, three central research hypotheses will be presented.

- H1: Income, financial motivation, passion for art and market trends, and alternative offers are statistically significant when structurally modeled on loss-regret.
- H2: Income, financial motivation, passion for art and market trends, and alternative offers are statistically significant when structurally modeled on enjoyment.
- H3: Income, financial motivation, passion for art and market trends, and alternative offers are statistically significant when structurally modeled on the purchase frequency.

The work is based on the dearth of literature on the analysis of the determinants of art and its interrelation to the financial world. In particular, it addresses variables that are challenging to quantify within the economic realm, including qualitative variables such as those explored in this research.

One of the most significant contributions of this research is the utilization of partial least squares and structural equation modelling to examine the art market in Mexico. This represents a novel approach, as there is a paucity of research in this area. The methodology employed offers the advantage of allowing for the examination of multiple dependent variables, as demonstrated in the present study. This allows for the investigation of a key bias in behavioral finance, namely loss regret. Additionally, it permits the exploration of the role of pleasure and the frequency of purchase as underlying constructs. The construct of passion for art provides an explanation for these three variables, with the pleasure derived from purchasing art being of particular significance. However, neither the market trend nor income levels can be identified as explanatory factors for any of the three constructs under analysis. The partial explanatory factors are financial motivation and access to additional supply.

Another novel aspect of this study is the examination of the concept of loss regret, defined as the regret experienced by the consumer when a purchasing opportunity is missed. In other words, there is an opportunity cost associated with the potential increase in value of the work of art. This can give rise to the notion of having missed a valuable investment, which suggests that the individual may unconsciously perceive it as such. Such sentiments may also manifest as a fear of missing out (FOMO), anxiety, or the apprehension that one is failing to capitalize on potential opportunities.

This research has been organized into five sections. The first section is the introduction, in which the research problem, the hypotheses, and the contribution of the work to science are set forth. The second section of the research deals with the state of the art and the characteristics of the art market. The third section deals with the methodology, which employs PLS-SEM. The final sections present the results of applying this statistical method and conclude with a discussion of the findings.

2. State of Art

The question of what constitutes art is a topic of considerable debate among scholars and theorists. The concept of art cannot be defined in the same manner as other objects due to its inherently aesthetic and subjective nature (Alcaraz & Pérez Carreño, 2018). Aesthetics is a philosophical discipline that examines the ways in which humans interpret the sensory effects of their surrounding environment. Aesthetics is the study of beauty, harmony, quality, and proportion, and the pleasure derived from these qualities. When an object or experience is perceived as aesthetically pleasing, it evokes a sense of wonder and elicits positive sensations in the observer. (Beuchot, 2018). A conceptualization of art based on aesthetics allows us to posit that the definition of art should begin with the value of the aesthetical experience of the viewer, rather than with its representative or expressive function. (Alcaraz & Pérez Carreño, 2018).

In light of the aforementioned, an art piece can be assigned disparate values. For the purposes of this paper, the focus will be on the monetary value of the pieces and the behavior within their market. Similarly, art can be considered a luxury asset, as its value is susceptible to economic fluctuations. Unlike other luxury assets, such as jewelry or designer goods like bags, clothes, and luxury cars, the pleasure value of art cannot be directly compared. This is because art is highly expendable, making it a unique commodity within the luxury market. (Espel Aldámiz-Echevarría, 2013). The value of an artwork is contingent upon a multitude of factors, including its physical attributes and the subjective motivations of potential buyers.

In economic terms, relative value is a comparative concept. The value of an artwork is determined by a number of factors, including the artist's current market value, the price of similar works by the same artist, the technical aspects of the artwork, such as the technique used and the dimensions, as well as other factors such as the year of creation. Subsequently, the intrinsic characteristics of the artwork are taken into account.

(a) Rarity factor: when the artist has created one or very few pieces for a specific theme.
(b) Style factor: when the artist has painted one of a few pieces with a specific style or brushstrokes. The preservation condition factor, related to the physical condition of the piece, restoration, or damage, affects the value.
(c) Visual factor: the piece must be pleasant, not confusing, and space and form must be appreciated.
(d) Documented factor: the value of a piece increases or decreases based on its documented history, it is authentication, the historical precedents, and its international exporting feasibility.

Although the subjective value reflects a valuation oriented to subjective or individual considerations, numerous factors are influenced by emotional responses, appreciation, or personal taste. This value is subjective and can be quantified in terms of aesthetic enjoyment, that is, in terms of the pleasure derived from the object when observed. The valuation of art pieces differs from that of other assets due to the relevance of aesthetic criteria. Quantitative aspects can be measured for most assets using an econometric model, thereby reducing the subjectivity of the individual performing the valuation. In the case of paintings, the quantitative variables that may be accounted

for are limited. These include the dimensions of the paint, the age of the artist, and the date of the artist's death. However, there are also a number of subjective variables that depend on the aesthetic perception of the observer. The following aesthetic values should be considered when valuing an art piece: sensorial, formal, cultural, vital, and pleasure values. In his 2013 analysis, Espel Aldamiz-Echeverría posits that the sum of the relative and the subjective value will determine the value of a piece of art.

2.1 Art Market

As elucidated by Iturbide & Peraza (2015), the behavior of the art market is anomalous, as the demand and the fixation of prices have disparate foundations. The demand curves are constructed subsequent to individual sales for each piece, and the cost of production exerts a negligible influence, as other factors such as the artist's consolidation and the distributors with potential buyer penetration power exert a more significant impact.

Furthermore, the market is characterised by a paucity of transparency and a dearth of publicly accessible information and sales records, which presents a significant challenge for the study and monitoring of purchasing trends and price movements. As observed by Prieto-Rodriguez and Vecco, the probability of achieving long-run equilibrium pricing in this market is remote, given the considerable range of price variations and the distinctive nature of artworks. Additionally, external factors such as speculation, the location of sales, expert opinions, and the lack of transparency regarding artwork availability contribute to this challenge. (J. Prieto-Rodriguez; M. Vecco, 2021)

The art market can be divided into two fundamental submarkets based on the artist. The primary market comprises pieces created and introduced to the market by living artists with a recent history of production, whereas the secondary market encompasses the return of pieces to circulation by a third party, typically through auctions or direct sale, and often involving pieces by renowned deceased artists with a strong demand. Each market is characterized by specific factors that influence price determination. In the primary market, the reputation of the artist and the dimensions of their work are the primary determinants of price. Currently, there are no particular considerations regarding the individual quality of the pieces, rather than the general quality produced by the artist.

Therefore, the price is fixed according to the artist's work and the amount of time invested. The more extensive the piece, the greater the consideration given to the effort required, which raises the price. Conversely, the secondary market comprises a multitude of distinctive pieces, rendering it less likely that a piece by a deceased artist with analogous characteristics will be available concurrently. In this market, it is essential to ascertain the authenticity of the piece, given the high risk of falsification and the potential for misrepresentation. Additionally, the condition of the piece, its age, and the prices and demand history for similar pieces or pieces within the same style or collection are crucial factors. Popular pieces may command a higher price than lesser-known pieces or pieces that are not characteristic of the artist.

2.2 Art market cycles

The famous Spanish art dealer Miguel Espel Aldámiz-Echevarría (2013) defines the behavior and travel of art pieces once they enter the market. Within his work, he traces diverse schemes essential for the movement within this market, starting with the purchasing cycles.

Figure 2. *Determinants of the purchase cycle*
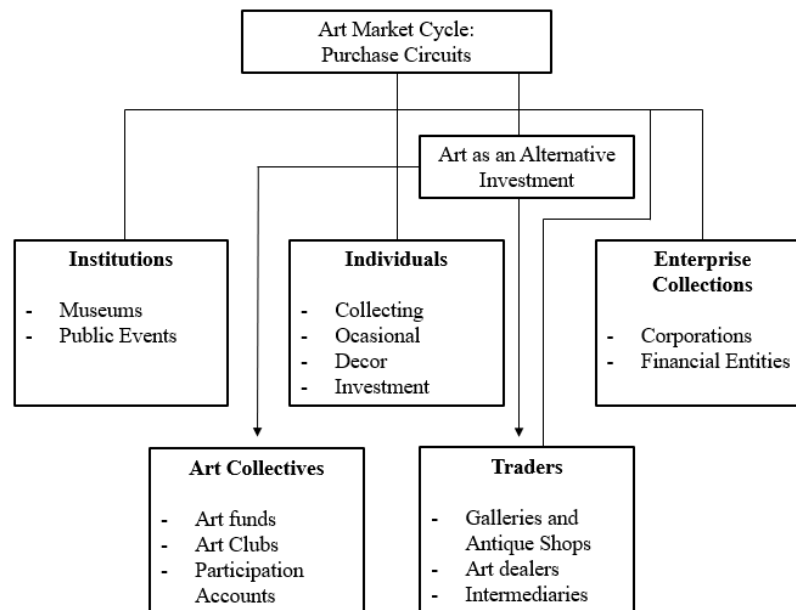
Source: Espel Aldámiz-Echevarría, 2013

In consideration of the expectations associated with this paper, the topic of art will be addressed solely in the context of its potential as an alternative investment. Since the 1970s, a financial trend known as "alternative investment" has emerged. The objective was to differentiate classical investments (such as those in the stock, exchange, and debt markets) from alternative investments, which were viewed as operating in a different context, such as art. Classic investments are subject to regulatory oversight with the objective of ensuring transparency and accessibility of information for potential investors. In contrast, alternative investments are not subject to the same regulatory requirements as other investments, which hinders investors' ability to access information in the market.

This lack of transparency poses a significant challenge for alternative investments. In addition to offering financial gain, alternative investments also provide a profit. Nevertheless, this profit is regarded as a capital gain. The value of art pieces tends to appreciate over time, and this trend is expected to continue in the long term. In contrast to classical investments, which are solely financial products, alternative investments offer additional factors that enhance their value. These include the pleasure or passion for collecting, aesthetic pleasure and art appreciation, and refugee value. It is not feasible to invest in art in the same manner as one would invest in other financial

instruments. There are numerous factors to consider before art can be considered as a viable investment option. Unlike other liquid assets, art cannot be accessed at any given moment and cannot be sold without assuming a loss. However, in certain cases, a loss may be offset by subsequent profit, depending on the timing of the acquisition of the artwork in question. In light of the aforementioned considerations, it is prudent to conduct an investment purchase in art only with capital that is not required in the near term. (Espel Aldámiz-Echevarría, 2013). Furthermore, the diverse profiles of art buyers will be examined, including their distinctive characteristics, expectations, and motivations for acquiring art, which is often perceived as an effective investment.

2.2.1. Type of buyers and their behavior

As previously stated in this research, the art buyer exerts a significant influence on the price assigned to a piece of art, relative to its aesthetic and cultural values. The prices of art pieces are influenced by external factors, including customer expectations, such as trends or social emulation factors related to public opinion from experts and their effect on quotations. Additionally, possession-power factors, related to the dominance and power feelings associated with holding and ostentation of luxury goods, can also impact prices. Other factors, such as competitive factors characteristic in public auctions, sector and economy factors, and market opinion regarding the artist, can also influence prices.

In consideration of the aforementioned purchase circuits, it becomes evident that a multitude of buyer types, each with distinct purposes and motivations, can be observed. These can be classified into five distinct groups: The aforementioned categories of art buyers can be further subdivided into the following groups: individual buyers, investment collectives, enterprise collections, institutional buyers, and merchants.

The group of individual buyers includes collectors or frequent buyers, amateurs or occasional buyers, decorative buyers, speculators who want to buy art at low prices with the aim of selling it in the short term, trying to achieve the highest profitability, and finally, collectors' investors who buy art for its aesthetic value but follow financial or investment criteria to know the future value and benefits of the work of art as an asset. An investment collective is a group of investors who pool their resources to invest in art pieces. The lack of regulation in many countries increases the risk profile of these investments, as the lack of transparency and accountability makes it challenging to assess the reliability of the investment. However, many investors view the acquisition of art pieces as a profitable economic investment.

Enterprise collections represent a viable financial alternative for such investors, offering the potential for both investment and the creation of permanent collections, as evidenced by the Jumex collection in Mexico. The rationale behind a company's decision to invest in art may be influenced by factors such as the company's image or its capital structure. (Espel Aldámiz-Echevarría, 2013). Such investments may prove highly lucrative as a result of the injection of capital into the art market. To illustrate, the Jumex collection, owned by the Jumex Contemporary Art Foundation, serves to advance the production, discourse, and dissemination of knowledge pertaining to contemporary art, while also supporting the sustained production of art. (Fundación Jumex, 2023). Furthermore, there are institutional buyers, such as museums and official institutions, who purchase art with the intention of building collections and organizing public exhibitions. This has a significant impact on the market,

as it provides an opportunity to stimulate interest and influence the preferences and aspirations of potential buyers with regard to specific styles or artists.

In conclusion, art dealers, gallery owners, antiquarians, and auctioneers seek to sell art pieces to any of the aforementioned types of buyers. (Espel Aldámiz-Echevarría, 2013). It is evident that the prices of artworks are subject to fluctuations due to the influence of various types of buyers. These fluctuations are influenced by the expectations of the buyers with respect to the purchase or, in some cases, the investment potential of the artworks. The peculiarities of the market demand, as previously discussed, give rise to differing impacts on market movements.

2.3. Art Market in Mexico and Worldwide

The art market is currently experiencing a period of considerable uncertainty, due to a number of factors, including the impact of the global economic downturn, the response to the ongoing pandemic, and the advent of the fourth industrial revolution, which is characterised by a focus on automation and digitalisation. (Donovan et al., 2022). This has resulted in a shift in the attitudes of frequent art consumers, who now anticipate a change in their preferences for luxury goods. In contrast with the rest of the markets, the art market has benefited from the global economic downturn, as consumers are in the ultra-high socioeconomic level, allowing this market to reflect the status of the wealthier people. Furthermore, this consumer group can be divided according to their motivations: those who view art as an investment to protect against inflation and those who appreciate art for its aesthetic value. In the event of an economic crisis, it is possible that priced pieces will return to the market, as owners may be forced to sell. Furthermore, the current economic climate provides an opportunity for younger artists who are newly entering the art world to be discovered and to become trendsetters, thereby increasing the demand for their work while the price remains affordable for a larger number of potential buyers.

Those most likely to be affected are semi-established artists, due to the increased market offers. Furthermore, the demand has expanded to new regions in Europe and Asia. The emergence of these new buyers indicates a shift in preferences towards a more demanding new generation of art consumers. In the case of Mexico, the stock market refers to the art market as a refuge for assets where the prices of the pieces are independent of the Mexican economy (Dorantes, 2019). Mexico is home to three of the two hundred major art collectors in the global art market, making it the leading country in Latin America in this regard. Similarly, art galleries in Mexico City have garnered the attention of collectors from around the globe due to the surge in interest in contemporary art over the past few years. One of the most significant art shows for this style is Zona Maco (Colavolpe, 2018).

2.4 Financial valuation methods

Some authors have chosen different approaches for the development of models, allowing the art community with alternatives to art valuation methods. Next, the relevant valuation models in the

field will be explained to analyze and compare the approach, the applied techniques, and the expected results.

2.4.1 Regression analysis

The determinants of regression price have been the subject of considerable debate among researchers, with Garay (2021) offering a particularly insightful perspective. As previously discussed, there has been a significant focus on the potential of predicting and interpreting the preferences of spectators through the essential elements of an image, with the aim of defining aesthetic values. In their 2021 study, Iigaya and colleagues adopt an approach that begins with an analysis of preferences for art, combining low- and high-level characteristics in an artistic image and utilising a deep neuronal and convolutional net (DCNN). This allows the establishment of the desired preferences, which may be processed similarly to how the human brain processes images.

The identification of high-level characteristics necessitates the input of human judgement, with examples including the presence of concrete, dynamic, and value-related elements.

The statistical properties and visual characteristics of an image, including aspects such as tone, position, and contrast, determine its low-level characteristics. It is essential to consider both the high- and low-level characteristics when evaluating an artwork, given the visual complexity of such pieces. These works often exhibit exceptional technique across diverse styles, and they often convey feelings and messages that cannot be fully appreciated without the input of the human intellect. By assigning values to the various characteristics, a linear regression model can be constructed to predict the value of a weighted linear combination of the high- and low-level characteristics, which in turn can be used to estimate the subjective value of an artwork. Similarly, the model is capable of capturing the variation in style observed among spectators, which is influenced by the visual stimulus elicited by the low-level characteristics inherent to each style.

The model proposes that aesthetic visual judgement is not constituted by specific characteristics, but rather by universal characteristics that elicit a visual stimulus. While the model has limitations, such as the exclusion of characteristics that are not visually based, such as their semantic significance and historical relevance, it does allow for the integration of only the aesthetical visual value variable.

The model allows for the involvement of the subjectivity of the observer. This model posits that aesthetic visual judgement is not constituted by specific characteristics, but rather by universal characteristics that elicit a visual stimulus. While the model does have limitations, such as the exclusion of characteristics that are not visually based in terms of their semantic significance and historical relevance, it does allow for the integration of the aesthetic visual value variable.

The model enables the subjective assessment of the art piece by the spectators, which affects its popularity and the capacity to attract potential buyers and investors. This subsequently impacts the final value and, consequently, the price. (Iigaya, et. al., 2021)

Similarly, regression analysis models can be employed to estimate sales prices for art pieces in auctions through hedonic regression, whereby the characteristics of the objects are utilised to ascertain their value. Galbraith and Hodgson (2018) put forth the proposition that an estimated sales value in an auction can be regarded as a regression, with the characteristics of the artwork and the auction itself serving as regressors. The aforementioned regressors include the date of the auction,

the auctioneer, the artist, the dimensions of the piece, the theme, the materials used, and other factors. The principal regressors are categorical variables that should be incorporated into the study as "dummy" variables. However, different studies have observed the effect of specific art piece categories at the individual level for each artist, with varying impacts, including those related to age. The impact of an artist's age may vary depending on the artist in question. This implies that the value of an artist's work may be significantly influenced by their age, with works created in their early years often holding greater value than those created in their later years or advanced age.

Meanwhile, the work created in their last period has superior value for other artists. In some cases, more information exists for specific works, for instance, sales prices in previous auctions, which we can add to the model to complement it to get better estimations. However, some works have never been sold or only been done in closed sales without information access. (Galbraith & Hodgson, 2018).

2.5 Structural Equations Model and Partial Least Squares

Once the valuation methods explained in this theoretical scheme are understood, a more comprehensive grasp of the research work's subject matter is achieved, encompassing the theme, models, and analysis pertaining to the visual characteristics and the artist, in addition to previous market prices. However, these models do not consider consumer preferences regarding purchasing motivation, which may result in an increase or decrease in the offered price.

To ascertain the views of consumers, surveys will be conducted with both current and potential purchasers of Mexican art. A structural equations model is a multivariate statistical tool that allows the study of the relationship between latent variables, which cannot be directly measured, and observed variables, which can be measured directly. (Manzano, 2018) enables the determination of the weight of the consumer's motivation and expectations in relation to the final price.

The overarching modelling strategy, as outlined in the partial least squares approach, entails the projection of latent structures. Each latent variable is constructed based on linear variables and measurable categories that may either form or reflect the phenomenon under investigation. The coefficient between natural, latent, and independent responses varies between -1 and 1. A value of 1 indicates the highest level of relevance, while a value closer to 0 indicates a lower level of relevance. To ascertain the significance of these models, resampling techniques are employed, including bootstrapping, which enables the measurement of the standard error of each regression within the model, as well as the variance and distribution.

Given the exploratory nature of this study, a partial least squares structural equation model (PLS-SEM) will facilitate the relationship between all independent variables and several response variables, which is particularly beneficial in situations where multicollinearity exists among independent variables. Furthermore, PLS-SEM is robust in situations of data noise and missing data (Garson, 2016).

3. Methodology

3.1 Methodology

This statistical method will allow the abstraction of the most relevant information based on the collected data and build a model to define the consuming determination and the valuation of art pieces. The survey is designed to measure varied factors regarding profile and consumer conduct using a ponderation from 1 to 5, allowing us to uniformly measure the values for each answer to the different questions. It was decided to use this type of survey in order to make it easier for the respondents to choose between 5 possible qualitative levels, not more or less, since this provides sufficient variance and a homogeneous scale for the interpretation of the research results.

It is also important to note that no dichotomous variables were identified that could potentially complicate the analysis and results. All the variables were found to be discrete and categorical. A total of 144 individuals responded to the survey, with 44% indicating a proclivity for artistic pursuits.

The majority of respondents (68%) were between the ages of 43 and 74, and 93% had attained a post-secondary education. The respondents had obtained the following qualifications: 55% Bachelor's, 34% Master's and 4% PhDs. In terms of income, 85% of the respondents indicated that they have consistently maintained a stable source of income, with 58% of this group reporting that they occasionally purchase luxury items such as art. Once the survey is applied, the answers will be used to develop the partial least squares structural equations model to observe the correlation between the factors to be analyzed. Once the model is defined, the elements of the factors with significant impact will be explained to understand how these may affect the economic value of an art piece.The model construction started by defining the effects (endogenous variables) to be studied:

(1) Loss Regret: defined as the regret feeling felt by the consumer when letting pass a purchasing opportunity.
(2) Purchase frequency: a variable considering how frequently the buyers purchase within the market.
(3) Pleasure: variable built from the responses of consumers' personal and conspicuous consumption preferences

Five determinants (exogenous variables) will be used to define the dependent variables.

(1) Art Passion: built by the artistic profile of the person, including knowledge, studies, tastes, and preferences.
(2) Income: considering the total of incoming sources available for the consumer.
(3) Offers: the ability of the buyer to submit a price offer to the seller
(4) Market trends: based on the attributed importance of the buyers to the opinion of experts and artistic movements.
(5) Financial Motivation: consideration by the consumer regarding purchases as investments and the future speculative value.

3.2. Assumptions, modelling and Background of PLS-SEM

The algorithm PLS SEM based upon Vinzi, et al, (2010) The algorithm searches to estimate relationships upon $Q(q = 1, ..., Q)$ that would be the expression of unobservable constructs. It also assumes that there are P variables $P(p = 1, ..., P)$ observed in N unities $(n = 1, ..., N)$. The data that results (x_{npq}) is partitioned in table $X(X_1, ..., X_q, ..., X_Q)$ where X_q is the generic q-th block made of P_p variables. In PLS estimation, two models are employed: a measurement model and a structural model. The former elucidates the relationships between latent and corresponding manifest variables, whereas the latter elucidates the relationships between latent variables. Consequently, the structural model is expressed as follows:

$$(1)\ \varepsilon_j = \beta_{0j} + \sum_{q:\varepsilon_q \to \varepsilon_q} \beta_{qj}\varepsilon_q + \varphi_j$$

Where $\varepsilon_j(j = 1, ..., J)$ Is the endogenous latent variable
Where β_{qj} Is the coefficient interrelation path the *q-th* exogenous latent variable to the *j-th* endogenous and the value of φ_j Is the error.

The other model, the measurement model, is contingent upon the out-ward-on-inward model and is capable of modeling disparate relations. As Wynne Chin (2000) has observed in the context of reflexive models, each manifest variable is related to the latent variable.

$$(2)\ x_{pq} = \lambda_{po} + \lambda_{pq}\varepsilon_q + \in_{pq}$$

Where λ_{pq} Is the loading associated to the *p-th* manifest variable in the *q-th* block, and the error term $\in_{pq}$. Which aspect of the measurement process is lacking in precision? It is assumed that the error is uncorrelated with the latent variable in the same block and has a mean of zero.

It is crucial to note that this construct should be homogeneous, whereby the manifest variables within this block are measuring the same underlying concept.   In the formative model, the assumption of homogeneity is not made. The latent variable is a linear combination of the manifest variables. It is expected that these indicators will not covary with one another, and this can be formally expressed as follows:

$$(3)\ \varepsilon_q = \sum_{p=1}^{P_q} \omega_{pq}\, x_{pq} + \delta_q$$

Where ω_{pq} Is the coefficient that kinks each manifest variable to the corresponding latent variable and the error term δ_q. In light of the methodology presented and from a scientific and statistical standpoint, there are multiple justifications for selecting this particular modeling approach. The method is suitable for dealing with non-normal data, and reliable results can be obtained even with small samples. It is also advantageous for handling both reflective and formative constructs, and it allows for objective prediction and complex modelling, including the ability to deal with categorical variables and linear relationships.

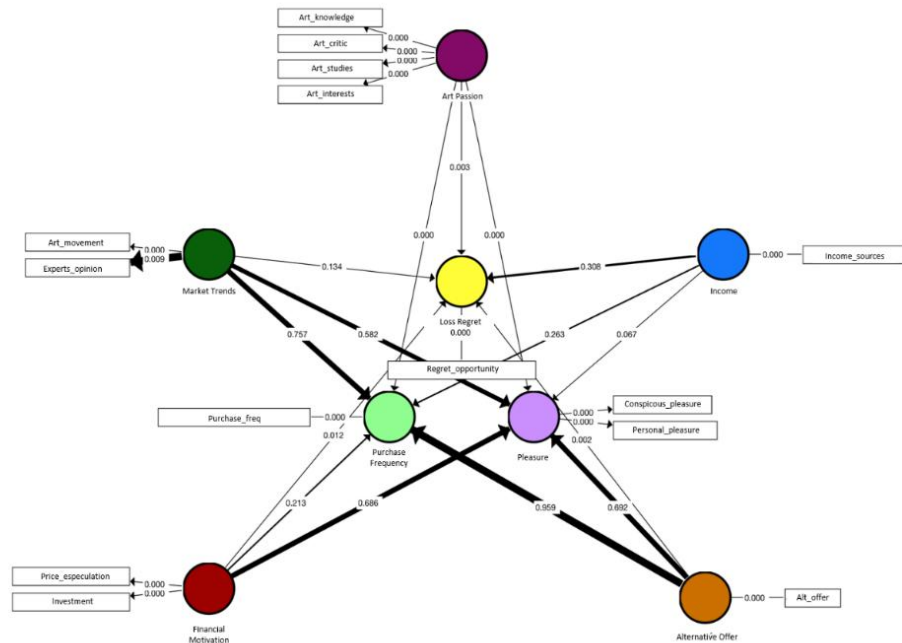**Figure 3.** *Path model without coefficients and R square*
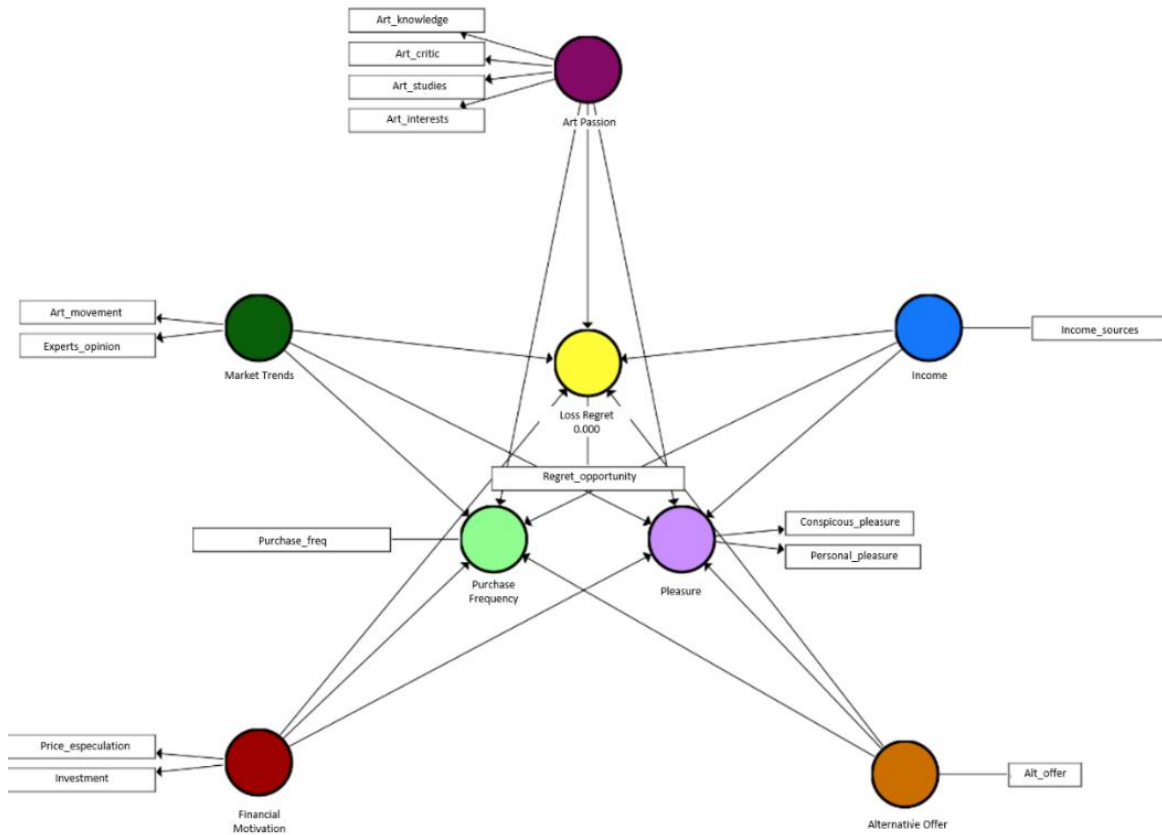
Source: own elaboration with SmartPLS software developed by Ringle, C. M., Wende, S., and Becker, J.-M. 2015. "SmartPLS 3." Boenningstedt: SmartPLS GmbH, http://www.smartpls.com.

Once all the latent variables to be used in the model had been defined, the trails that relate the independent variables to the effects were traced. The PLS model was constructed with the objective of estimating the coefficients that would maximise the R-squared values, thereby explaining the variance of the partial regressions between each independent variable and each executed response. The traced paths demonstrated the strength of the relationships between the determinants and the effects under investigation. The R-squares displayed in Figure 4 elucidate the total squares of the model and quantify the extent to which the independent variables elucidate each dependent variable.

Figure 4. *Path Model*
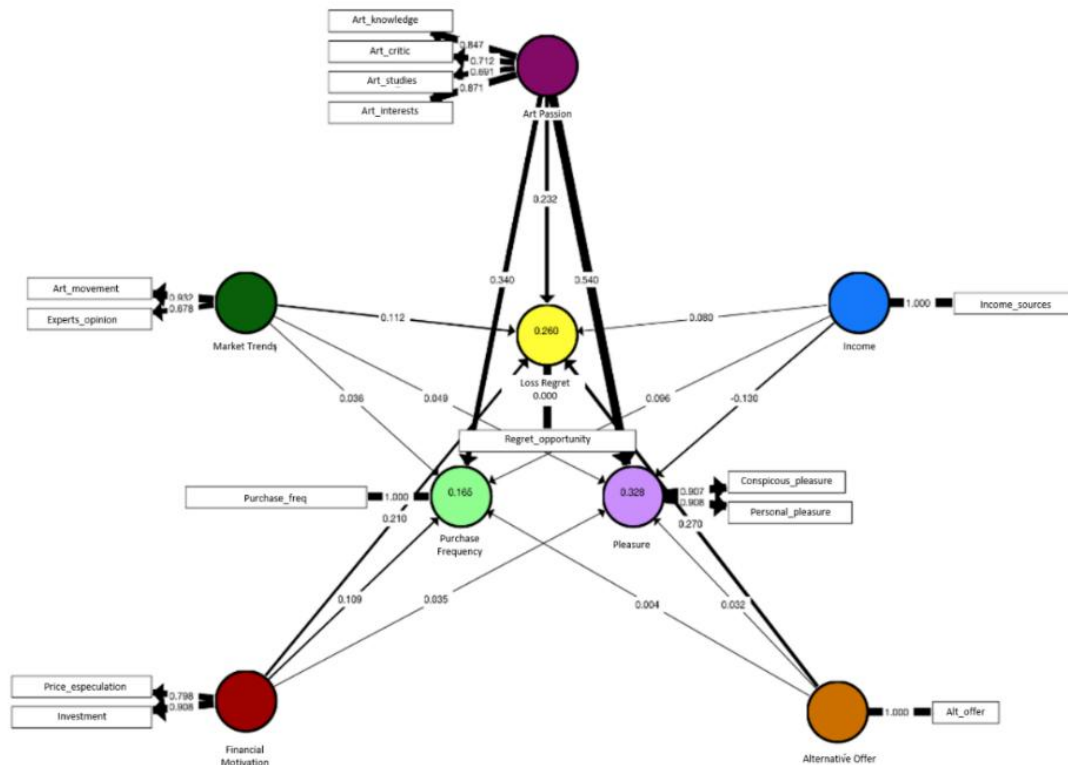
Source: own elaboration with SmartPLS software developed by Ringle, C. M., Wende, S., and Becker, J.-M. 2015. "SmartPLS 3." Boenningstedt: SmartPLS GmbH, http://www.smartpls.com.

4. Results and discussion

Observing figure 4, it was noted that *art passion* has a positive heavyweight relationship with the three effects, income has a negative relationship wit*h pleasure,* a minimal positive relationship with *purchase frequency,* and *loss regret*. The most significant relationship of the *alternative offer* variable is with *loss regret* with a 0.270 value. In the same way, *market trend* has only minor positive relationships except for its relationship with the *loss regret* effect, whose value exceeds 0.1. Finally, *financial motivation* accounted for only positive relationships, the most significant with *loss regret* and the least with *pleasure*. Regarding R-Square, *pleasure* is the most explained construct with a 0.32 R-square, followed by *loss regret* (0.26) and *purchase frequency* (0.16).

Figure 5. *Bootstrapping Model*

Source: own elaboration with SmartPLS software developed by   Ringle, C. M., Wende, S., and Becker, J.-M. 2015. "SmartPLS 3." Boenningstedt: SmartPLS GmbH, http://www.smartpls.com.

Table 1. *Bootstrapping P-values and statistical significance*

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
income -> loss regret	0.080	0.077	0.078	1.020	0.308
income -> pleasure	-0.130	-0.128	0.071	1.833	0.067*
income -> purchase frequency	0.096	0.097	0.086	1.120	0.263
financial motivation -> loss regret	0.210	0.214	0.083	2.521	0.012**
financial motivation -> pleasure	0.035	0.042	0.086	0.404	0.686
financial motivation -> purchase frequency	0.109	0.118	0.087	1.247	0.213

art passion -> loss regret	0.232	0.230	0.079	2.940	0.003**
art passion -> pleasure	0.540	0.543	0.076	7.144	0.000**
art passion -> purchase frequency	0.340	0.343	0.078	4.386	0.000**
market trend -> loss regret	0.112	0.113	0.075	1.499	0.134
market trend -> pleasure	0.049	0.046	0.090	0.551	0.582
market trend -> purchase frequency	0.036	0.033	0.117	0.309	0.757
alternative offer -> loss regret	0.270	0.266	0.088	3.062	0.002**
alternative offer -> pleasure	0.032	0.034	0.080	0.396	0.692
alternative offer -> purchase f requency	0.004	0.002	0.079	0.052	0.959

Source: own elaboration with SmartPLS software developed by Ringle, C. M., Wende, S., and Becker, J.-M. 2015. "SmartPLS 3." Boenningstedt: SmartPLS GmbH, http://www.smartpls.com.

Furthermore, to appreciate the statistical significance of the model, 5,000 Bootstrapping tests were conducted. Observing the calculated value (Figures 4 and 5) that there is a strong relevance of the determinant art passion over the three effects, loss regret, purchase frequency, and pleasure. From this, it can be affirmed that all art consumers are governed mainly by the aesthetic attribute that defines an art piece.

Conversely, the character of the offering (alternative offer) and the financial motivation are of considerable consequence in determining a person's regret when a purchase opportunity is missed. However, these factors are not significant in terms of purchase frequency or income level. This indicates that consumers in the art market tend to be highly selective and cautious when purchasing any work.

In addition to the above, it can be noted that the P-values coming from the "markets trends" determinant are higher than $\alpha = 0.05$, which means that it is not significant over any of the effects trying to be described this can be interpreted by the lack of inherence that the thirds parties have over the market movement, the consumer preference at the time of purchase will partially determine this.

5. Conclusions

Upon independent analysis of this hypothesis, it was found that loss regret bias could be statistically explained by financial motivation and passion for art alternative offers. Consequently, individuals experience feelings of regret and cognitive dissonance. The variable of art passion was found to be an influential exogenous variable in explaining the constructs of loss, regret, pleasure, and purchase frequency. Notably, income was found to have no statistically significant impact at the 95% confidence level on these modelled constructs.

Ascrutiny of the results obtained through the PLS-SEM model, in conjunction with an examination of the hypothesis pertaining to the model, reveals that not all of the independent variables under consideration exert a significant influence on the response variables, namely loss regret, pleasure, and purchase frequency. Nevertheless, even the variables that were not statistically significant nonetheless offer valuable insights into the behaviour of the market and the effects of consumers on art investment. In the wake of market shifts and investor behaviours in the wake of the pandemic, there has been a renewed focus on alternative investments as a safer option for those with a risk-averse investment strategy. In certain instances, these alternative investments may also offer the potential for higher returns, as evidenced by the case of art pieces whose cultural value is attributed by society, not only consumers, which can serve as a form of shelter asset. This is due to the fact that the fluctuations in the prices of such assets are not as susceptible to the current state of the economy as other investments. A recession will not result in a reduction in the price of Frida's painting. Rather, it will facilitate the re-circulation of valuable pieces into the market, thereby increasing profit margins.

Additionally, the model demonstrates a regret bias in these types of investments, due to the intrinsic pressure associated with scarcity and uniqueness of these assets and the social status they confer upon the owner. It is reasonable to posit that an art piece may be subject to price increases in the event of an increase in popularity of one or more of the factors inherent to art, including the artist, style, and cultural significance. The decision-making process of a potential art investor is driven by their passion for art, which mitigates the tendency to experience regret bias. This implies that individuals are less likely to experience regret behaviour, which is characterised by emotional distress. Those who do not appreciate art on a subjective level and who prioritise liquidity and low-risk investments will be less likely to consider art as a viable option, despite the benefits of shelter assets. Similarly, the model revealed that trends are not a significant factor in the observed effects. This emphasises the significance of consumer preferences and the role they play in influencing market trends. In contrast to other markets, the economic value attributed to an artwork as a unique entity is contingent upon the prevailing social milieu and the prevailing consumer preferences at a given point in time. This contrasts with the possibility of conducting a generic valuation process for other goods.

The limitations of this study pertain to the historical context in which the data were collected, a period immediately following the economic crisis precipitated by the global spread of the SARS-CoV-2 virus. This context may have influenced the perception of art as a refugee asset, as has been observed with other assets, such as gold. Nevertheless, it is essential to acknowledge that any study

that incorporates social perception is inherently susceptible to a certain degree of subjectivity. Efforts were made to mitigate this through the formulation of the questions posed and the selection of the population under investigation. The culture to which one is exposed is also a relevant factor to consider. For example, if the culture in question is more oriented towards a specific dimension, this may have an impact on the results. Hofstede (2016) posits that Mexican culture exhibits a pronounced proclivity to avoid uncertainty, a tendency that is particularly pronounced in countries with highly codified belief systems. He also characterizes Mexican culture as normative, short-term oriented, and marked by a relatively limited propensity to save for the future, with a pronounced focus on achieving immediate results. Additionally, Hofstede (2016) posits that Mexican culture evinces a pronounced proclivity towards indulgence. Individuals in societies that exhibit a high level of indulgence tend to demonstrate a proclivity for the gratification of their impulses and desires, particularly in relation to the pursuit of enjoyment and pleasure. In other words, cultural factors can also influence how art is perceived and consequently affect the outcomes of other studies.

Is investing in Art beneficial for society? The short answer is yes; of course, it is. Art, such as paintings and sculptures, as a physical asset, requires preservation and maintenance, which cannot be as easily provided by government funds, especially if the economy is going through a rough patch. Art is one of the first things to lose funding since it is not an essential activity. When Art belongs to private collections or is lent to museums by them for the public to enjoy, it allows the correct conservation of the pieces, therefore maintaining and increasing their value. Art investment in globally acclaimed pieces of Art may be exclusive for the ultra-rich, but investing in pieces from up-and-coming new artists may also be of benefit for potential art investors with a more limited budget looking for shelter assets that, with time, will increase their value as the artist increases in popularity.

People, humans have created value long before technology entered the picture; storytelling through literature, sculpture, and painting has enriched our culture, creating unmeasurable value, exceeding the novelty value technology has; investing in Art is an investment in culture, human creativity and protection of our legacy while taking advantage of the opportunities and necessities the global economy presents. Bitcoin and S&P are extremely valuable, but Frida Kahlo is invaluable.

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6. Appendices

6.1 Consumer preferences and motivation measuring survey.

The following survey is designed to construct an art consumer profile as well as measure their preferences and motivations, it is composed by 37 questions divided in 6 sections: consumer profile, artistic profile, financial profile, motivations, factor´s consideration and consumers' character. (Source: own elaboration using Google Forms)

Consumers profile

1. What age range do you belong to?

   - 18-29

   - 30-42

   - 43-54

   - 55-74

   - 75 or more

2. What was your degree obtained?

   - Basic

   - High School

   - Bachelors

   - Masters

   - PHD

3. How often do you acquire works of art?

   - Never

   - Almost never

   - Sometimes

   - Regularly

   - Always

Artistic Profile

4. The nature of my academic studies is/was very artistic.

   - Completely disagree.

   - Disagree

   - Neither agree nor disagree

   - Agree

   - Completely Agree

5. My personal interests are very artistic.

   - Completely disagree.

   - Disagree

   - Neither agree nor disagree

   - Agree

   - Completely Agree

6. I consider that I have a high knowledge about art.

   - Completely disagree.

   - Disagree

   - Neither agree nor disagree

   - Agree

   - Completely Agree

7. I am very critical about the art I consume. (Series, movies, theater, painting, sculpture, etc.)

   - Completely disagree.

   - Disagree

   - Neither agree nor disagree

   - Agree

   - Completely Agree

Financial profile

8. I have a stable source of income.

   - Completely disagree.

- Disagree

- Neither agree nor disagree

- Agree

- Completely Agree

9. How many sources of income do you have? (Salary, property rent, investments, etc.)

- Completely disagree.

- Disagree

- Neither agree nor disagree

- Agree

- Completely Agree

10. My income allows me to live comfortably.

- Completely disagree.

- Disagree

- Neither agree nor disagree

- Agree

- Completely Agree

11. My income allows me to save comfortably.

- Completely disagree.

- Disagree

- Neither agree nor disagree

- Agree

- Completely Agree

12. My income allows me to acquire luxury goods.

- Completely disagree.

- Disagree

- Neither agree nor disagree

- Agree

- Completely Agree

Motivations

13. I consume art for personal pleasure.

- Completely disagree.

- Disagree

- Neither agree nor disagree

- Agree

- Completely Agree

14. I like to show my works to family and friends.

- Completely disagree.

- Disagree

- Neither agree nor disagree

- Agree

- Completely Agree

15. I consider art to be merely decoration.

- Completely disagree.

- Disagree

- Neither agree nor disagree

- Agree

- Completely Agree

16. The aesthetic enjoyment of the work is more important to me than its economic value.

- Completely disagree.

- Disagree

- Neither agree nor disagree

- Agree

- Completely Agree

17. I consider art as an investment.

- Completely disagree.

- Disagree

- Neither agree nor disagree

- Agree

- Completely Agree

18. When I acquire a piece of art, I think about how much more it could be worth in the future.

    - Completely disagree.

    - Disagree

    - Neither agree nor disagree

    - Agree

    - Completely Agree

19. I am aware of the differences between investment and expenses.

    - Completely disagree.

    - Disagree

    - Neither agree nor disagree

    - Agree

    - Completely Agree

Factors' consideration

20. That the artist is Mexican

    - Not at all

    - A little bit

    - Enough

    - A lot

    - It's essential.

21. Artist's reputation

    - Not at all

    - A little bit

    - Enough

    - A lot

    - It's essential.

22. Age of the artist

- Not at all

- A little bit

- Enough

- A lot

- It's essential.

23. Style

    - Not at all

    - A little bit

    - Enough

    - A lot

    - It's essential.

24. Art movement/Cultural context

    - Not at all

    - A little bit

    - Enough

    - A lot

    - It's essential.

25. Technique

    - Not at all

    - A little bit

    - Enough

    - A lot

    - It's essential.

26. Size/dimensions

    - Not at all

    - A little bit

    - Enough

    - A lot

    - It's essential.

27. Scarcity: whether there are many works by the artist available on the market

28

REMEF (The Mexican Journal of Economics and Finance)
Frida: more profitable than S&P 500?

- Not at all

- A little bit

- Enough

- A lot

- It's essential.

28. Conservation status

- Not at all

- A little bit

- Enough

- A lot

- It's essential.

29. Authenticity

- Not at all

- A little bit

- Enough

- A lot

- It's essential

30. Fashions and trends

- Not at all

- A little bit

- Enough

- A lot

- It's essential.

31. Expert opinions

- Not at all

- A little bit

- Enough

- A lot

- It's essential.

32. Relationship with the seller (gallerist, dealer, artist, etc.)

- Not at all

- A little bit

- Enough

- A lot

- It's essential.

Consumers' Character

33. I would/have made an art purchase without questioning the price.

- Completely disagree.

- Disagree

- Neither agree nor disagree

- Agree

- Completely Agree

34. I would not buy a work that I liked very much because I consider it overvalued.

- Completely disagree.

- Disagree

- Neither agree nor disagree

- Agree

- Completely Agree

35. I have regretted what I paid for a work of art.

- Completely disagree.

- Disagree

- Neither agree nor disagree

- Agree

- Completely Agree

36. I have regretted not acquiring a work of art when I had the opportunity.

- Completely disagree.

<div style="display:flex; justify-content:space-between;">
<div>

- Disagree

- Neither agree nor disagree

- Agree

- Completely Agree

</div>
<div>

- Disagree

- Neither agree nor disagree

- Agree

- Completely Agree

</div>
</div>

37. I would dare/I have dared to make an offer other than the stipulated price.

   - Completely disagree.

What was your degree obtained?
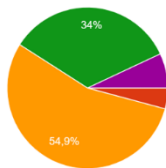
What age range do you belong to?
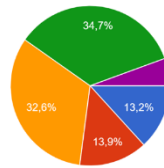
How often do you acquire works of art?
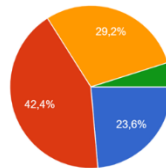
The nature of my academic studies is/was very artistic.
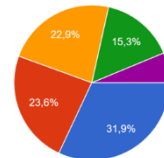
My personal interests are very artistic.
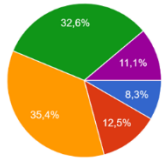
I consider that I have a high knowledge about art.
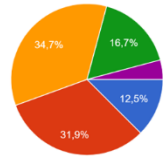
I am very critical about the art I consume. (Series, movies, theater, painting, sculpture, etc.)
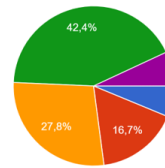
I have a stable source of income.
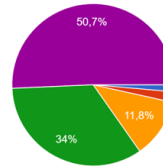
How many sources of income do you have? (Salary, property rent, investments, etc.)
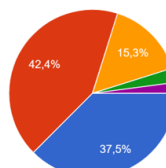
My income allows me to live comfortably.
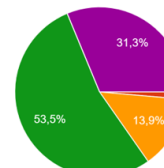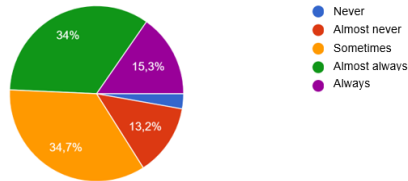
30

REMEF (The Mexican Journal of Economics and Finance)
Frida: more profitable than S&P 500?

My income allows me to save comfortably.

- Never
- Almost never
- Sometimes
- Almost always
- Always

My income allows me to acquire luxury goods.

- Never
- Almost never
- Sometimes
- Almost always
- Always

I consume art for personal pleasure.
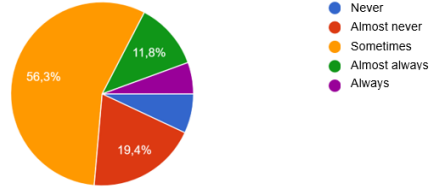
- Completely disagree
- Disagree
- Neither agree nor disagree
- Agree
- Completely Agree
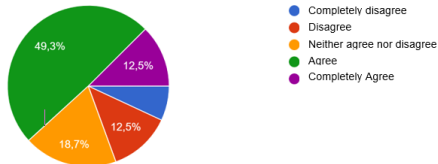
I like to show my art works to family and friends.
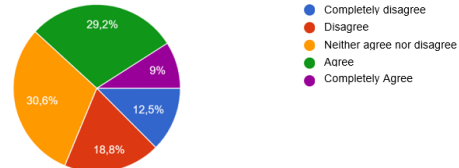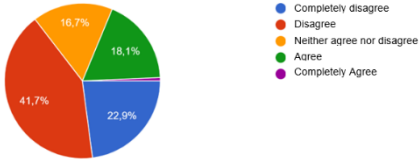
- Completely disagree
- Disagree
- Neither agree nor disagree
- Agree
- Completely Agree

I consider art to be merely decoration.

- Completely disagree
- Disagree
- Neither agree nor disagree
- Agree
- Completely Agree

The aesthetic enjoyment of the work is more important to me than its economic value.

- Completely disagree
- Disagree
- Neither agree nor disagree
- Agree
- Completely Agree

I consider art as an investment.

- Completely disagree
- Disagree
- Neither agree nor disagree
- Agree
- Completely Agree

When I acquire a piece of art, I think about how much more it could be worth in the future.

- Completely disagree
- Disagree
- Neither agree nor disagree
- Agree
- Completely Agree

I am aware of the differences between investment and expenses.

- Completely disagree
- Disagree
- Neither agree nor disagree
- Agree
- Completely Agree

That the artist is Mexican

- Not at all
- A little bit
- Enough
- A lot
- It's essential
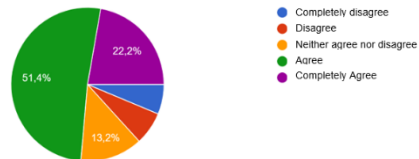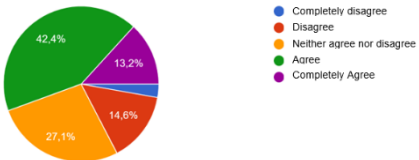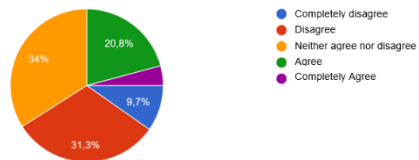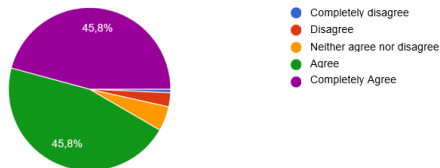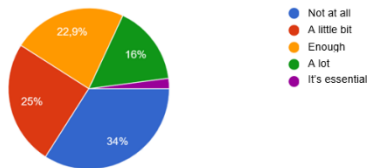
Artist's reputation

Age of the artist

- Not at all
- A little bit
- Enough
- A lot
- It's essential

Style

- Not at all
- A little bit
- Enough
- A lot
- It's essential

Art movement/Cultural context

- Not at all
- A little bit
- Enough
- A lot
- It's essential

- Not at all
- A little bit
- Enough
- A lot
- It's essential

- Not at all
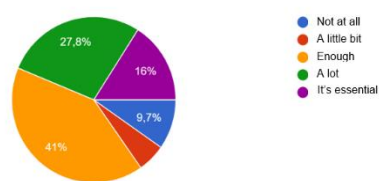- A little bit
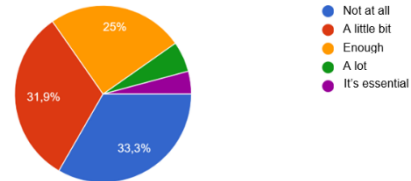- Enough
- A lot
- It's essential
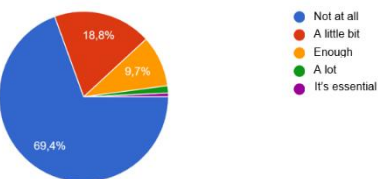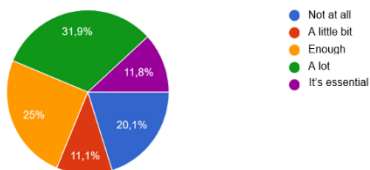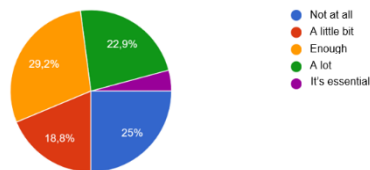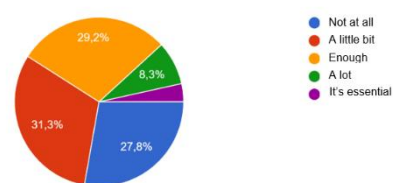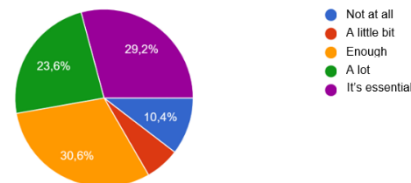
Technique

Size/dimensions
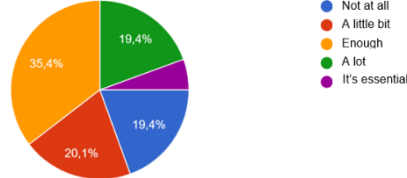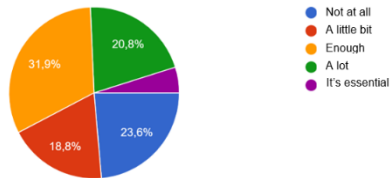
Scarcity: whether there are many works by the artist available on the market

Conservation status

Authenticity

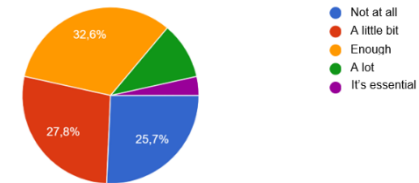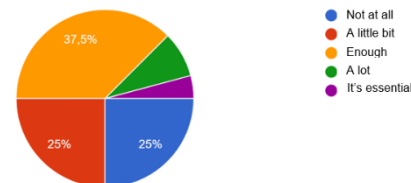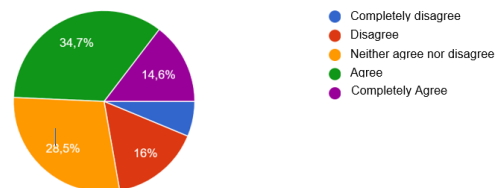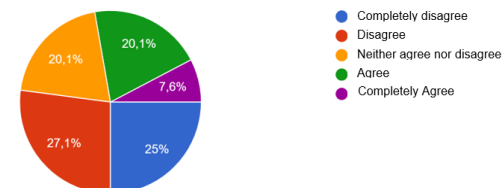**Fashion and trends**

Experts' opinions

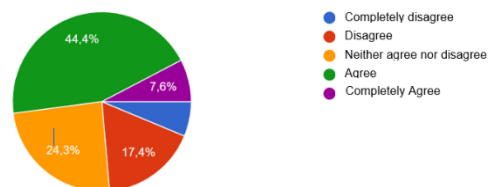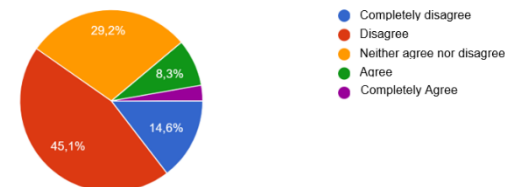**Relationship with the seller (gallerist, dealer, artist, etc.)**

I would/have made an art purchase without questioning the price.

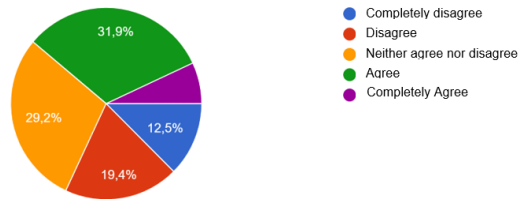**I would not buy a work that I liked very much because I consider it overvalued.**

I have regretted what I paid for a work of art.

I have regretted not acquiring a work of art when I had the opportunity.

I would dare/I have dared to make an offer other than the stipulated price.

Source: automated elaboration through Google Forms survey.

## 6.2 Validity, Reliability, HTMT, Structural Collinearity

Table. 2 Reflexive model Cronbach Alpha, Rho_ A, Composite Reliability and AVE

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
ALTERNATIVE OFFER	1.000	1.000	1.000	1.000
ART PASSION	0.792	0.831	0.864	0.615
FINANCIAL MOTIVATION	0.641	0.698	0.844	0.731
INCOME	1.000	1.000	1.000	1.000
LOSS REGRET		1.000		
MARKET TRENDS	0.534	0.712	0.794	0.664
PLEASURE	0.786	0.786	0.903	0.824
PURCHASE FREQUENCY	1.000	1.000	1.000	1.000

Source: own elaboration with SmartPLS software developed by Ringle, C. M., Wende, S., and Becker, J.-M. 2015. "SmartPLS 3." Boenningstedt: SmartPLS GmbH, http://www.smartpls.com.

Figure 6. Heterotrait_Montrait Ratio
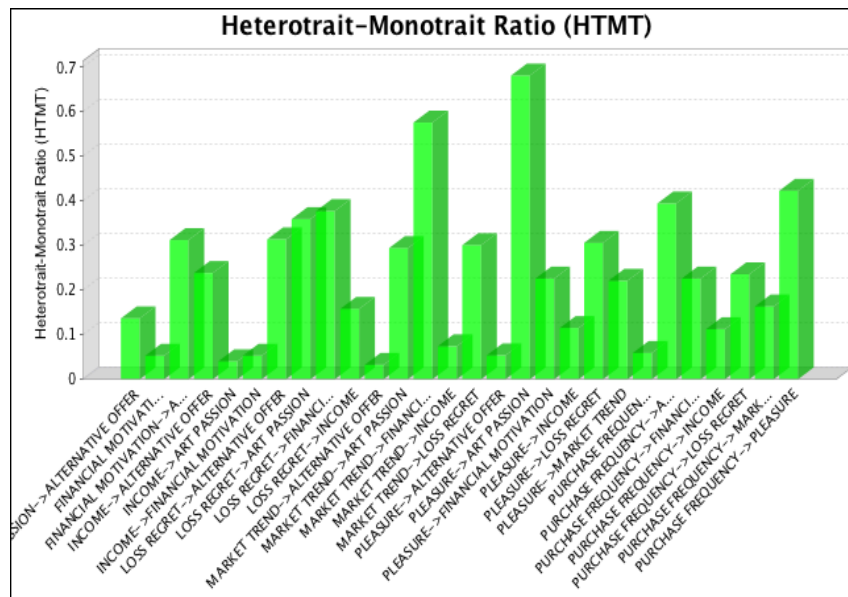
Source: own elaboration with SmartPLS software developed by Ringle, C. M., Wende, S., and Becker, J.-M. 2015. "SmartPLS 3." Boenningstedt: SmartPLS GmbH, http://www.smartpls.com.

Table 3. Variance Inflation Factor Outer Values

	VIF
Alternative Offer	1.000
Income Sources	1.000
Regret Opportunity	1.000
art_studies	1.639
art_critic	1.425
art_interests	2.188
art_knowledge	1.726
art_movement	1.153
conspicuous_pleasure	1.720
investment	1.287
experts_opinion	1.153
personal_pleasure	1.720

price_speculation	1.287
purchase_freq	1.000

Source: own elaboration with SmartPLS software developed by Ringle, C. M., Wende, S., and Becker, J.-M. 2015. "SmartPLS 3." Boenningstedt: SmartPLS GmbH, http://www.smartpls.com.

Table 4. Variance Inflation Factor Inner Values

	LOSS REGRET	PLEASURE	PURCHASE FREQUENCY
ALTERNATIVE OFFER	1.069	1.069	1.069
ART PASSION	1.081	1.081	1.081
FINANCIAL MOTIVATION	1.122	1.122	1.122
INCOME	1.061	1.061	1.061
MARKET TRENDS	1.113	1.113	1.113

Source: own elaboration with SmartPLS software developed by Ringle, C. M., Wende, S., and Becker, J.-M. 2015. "SmartPLS 3." Boenningstedt: SmartPLS GmbH, http://www.smartpls.com.