

European Journal of Science and Technology Special Issue 24, pp. 226-234, April 2021 Copyright © 2021 EJOSAT **Research Article** 

# **Analysis of Generations' Preferences for Buying Gold Earrings**

Ozgenur Tuncer<sup>1\*</sup>, Ufuk Cebeci<sup>2</sup>

<sup>1\*</sup>Goldenline Bogazici Hediyelik Esya ve El Sanatları San. Ve Tic. A.S, Istanbul, Turkey, (ORCID: 0000-0003-3440-2561), <u>ozgetuncer@goldenlinejew.com</u>
<sup>2</sup> Istanbul Technical University, Faculty of Management, Departmant of Industrial Engineering, Istanbul, Turkey, (ORCID: 0000-0003-4367-6206), <u>cebeciu@itu.edu.tr</u>

## (2nd International Conference on Access to Recent Advances in Engineering and Digitalization (ARACONF)-10–12 March 2021) (**DOI:** 10.31590/ejosat.904073)

ATIF/REFERENCE: Tuncer, O., Cebeci, U. (2021). Analysis of Generations' Preferences for Buying Gold Earrings. *European Journal of Science and Technology*, (24), 226-234.

#### Abstract

Customer satisfaction in product design is the shaping and the creating content of the product according to the expectations and wishes of the customer with the understanding that I can sell the product which I can produce the customer's requests In these days, where competition is increasing, it is extremely important to ensure the design of products that will provide customer satisfaction for businesses to survive and go one step further. For this reason, businesses should realize in studies that will recognize their customers in the target market.

Considering the cost of gold, workmanship, time and the number of competitors in the market, gold jewelry design should be made to meet customer expectations. The study examines the effect of color, carat, model, appearance and figure status variables on the purchasing behavior of different generations by conjoint analysis. This study was conducted with 216 participants from across Turkey is the first study examining the gold jewelry buying behavior of generations.

Keywords: Gold Earrings, Generation, Conjoint Analysis, Customer Satisfaction.

# Kuşakların Altın Küpe Satın Alma Tercihlerinin Analizi

#### Öz

Ürün tasarımında müşteri memnuniyeti, müşterinin isteklerini üretebilirsem satabilirim anlayışı ile ürünün müşterinin beklenti ve isteklerine göre şekillenmesi ve içeriğinin oluşturulmasıdır. Rekabetin giderek arttığı bu günlerde müşteri memnuniyetini sağlayacak ürünlerin tasarımının sağlanması işletmelerin ayakta kalmaları ve bir adım ileriye gidebilmesi için son derece önemlidir. Bu nedenle işletmelerin hedef pazardaki müşterilerini tanıyacak çalışmalar içerisinde bulunmaları gerekir.

Altın takı üretimi yapan firmaların altının maliyeti, işçilik, zaman gibi faktörler ile pazardaki rakiplerinin sayısı değerlendirildiğinde altın takı tasarımının müşteri beklentilerini karşılayacak şekilde yapılması gerekmektedir. Çalışma kuşakların altın küpe tasarımına etki eden renk, ayar, model, görünüm ve figür durumu değişkenlerinin farklı kuşakların satın alma davranışları üzerindeki etkisini konjoint analizi ile incelemektedir. Türkiye genelinden 216 katılımcı ile gerçekleştirilen bu çalışma kuşakların altın takı satın alma davranışlarının incelendiği ilk çalışma olma özelliği taşımaktadır.

Anahtar Kelimeler: Altın Küpe, Kuşak, Konjoint Analizi, Müşteri Memnuniyeti.

<sup>\*</sup> Sorumlu Yazar: <u>ozgetuncer@goldenlinejew.com</u>

# **1. Introduction**

Businesses that want their customers to be satisfied by meeting the demands and needs of their consumers; have difficulties due to their many competitors and the wide variety of goods and services. For this reason, it is important that companies develop the right strategies depending on the sector they are in. The most important factor to be taken into account in developing strategies correctly is undoubtedly herself of customer. Therefore, the cultural, social, psychological and individual situations of the consumers are effective in determining the strategies of the businesses.

Jewelry is the getting of precious like gold and semiprecious metals and stones into jewelry by processing (Akmermer & Ayyıldız, 2016). The jewelry sector, which is generally passed on from father to son, is an important sector with its deep-rooted history and contributions to the country's economy. Turkey was ranked ninth in gold jewelry exports in 2018. In 2019, according to TUIK data, gold jewelry exports of 5 billion US dollars were realized. (Mücevherat Sektör Raporu, 2020). It has average of 5,000 manufacturers and 35,000 retail shops in this sector. The Center of production in Turkey is Istanbul and also manufacture is realized in high amounts in Ankara and Izmir (Mücevherat Sektör Raporu, 2020). The changing demands and needs of consumers and the excess of competitors in this sector increase the competitive environment. It is seen that gold jewelry producers do works in this field after 2000 by starting to pay more attention to customer demand and needs in order to avoid this intense competition.

It is necessary to examine how people consume according to their some characteristics to be evaluated the consumers in a healthier and more objective way. Generations are communities formed by individuals who gathered around common thought and behavior patterns. Individuals in the same generation witness the same technological developments, social advances, problems and economic changes. Howe and Strauss (2009) argue that individuals of the same generation born in the same time period will display a common buying and consumption behavior. Depending on this view, generations are considered as an important factor to be examined on the purchasing behavior of consumers (Bayrakdaroğlu & Özbek, 2018). Businesses use generations in order to determine theirs target customers, reach customers more easily and divide the market (Özden, 2019). In studies which do on gold jewelry consumers, trying to discover customers over generations will enable to develop more consistent marketing strategies of business by giving a different perspective to business.

There are some differences in terms of purchasing behavior between generations. In the period of Generation X (1965-1979), ruler of the market is producers and there is mass production (Altuntuğ, 2012). They are hesitant about shopping online (Bahçivan, 2019). They prefer to shop by seeing, tasting and bargaining. They are reluctant to try new products and services and are willing to shop from brands they know (Aslan, 2019). The transition of sovereignty from producer to consumer was provided with Generation Y (1980-1999). Easy access to information and questioning attitudes of generation Y individuals forced sellers to be honest (Altuntuğ, 2012). Also with the effect of globalization, an orientation towards different, private and personal consumption has been provided. Generation Y individuals, on the other hand, display an undecided attitude in their purchasing decisions. However, generation Y consumers who actively use mobile technology and social media generally adopt online shopping (Bahçivan, 2019). They are willing to try new products or services. They like it hard, but they get bored quickly and give up (Aslan, 2019). Results of the survey conducted by Barkley, one of the leading independent marketing agencies in America, with more than 5000 young participants in August 2011; revealed the differences of generation Y from previous generations in marketing, traveling, clothing, eating and drinking habits, especially the use of social media and technology (Tükel, 2014). Generation Z (2000 and later) individuals are the consumer mass of the future; they are individuals who want to buy and consume every product which they want immediately (Altuntuğ, 2012). Since generation Z consumers, who actively use technologies such as smartphones, tablets and computers, have the purchasing power in their hands in recent years, importance of the e-commerce concept has increased (Bahçivan, 2019).

# 2. Material and Method

### 2.1. Material

It is possible to obtain very different designs according to the consumer preferences and the imagination of the designers in the models designed as gold earrings. These differences occur due to the different qualities which product has and are taken into account by people. The main characteristics that make up the differences are the variables of color, carat, model, appearance, figure, and size.

The color of pure gold, which is obtained from nature and not mixed with other elements, is yellow. As a result of mixing pure gold with the element of silver, an alloy of green gold is obtained. In people's perception, mostly green gold is known as yellow gold. While a result of plating the alloy of nickel and platinum elements and pure gold with rhodium, white gold is obtained; by adding copper predominantly into pure gold, rose (pinkish) gold is obtained. It is possible to obtain different design models by using these colors alone or together (Altında Fırsat, 2018).

Since pure gold has a soft feature in jewelry, it is used in the production of gold jewelry by forming an alloy with precious auxiliary metals. The purity of alloys is expressed with carat or miliem in jewelry. Pure gold is considered to be 24K (1000 milliem). The value of purity decreases as the carat approaches towards zero with the addition of additives.

Gold earrings can be classified in various ways such as circle model earrings, dangly model earrings, mini model earrings.

In the design of gold earrings, besides simple earrings, patterned can design be made with a pencil, which we can express as patterned, the design can be differentiated with different stones, or designs in different colors can be obtained by enameling.

In gold earrings, depending on preference different figures such as hearts, stars, flowers and infinity signs can be used; as well as simple designs without figures can be created.

The sizes of the earrings and figures of the earrings vary depending on the design.

Based on all these qualities, gold earrings which have different models, colors, carats, looks and figures create the main material of the study. In order to evaluate the purchasing decision of the gold earrings, the gold earring models produced by Goldenline Jewelry Company were examined and according to these models and the opinions of the employees, the factors that will affect the purchasing decision were determined. Accordingly, the factors to be evaluated in the study are color, carat, model, figure status and appearance.



Figure 1. Gold Earrings Sample Photos (Runda, 2021)

#### 2.2. Method

A wide variety of methods are used to determine the preferences of consumers in market researches. One of these methods is conjoint analysis, which provides clear and objective numerical results to researchers. Therefore, in the study, it was decided to use conjoint analysis to evaluate the factors affecting the gold earring purchasing preferences of the generations.

#### 2.2.1. Conjoint Analysis

Conjoint analysis is a statistical method that at the purchasing stage, enables the determination of the combination that will provide the most benefit for the consumer from factors which product or service has and to determine the most preferred factor levels on that product or service (Cevik & Yiğit, 2011). It is an analysis that enables to estimate the common effect of a group of independent variables that measure the characteristics of a product or service on the dependent variable that measures consumers' preferences (Bodog & Florian, 2012). The first studies of conjoint analysis were carried out in the 1920s. In 1971, the first consumer-focused study was carried out by Paul Green and Vithala R. Rao (Çevik & Yiğit, 2011). Conjoint analysis, which has been used in many fields such as retail, health, mobile technologies and automotive, is one of the preferred multivariate analysis techniques to determine consumer behavior (Turanlı, Taşpınar Cengiz, & Işık, 2013). Conjoint analysis enables quantitative comparison of qualities by transforming factors that are not expressed numerically such as color and brand into data that can be expressed numerically (Çevik & Yiğit, 2011).

Conjoint analysis is carried out in four stages: determining the independent variables and their levels, creating scorecards for these levels with orthogonal design, ranking or scoring the cards according to participant preferences, and finally finding and interpreting the benefit coefficients by applying conjoint analysis.

#### 2.2.2.Aplication of Conjoint Analysis

There are many criterias in designing a gold earring. Buyers get hard to consider all these criteria when they make a purchasing decision. Therefore, it was aimed to estimate the benefit values for the buyers by utilizing the criteria that are important in the decision to buy gold earrings with conjunct analysis and the levels of these criteria. In this study, a questionnaire form was applied to 220 participants through the internet and face to face in two ways. As the sampling method, convenience sampling, which is one of the non-random sampling methods, was used because of time constraints. The research was conducted with participants from across Turkey.

Since the number of factors that can affect the decision which people buy gold earrings and the numbers of levels belonging to these factors are high, the factors and levels of these factors to be used in the research were determined by examining the models which are manufactured in Goldenline Jewelry Company and by benefiting from the opinions of the manufacturers there. As it becomes difficult for participants to answer the questionnaire when the number of combination is too high, the least possible factor was chosen for the study. Accordingly, the variables and levels of color, carat, model, appearance and figure status are independent variables, and the gold earring purchasing behavior of consumers constitutes the dependent variable. The independent variables and levels of these independent variables determined in the study are shown in Table 1.

Table 1. Independent Variables and Their Levels

Color	Carat	Model	Figure Status	Appearance
One - color	10K	Eardrops	Figured	Simple
Two - color	14K	Hoop Earrings	No figure	Patterned
Three – color	18K	Tiny Earrings		Stony
	22K	-		

While conjoint analysis is being applied, it is necessary determining the type of relationship between the factor and the preference order of the scorecards levels examined in the SPSS statistical package program. Both continuous and categorical variables can be used to measure the attributes involved in the analysis (Bodog & Florian, 2012). If the preferability increases when the factor levels increase, it is called a linear increasing model, and if the preferability decreases when the factor levels increase, it is called a linear decreasing model. If there is a categorical relationship between factor levels, they are discrete models. It was found appropriate that all of the factors preferred in the study are evaluated as discrete.

In our study, the partial utility model was chosen since the direction of the relationship between the levels of the variable determined as the preference model and the preference scores could not be determined.

One of the data collection methods in conjoint analysis is the full profile method. In the full profile method, participants are given cards containing all sub-factor combinations related to the product or service. It is wanted that the participants should score their favorites with a high score or rank with the best card in such a way that first rank by evaluating the sub-factor combinations on these cards. When all sub-factors are evaluated together, it is more likely to reach more meaningful results (Güngör & Özdemir, 2009). In this study, the full profile method was preferred as the data collection method.

The reduced design model was used in selecting the data collection design. Because there are five independent variables accepted in the full factorial design and these independent variables have 3, 4, 3, 3, 2 levels, respectively. Accordingly, 3x4x3x3x2; In other words, 216 election cards are formed. It is very time-consuming for participants to analyze and evaluate 216 selection cards; it is not even possible in some cases. Therefore, the reduced design has been chosen. Orthogonal design has been used in obtaining the reduced design model. Thus, 216 score selection cards were reduced to 16. The reduced

design can also be generated randomly. However, the most appropriate method for the design to be effective and balanced is the orthogonal design method. In the study, orthogonal design was obtained by using SPSS 22.0 package program. The score cards created are shown in Table 2. Earring samples presented to the participants in the questionnaire to form an opinion are given as an attachment.

Card No	Color	Carat	Model	Figure Status	Appearance
1	Three – color	18K	Eardrops	No figure	Stony
2	Two-color	10K	Eardrops	Figured	Patterned
3	One – color	18K	Hoop Earrings	No figure	Patterned
4	Two-color	14K	Tiny Earrings	No figure	Stony
5	One – color	14K	Eardrops	No figure	Patterned
6	One – color	22K	Eardrops	Figured	Stony
7	Two-color	22K	Hoop Earrings	No figure	Simple
8	One – color	10K	Hoop Earrings	Figured	Stony
9	Three – color	10K	Eardrops	No figure	Simple
10	Three – color	22K	Tiny Earrings	Figured	Patterned
11	One – color	14K	Eardrops	Figured	Simple
12	Two-color	18K	Eardrops	Figured	Simple
13	One – color	22K	Eardrops	No figure	Simple
14	Three – color	14K	Hoop Earrings	Figured	Simple
15	One – color	10K	Tiny Earrings	No figure	Simple
16	One – color	18K	Tiny Earrings	Figured	Simple

Table 2. Scorecards Obtained with SPSS 22

### 3. Results and Discussion

Conjoint analysis survey is applied to 220 participants in Turkey; and in study, it was decided to use data of 216 participants from X, Y and Z generations. The results of the other 4 participants were not found appropriate because they do not belong to the X, Y and Z generations. Consumers' decisionmaking styles are affected by demographic characteristics such as age and gender. Stating the demographic characteristics of these participants will be useful in interpreting the analysis results. Accordingly, 78% of the participants in the study are women and 22% are men. In addition, 25% of these participants include individuals belonging to the X generation, 51% to the Y generation and 24% to the Z generation. The data of the participants regarding gender and age distributions are shown in Table 3.

Table 3.Gender and Age Distribution of the Participants

	Gen.X	Gen.Y	Gen. Z	Total
Woman	37	90	41	168
Man	17	21	10	48
Total	54	111	51	216

When the education levels of the respondents are examined, it is seen that the ratio of high school graduates and university graduates are high. In Figure 2, the distribution of the the education levels of the participants is given.

#### Avrupa Bilim ve Teknoloji Dergisi



Figure 2. Educational Levels of Participants

The analysis of the research data was achieved in SPSS 22.0 package program with the help of the syntax instruction module.

Factor	Level	Average Weight	Utility coefficient	Standard error
Color	One – color	31,441	0,728	0,489
	Two-color		0,675	0,573
	Three - color		-1,404	0,573
Carat	14K	21,046	-0,245	0,635
	10K		-0,675	0,635
	18K		0,168	0,635
	22K		0,752	0,635
Model	Eardrops	15,567	0,025	0,489
	Tiny Earrings		-0,540	0,573
	Hoop Earrings		0,515	0,573
Figure Status	Figured	12,051	0,409	0,367
	No figure		-0,409	0,367
Appearance	Simple	19,894	0,783	0,489
	Patterned		-0,566	0,573
	Stony		-0,217	0,573
Constant	•		8,116	0,423
Pearson's R		0,852	(p=0,000)	
Kendall's tau		0,683	(p=0,000)	

Table 4. Conjoint Analysis Results Regarding the General Model

When Table 4, which includes the results of the general model, is examined, it is seen that the participants in the survey pay attention to the color factor with an average weight of 31,441 when purchasing gold earrings. When the benefits of the color factor are examined, the order of importance in terms of contribution to the total benefit was realized as one color, two colors and three colors. In other words, the participants mostly prefer to buy gold earrings with one color.

The second important factor influencing the decision to buy gold earrings is the carat of gold. Accordingly, when the utility coefficients are examined, it is seen that 22K is preferred at most and at least 10K is preferred.

The third factor is the appearance. For the participants, according to the benefit coefficients, simple gold earrings are most preferred. Then the models with stones, and finally the models which have pattern done with pencil on the surface, affect the purchasing decision.

The model of the gold earring with an average weight of 15,567 affects the purchasing decision as the fourth. The order of

importance in terms of contributing to the total benefit is hoop earrings, eardrops and tiny earrings.

Finally, the least influencing factor is the figure status with an average weight of 12,051. When the benefit coefficients are examined according to the answers given by the participants, figured models are preferred more than those without figures.

The rate of compliance of the established model with the preferences of the participants was 85.2% according to Pearson's R test; According to the Kendall's Tau test, it was determined to be 68.3%. It can be said that there is a positive and significant relationship between the established conjuncture model and the observed results.

The conjoint model obtained:

Benefit = 8,116 + Color + Carat + Model + Figure Status + Appearance

According to the model, when the utility values are substituted, the card with the highest benefit is card number 12. The least useful card is the score card given with number 1.

#### European Journal of Science and Technology

Factor	Level	Average Weight	Utility coefficient	Standard error
Color	One – color	27,006	0,049	0,525
	Two-color		0,860	0,616
	Three - color		-0,909	0,616
Carat	14K	27,359	-0,588	0,682
	10K		-0,838	0,682
	18K		0,472	0,682
	22K		0,954	0,682
Model	Eardrops	20,255	0,515	0,525
	Tiny Earrings		-0,811	0,616
	Hoop Earrings		0,296	0,616
Figure Status	Figured	16,614	0,544	0,394
	No figure		-0,544	0,394
Appearance	Simple	8,766	0,210	0,525
	Patterned		-0,364	0,616
	Stony		0,154	0,616
Constant			8,306	0,455
Pearson's R		0,820	(p=0,000)	
Kendall's tau		0,561	(p=0,001)	

Table 5. Conjoint Analysis Results for Generation X

The results of the conjoint analysis of the factors that affect the decision of individuals of generation X to purchase gold earrings are shown in Table 5. According to the analysis results in Table 5, the factors affecting the purchasing decision of the X generation individuals are the carat, color, model, figure status and appearance, respectively. Accordingly, while individuals of the X generation are purchasing gold earrings, they give importance to the most carat of the earring and least its appearance.

When the benefit coefficients of the X generation individuals born between 1965-1979 are examined, in terms of the carat factor, they want to buy most 22K least 10K gold earrings. When evaluated in terms of color factor, it is seen that the most preferred two-color with 0.860 benefit coefficient. Then one-color and three-color models are preferred. In terms of the third affecting model factor with an average weight of 20,255, the eardrops models have the highest benefit coefficient. The fourth factor is figure status. Individuals of the X generation prefer figured model earrings rather than unfigured models. Finally, in terms of the appearance factor, simple gold earrings with a benefit coefficient of 0.210, stony with a utility coefficient of 0.154 and patterned gold earrings with a utility coefficient of -0.364 are appreciated by the X generation.

The rate of compliance of the established model with the preferences of the participants is 82% according to the Pearson's R test; According to the Kendall's Tau test, it was determined to be 56.1%. It can be said that there is a positive, significant, good relationship between the established conjuncture model and the observed results.

Factor	Level	Average Weight	Utility coefficient	Standard error
Color	One – color	37,616	1,002	0,528
	Two-color		0,638	0,619
	Three - color		-1,639	0,619
Carat	14K	17,677	-0,354	0,686
	10K		-0,615	0,686
	18K		0,342	0,686
	22K		0,626	0,686
Model	Eardrops	16,009	-0,456	0,528
	Tiny Earrings		-0,211	0,619
	Hoop Earrings		0,667	0,619
Figure Status	Figured	5,261	0,185	0,396
	No figure		-0,185	0,396
Appearance	Simple	23,436	0,998	0,528
	Patterned		-0,647	0,619
	Stony		-0,352	0,619
Constant			8,114	0,457
Pearson's R		0,863	(p=0,000)	
Kendall's tau		0,667	(p=0,000)	

Tablo 6. Conjoint Analysis Results for Generation Y

Generation Y individuals borned between 1980-1999 pay attention to the color of gold with an average weight of 37,616 when purchasing gold earrings. This is followed by the appearance with an average weight of 23,436, the carat with an average weight of 17,677, the model with an average weight of 16,009 and finally the figure status with an average weight of 5,261.

In terms of color factor, one-color, two-color and three-color models are preferred, respectively. According to the appearance factor, it is desired to buy the most simple and the least patterned models. In terms of the carat factor, it is seen that the utility coefficient decreases from 22K to 10K. When the levels of the model factor are examined, hoop earrings, tiny earrings, and eardrops are preferred, respectively. Finally, figured models have more utility coefficients than non-figured models.

The rate of compliance of the established model with the preferences of the participants is 86,3% according to the Pearson's R test; According to the Kendall's Tau test, it was determined to be 66,7%. It can be said that there is a positive, significant, good relationship between the established conjuncture model and the observed results.

Factor	Level	Average Weight	Utility coefficient	Standard error
Color	One – color	27,432	0,853	0,448
	Two-color		0,561	0,526
	Three – color		-1,414	0,526
Carat	14K	17,497	0,353	0,582
	10K		-0,632	0,582
	18K		-0,534	0,582
	22K		0,814	0,582
Model	Eardrops	18,416	0,552	0,448
	Tiny Earrings		-0,970	0,526
	Hoop Earrings		0,417	0,526
Figure Status	Figured	18,209	0,752	0,336
	No figure		-0,752	0,336
Appearance	Simple	18,446	0,922	0,448
	Patterned		-0,603	0,526
	Stony		-0,319	0,526
Constant			7,918	0,388
Pearson's R		0,910	(p=0,000)	
Kendall's tau		0,717	(p=0,000)	

Table 7. Conjoint Analysis Results for Generation Z

According to the participants belonging to Generation Z, although there is no big difference between the average weights in the decision to purchase gold earrings, the color, appearance, model, figure status and carat factors affect the purchasing decision, respectively.

When the generation Z individuals are evaluated according to the utility coefficients, one-color models in terms of color factor; then are preferred two and three color models. According to the appearance factor which is second important; most simple models, least patterned models that are created with a pencil process on the surface are preferred. As a model, eardrops, hoop earrings and tiny earrings are preferred. Figured models are required more than those without figures. Also, in terms of carat factor, it is preferred to buy 22K, 14K, 18K and 10K gold earrings, respectively.

The rate of compliance of the established model with the preferences of the participants is 91% according to the Pearson's R test; According to the Kendall's Tau test, it was determined to be 71,7%. It can be said that there is a positive, significant, high relationship between the established conjuncture model and the observed results.

Finally, the differences between male and female participants were examined in the study. According to these results, while the most important factor affecting the purchasing decision for women is the color of gold, for men it is the carat of gold. When the benefit coefficients of women are examined, they prefer 22K, 14K, 18K and 10K, respectively, while men prefer 22K, 18K, 14K and 10K. Both gender groups stated that they would buy one color, simple, figured and eardrops.

## 4. Conclusions and Recommendations

Exclusive and luxury products like gold jewelry; despite their high prices, it is demanded by many people around the world for various purposes such as looking good, investing, giving gifts (Pongyeela, 2012). The fact that there is still demand for gold jewelry causes the protection of its high price for a long time and the creation of a competitive environment among the manufacturers. Companies should take into account the needs and wishes of their customers in order to survive in this competitive environment and to continue their existence successfully. It is important to constantly increase the value of the product offered to the customer and to determine the trend by regularly following the customer's needs (Nasir, Deveciyan, & Yurder, 2020). According to the study of Nasir et al. (2016) conducted with 1019 employees in the jewelry industry, it was concluded that the customer product preferences changed over time. It has been observed that customers always tend to seek new products and services, and the needs and expectations regarding the product of new customers differ from the needs and expectations of their current customers.

Various demographic characteristics such as gender, age, education level, and city of residence should be paid attention in the studies to be carried out to determine customer needs. Another factor that can reveal the differences between customer needs is generations. Generations can exhibit different behaviors depending on the periods they live in. As well one of these differences is seen in purchasing behavior. Cetin (2017) supported the idea that there should be different marketing strategies for certain age ranges in his study. Foulkes (2016), in his study comparing the luxury perceptions of X and Y generation consumers in the UK, concluded that the generation Y customers in the UK tend to have more luxury brands than those of the X generation and they see this as a social status (Kahraman & Dağlı, 2019).

Conjoint analysis is used in consumer research to examine people's product preferences (Poortinga, 2002). In this study, the differences between the gold earring purchasing preferences of the X, Y and Z generations were examined by conjoint analysis. The independent variables of color, carat, model, appearance and figure status, which are thought to have the greatest effect on gold earring buying behavior, were accepted as factors. There are three sub-levels for the color factor: one - color, two - color, and three - color. The carat factor represents the material aspect of purchasing behavior. And it is handled in four sub-levels as 10K, 14K, 18K, and 22K. In terms of the model factor, the models are divided into three classes as eardrops, hoop earrings and tiny earrings. The appearance of the models has three sublevels such as simple, stony or patterned. Finally, the figure status independent variable is divided into two sub-levels according to whether it contains figures or not. With orthogonal design, 16 design cards containing these factors and sub-factors were evaluated by presenting to the participants in the conjoint questionnaire. After the answers of the participants were ranked from 1 to 16, the conjoint analysis was performed with the syntax module in the SPSS 22.0 package program. The study is important in that it is the first study in the world to examine the differences in gold purchase behavior of generations.

According to survey results which are answered 216 participants over Turkey; color, carat, appearance, model and figure status respectively affect to the purchase of gold earrings. Consumers generally prefer one color, 22K, simple, figured hoop earrings.

When the data of the participants are evaluated according to the generations they belong to, the factors that affect the purchase decision of Generation X are carat, color, model, figure status and appearance according to their average weight. Individuals of the X generation mostly prefer earrings in two colors, 22K, figured, simple, and eardrops. Color, appearance, carat, model and figure status respectively are important for Y generation individuals. Individuals of this generation mostly prefer one color, 22K, simple, figured, hoop earrings. The factors affecting the purchasing behavior of the generation Z individuals borned in 2000 and after are color, appearance, model, figure status and carat, respectively. When levels belonging to the factors were evaluated, it was concluded that they mostly preferred one color, 22K, simple, figured, eardrops.

When the results are evaluated, the carat factor representing the financial aspect for the individuals of the X generation is in the first rank in the purchasing decision, the third for the Y generation and the last for the Z generation. Accordingly, as the generation gets younger, the aim of getting gold earrings can be interpreted that it focuses on the design of gold rather than investment. It was concluded that the color factor generally has high effect and whether the gold earring has a figure or not has a low effect on the purchase.

When the analysis according to the gender variable is repeated, the most important factor affecting the purchasing decision for women is the color of gold, while for men is the carat of gold. While women prefer 22K, 14K, 18K and 10K, respectively, the preference decreases from 22 to 10 for men. Both gender groups stated that they would buy one color, simple, figured and eardrops.

According to the results of the study in which Gungor and Ozdemir (2009) examined the jewelry purchasing preferences of working women with conjoint analysis, women attach importance to the company that produces the most jewelry. This is followed by the stone used in jewelry, the model of the jewelry, the carat of the jewelry and the price of the jewelry. According to the factors they examined, they prefer lower-priced 14K jewelry rather than 18K and 22K. In this study carried out in 2021, the carat factor is the second important factor among the factors evaluated. And the majority of participants prefer gold earrings with 22K.

According to the study of Sultana et al. (2015) realized with 60 customers who the majority of whom are housewives between the ages of 34 and 41 in the Dhaka New Market in Bangladesh, people usually prefer to buy 22K. In addition, 48% of the participants prefer simple gold jewelry among the simple gold jewelry, colorful jewelry, stone jewelry and trendy jewelry available in the market. These results are similar to the results of our study.

This study was carried out on a gold earring, considering the ease of classification. The study can be repeated for different product groups (such as bracelet, necklace, ring). In the study, factors were kept low in order to make it easier for the respondent to answer. The study can be repeated by increasing the number of these factors. In addition, another study can be made for white gold, green gold, rose gold colors by including more specific expressions for the color factor. Finally, gold earrings with enamel were not included in the study. A study including enameled products can also be carried out to be evaluated in the new designs of the manufacturer.

## 5. Acknowledge

I would like to thank Mesut Abdik, Huseyin Abdik, Caner Akkoyunlu, Selcuk Ozer, Kubra Ates and all other employees from Goldenline Jewelry Company for their support during the study and to the other participants provided to reveal this study by participating to this survey.

## References

- Akmermer, B., & Ayyıldız, H. (2016, Haziran). Kuyumculuk Sektörünün Porter'ın Beş Güç Modeli İle Rekabetçilik Analizi: Tranzon İli Örneği. Karadeniz Teknik Üniversitesi Sosyal Bilimler Enstitüsü Sosyal Bilimler Dergisi, 6(11), 47-68.
- *Altında Fırsat.* (2018). 2020 tarihinde https://www.altindafirsat.com/altin-renkleri-nasil-belirlenir/ adresinden alındı
- Altuntuğ, N. (2012). Kuşaktan Kuşağa Tüketim Olgusu ve Geleceğin Tüketici Profili. *Organizasyon ve Yönetim Bilimleri Dergisi*, 4(1), 203-212.
- Aslan, B. (2019). Perakende Alımlarında X, Y ve Z Kuşaklarının Satın Alma Lokasyonlarını Tercih Etme Sebeplerinin İncelenmesi. *Tez Çalışması*. İstanbul.
- Bahçivan, G. (2019). Preference of Online and Offline Shopping Place; A Comparison of Y and Z Generations. *Tez Çalışması*. İstanbul.
- Bayrakdaroğlu, F., & Özbek, Ç. (2018). Kadınların Tüketim Alışkanlıklarının Kuşaklararası Boyutu. Sosyal ve Beşeri Bilimler Araştırma Dergisi, 19(42), 1-12.
- Bodog, S., & Florian, G. (2012, May). Conjoint Analysis in Marketing Research. *Journal of Electrical and Electronics Engineering*, 5(1), 19-22.
- Çetin, M. (2017, Aralık). Satın Alma Davranışlarını Etkileyen Faktörlerin Tüketici Tercihlerine Etkisi: Katılım Bankacılığı Araçları Üzerine Bir Araştırma Karaman İli Örneği. Konya.
- Çevik, O., & Yiğit, A. (2011). Konjoint Analizi ile Ofis Mobilyası Tüketicilerinin Tercihlerinin Belirlenmesi. KMÜ Sosyal ve Ekonomik Araştırmalar Dergisi, 13(20), 105-110.
- Güngör, M., & Özdemir, M. (2009). Çalışan Bayanların Takı Satın Alma Tercihleri ve Konjoint Analiz Yönteminin

Uygulanması. 1. Uluslararası Katılımlı Mücevher-Takı Tasarımı ve Eğitimi Sempozyumu, (s. 32-40). Aydın.

- Kahraman, M., & Dağlı, S. (2019). Marka Algısı, Müşteri Memnuniyeti ve Marka Tercihi İlişkisinin X ve Y Kuşağına Göre İncelenmesi. Uluslararası Ekonomi, İşletme ve Politika Dergisi, 3(2), 381-398.
- (2020). *Mücevherat Sektör Raporu*. Türkiye Cumhuriyeti Ticaret Bakanlığı, Ankara.
- Nasir, S., Deveciyan, M., & Yurder, Y. (2020). *Kuyumculuk* Sektöründe İşletmelerin Pazar Odaklı Stratejilere Yönelik Tutumları. İstanbul: İstanbul Kuyumcular Odası.
- Özden, A. (2019). Pozitif Algının ve Tüketici Karar Verme Tarzlarının Y ve Z Kuşakları Açısından Karşılaştırılması. *Gazi İktisat ve İşletme Dergisi*, 5(1), 1-20.
- Pongyeela, A. (2012). The Decision Making Process of Jewelry Buyers in Thailand. *Proceedia Economics and Finance*, 3, 188-192.
- Poortinga, W. (2002). Household preferences for energy-saving measures: A conjoint analysis. *Journal of Economic Pyschology*, 49-64.
- Runda. (2021). Şubat 19, 2021 tarihinde https://rundajewelry.com/collections/kupe adresinden alındı
- Sultana, M., Siddique, P., & Islam, S. (2015). Factor Analysis of Consumer Behaviour in Jewellery Business: An Empirical Study on Bangladesh. *European Journal of Business and Management*, 7(5), 79-84.
- Turanlı, M., Taşpınar Cengiz, D., & Işık, M. (2013). Konjoint Analizi ile Gazete Tercihlerini Etkileyen Faktörlerin Belirlenmesi. Ekonometri ve İstatistik Dergisi(19), 1-26.
- Tükel, İ. (2014, Kasım). Tüketimin Yeni Aktörleri: "Y Kuşağı". Hacettepe Üniversitesi Sosyolojik Araştırmalar Elektronik Dergisi, 1-22.

# Appendix

