

## Impact of Gender on Customer Satisfaction: Batna's Airport Users

تأثير نوع الجنس على رضا العملاء: مستخدمي مطار باتنة

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### Abstract:

*The aim of this paper is to investigate the existence of customer satisfaction differences based on gender regarding airports' services, taking Batna's Airport as a case study. Customer satisfaction is considered an important key performance indicator and even a proof for quality. Besides, airports represent an important playground for airway transport companies. A questionnaire was prepared for the data collection using eight quality dimensions. It was distributed in the airport directly during March 2015. SPSS 20 was later used for the data analysis. The results show that there are significant gender based differences in customer satisfaction and that every quality dimension affects global customer satisfaction differently based on gender.*

**Key words:** Service Quality, Customer satisfaction, Gender differences, Airport, Batna

**Jel Classification Codes :** J160, M300, M310, R410, R530

### ملخص:

يهدف هذا المقال إلى معاينة والتحقق من وجود اختلافات على أساس الجنس في رضا الزبائن فيما يتعلق بخدمات المطارات، مع الأخذ بمطار باتنة كدراسة حالة. حيث يعتبر رضا الزبائن من أهم مؤشرات الأداء دليلاً على الجودة. إلى جانب ذلك، تمثل المطارات ملعباً مهماً لشركات النقل الجوي. تم إعداد استبيان لجمع البيانات باستخدام ثمانية أبعاد للجودة. تم توزيعه في المطار بصفة مباشرة خلال شهر مارس 2015. و لقد استخدمنا برنامج SPSS 20 لاحقاً لتحليل البيانات. تظهر النتائج أن هناك اختلافات ذات دلالة بين الجنسين في رضا الزبائن وأن كل بُعد من أبعاد الجودة يؤثر على الرضا الكلي للزبائن بشكل مختلف بناءً على الجنس.

**كلمات مفتاحية :** جودة الخدمة ، رضا الزبائن ، الفروق بين الجنسين ، المطار ، باتنة

**تصنيف JEL :** J160, M300, M310, R410, R530

### INTRODUCTION

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*Identifying customer perceptions and their level of satisfaction towards an institution's services is highly important to ensure its competitiveness in the market. A practice regularly realized by companies to adapt their products or services accordingly, therefore, enhance their loyalty towards the brand and consequently improve the overall profitability (Yeh & Kuo, 2003).*

*Whilst customers seek nowadays more personalized services and a better understanding from their services providers (Arun Parasuraman, Berry, & Zeithaml, 1991), yet airports' user are somehow obliged to use airports' services regardless of the prices or the level of their quality since the demand of this type of services is often considered relatively inelastic (Doganis, 2005). Yet, they can always chose a different transportation mode in case they are unsatisfied. The expectation of these customers might differ over time and based on certain market segments like gender.*

*The evaluation and analysis of the differences in customer satisfaction based on gender had little attention even though such a field of a study could allow companies to establish specific marketing strategies for each segment or each specific group. For that, the importance of this study lies in the investigation of the existence of gender-based differences in quality perception by customers as declared in their level of satisfaction and more specifically the satisfaction of the users of Batna's airport.*

*From the previous, we can formulate the main problem of this study as:*

***Does gender affect the satisfaction of Batna's airport users differently?***

*To answer the main problematic we may suggest the following sub-questions:*

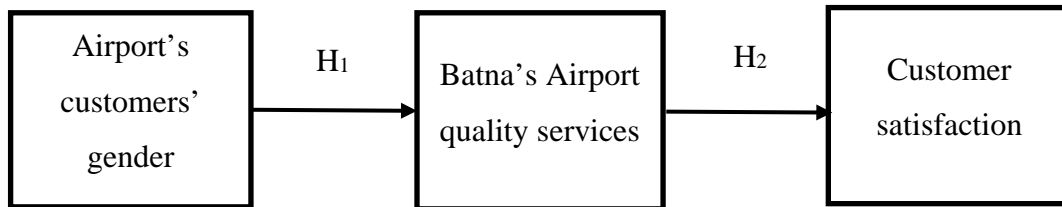
- 1- Are there significant differences based on gender in the satisfaction of Batna's Airport users?*
- 2- What influence have the different quality dimensions on customer satisfaction as perceived by gender?*

*In order to investigate the relationship between gender and customer satisfaction in airports we formulate two hypothesis:*

*H<sub>1</sub>: There are significant gender-based differences in customer satisfaction towards Batna's airport services.*

*H<sub>2</sub>: Each quality dimension have a different impact on customer satisfaction as perceived by gender.*

**Figure 1.** Research framework of this study



The importance of making such an analysis lays not only in the fact of identifying different sources of customer dissatisfaction based on gender and eliminating them, but also in using this segmentation to create special programs or offers for every segment. To make things clearer, airport managers might offer special transportation services for women if they turn to be specifically dissatisfied with the access to the airport compared to men. Creating such special services for every gender would not only preserve the satisfaction level, but also can enlarge the market share of air transportation users and ensure their loyalty to this transportation mode and to Batna's airport. If customer dissatisfaction persists, they would opt for different transportation modes, which would decrease the demand for air transportation, hence the different fees made by the airport would decrease making air transportation companies reconsider their existing lines as well.

Previous studies that were found might be classified in three categories due to their conflicted findings, the first one represents those that found no significant differences between male and female customers' satisfaction (Gümüş & Ekşi, 2014). The second category includes the studies that found women reporting higher satisfaction level than men (Carlson, Blustein, Fiorentino, & Prestianni, 2000; Khurshid, Naem, Ejaz, Mukhtar, & Batool, 2012; Omar, Ariffin, & Ahmad, 2016; Susilo & Cats, 2014). While other studies found the opposite, meaning that they found less satisfaction levels expressed by women (Bendall-Lyon & Powers, 2002; Chisick, 1997; Lin, Chiu, & Hsieh, 2001; Tucker III & Kelley, 2000; Zeithaml, Bitner, Gremler, & Pandit, 2006).

As for the studies made in the Algerian field, many studies were found to have measured customer satisfaction but only one study investigated the existence of gender-based

differences in customer satisfaction (Belatreche & Hadjaj, 2015). This study examined the impact of air transport quality on customer loyalty. The researchers studied the customers of Air Algérie in Ouargla and analyzed the differences in customer satisfaction based on gender, age, and profession. They found no significant differences between male and female respondents.

Hence, this study is structured as follows: firstly, we present a literature review of the needed concepts, which are service quality, customer satisfaction, and airport services. Secondly, we present the case study methodology and the different results. The following section includes a discussion of the results that we have found and finally a conclusion.

## **1. Literature Review:**

A theoretical framework of the concepts shaping this study must be established before undertaking the practical part of the study. It encompasses the definition of services quality, customer satisfaction, and airport services.

### **1.1 Service Quality:**

One of the leading definitions of service quality is that it is the judgment given by the customer for the service, being excellent or superior (Zeithaml, 1988). In another definition, it is the assessment given by a customer towards the relative superiority or inferiority of an organization's services (Bitner, 1992). Hence, service quality is mainly a subjective concept that is based on the evaluation given by a customer to a experiencing a service. Such an evaluation is much influenced by the customer's needs and expectations.

For the specific point of view of airport services, previous studies measuring the quality of these services studied the physical environment in which they are delivered, in other words, the components of the airport infrastructure and its attachments (Jiang & Zhang, 2016; Park & Park, 2018). Some studies also included the psychological elements of the environment such as the visible environment and the user's feelings (Nghiêm-Phú & Suter, 2018; Pantouvakis & Renzi, 2016; Tsai, Hsu, & Chou, 2011). Researchers also studied the impact of the internal and external features of the airport (Zeithaml et al., 2006).

Considering the previous studies, we conclude that there is no consensus on the exact measuring tool of service quality, yet the famous model (SERVQUAL) set in place by (Ananthanarayanan Parasuraman, Zeithaml, & Berry, 1988) is the most used and agreed upon

in this field. It sets five dimensions for services quality, which are assurance, empathy, reliability, responsiveness, and tangibles.

### **1.2 Customer Satisfaction:**

Customer satisfaction can be defined as the meeting of customers' predefined needs by the company (Islam, Chowdhury, Sarker, & Ahmed, 2014). It is determined by the perceived gap between their expectations regarding the quality of the service they request and their perceptions of this quality after their encounter with the services' provider (Barabino, Deiana, & Tilocca, 2012).

Companies now consider their customer as their most valuable asset (Gümüş & Ekşi, 2014), as a consequence, keeping an important market share of satisfied customers is crucial for the competitiveness of every company as dissatisfied customers turn to other brands or to substitute services after having their loyalty reduced over time (Bendall-Lyon & Powers, 2002). The importance of the study of customer satisfaction lies then in the fact that satisfaction ensures customer loyalty, and this latter ensures as well customer retention (Abenoza, Cats, & Susilo, 2017). For this reason, companies consider customer satisfaction as an important key performance indicator (Fornell, Fabris, & Pizzoglio, 2008), thus regularly proceed to measure and analyze it.

It is widely agreed upon that service quality is an antecedent of customer satisfaction (Zeithaml et al., 2006); consequently, companies who desire to assess their quality level seek their customers to study their satisfaction. The questionnaire has been the most used tool in this regard.

### **1.3 Airport Services:**

Airports are becoming more than a mere facility for airway transportation. They are evolving now to include hotels, conference rooms, and different kind of leisure facilities that ensure the user's comfort and enhance their satisfaction as well as the profitability of the airport (Al-Refaie, Bata, Eteiwi, & Jalham, 2014).

Airport management companies must provide the necessary facilities for air transportation operators and for the passengers as well. They impose different kind of fees for their services, consequently, the bigger the demand for air travelling the higher the incomes they could make from these fees. In table one below, the fees for aircraft landings for both

national and international traffic as well as tourism traffic, and it differs depending on the aircraft weight.

**Table 1.** Aircraft landing fees

	< 12 Tons	13-25 Tons	26-50 Tons	51-75 Tons	>75 Tons
<b>International Traffic</b>	11113.22DA	11113.22DA + 96.78 DA/T	2371.30DA + 202.35DA/T	7209.93DA + 209.9235DA/T	12678DA + 310.2435DA/T
<b>National Traffic</b>	58.20DA	58.20DA + 9.69DA/T	184.22DA + 20.69 DA/T	701.35 DA + 21.10 DA/T	1250.82DA + 33.97 DA/T
<b>Tourism Traffic</b>	45.19DA	45.19DA + 7.4969DA/T			

**Source:** Executive decree N° 01-112 of 05.05.2001 fixing the rate of the amounts of aeronautical fees as well as the methods of their distribution.

The following table presents the parking fees that would increase if the parking takes more time. The parking in the traffic areas is more expensive than other areas in order to reduce traffic.

**Table 2.** Aircraft parking fees

<b>On the traffic areas</b>	10.20DA per ton hour
<b>On other areas</b>	4.23DA per ton hour
<b>For general aviation with a take-off weight less than 20T</b>	
<b>Commercial</b>	30DA per ton hour
<b>Non-commercial</b>	7.5DA per ton hour

**Source:** Executive decree N° 01-112 of 05.05.2001 fixing the rate of the amounts of aeronautical fees as well as the methods of their distribution.

Airport management companies also impose charges on the travel companies depending on the number of passengers using the different facilities of the airport as shown below in table three. These charges differ according to the type of the flight, whether it is national or international.

**Table 3.** User charges for facilities fitted to receive passengers

<b>Passengers headed for an Algerian airport</b>	300 DA/ passenger
<b>Passengers headed for a foreign airport</b>	600 DA/ passenger

**Source:** Executive decree N° 01-112 of 05.05.2001 fixing the rate of the amounts of aeronautical fees as well as the methods of their distribution.

The quality of airports services is assessed using eight dimensions: Reception and courtesy, Access to the airport and parking, Signposts, Cleanliness, Waiting, Atmosphere and comfort, Information, Shops and services (Gönenç & Nicoletti, 2001). Each dimension is based on a few elements itself, as it would be explained next (Appendice 1 includes the different dimensions and sub-dimensions of airport services quality):

### **1. Reception and courtesy:**

As there are many facilities in the airport and many parties working there, reception and courtesy is made of six elements, the first one is the courtesy at the information desk, which represents the first place where the users go if any request is made. It is followed by the reception at the registration desk, at the different shops and services available inside the airport, the courtesy of police and customs officers working in the airport, the courtesy at the baggage check and finally, the courtesy at the telephone reception.

### **2. Access to the airport and parking:**

This encompasses any means facilitating the access to the airport, including the different road signs all along the way, the availability of different transportations from and to the airport. Pedestrian paths inside are also an important element as well as the easiness to park one's vehicle.

### **3. Signposts:**

They are of a major importance for someone unfamiliar with the airport and its surroundings, this dimension encloses all signpost leading to the most needed areas: the airport terminal, the registration office, the boarding gate, shops and services, the parking, luggage carts and signposts for disabled people.

### **4. Cleanliness:**

It represents a very important dimension for all types of services, it is assessed for the airport terminal, where a lot of time is spent, the outside surroundings, the parking, the bathrooms and at shops and services in the terminal.

### **5. Waiting:**

The waiting could be divided to waiting at: the passport check, the registration desk, hand luggage control, waiting in the departure lounge, at the baggage check at departure, and upon the arrival.

### **6. Atmosphere and comfort:**

They are evaluated by the general atmosphere and the comfort at the terminal, the security at the parking, the seat's availability at the boarding area and their level of comfort. Finally, the transportation of passengers to and from the airplanes that could be done by a bus or by telescopic gangway.

### **7. Information:**

Its availability is another quality dimension for airport services. Information could be displayed on screens or passed on audio announcements. For that, the visibility and readability of information on these screens and the comprehensiveness of audio announcements are elements of this dimension. We also evaluate information availability of parking fees and payment, information given by the phone as requested by the users and information given on demand at the reception desk.

### **8. Shops and services:**

The availability of different commodities and services inside the airport terminal enhances the waiting time considerably. This dimension is assessed by the availability of shops and services, car rental services, availability of luggage carts and the lighting and brightness inside the terminal.

## **2. Case Study:**

This section encompasses the practical part of the paper, it starts by presenting the methodology applied followed by the different statistical tests we have used to answer our problematic.

First, we will present Batna's airport, the object of our study. According to the airport management company, the airport was inaugurated in 1998; it is located at 35km far from the city of Batna. The airport has one track of 3000m×45m, four aircraft parking stands, and a terminal with a surface of 20.000m<sup>2</sup>. As for the parking, it can fit for 250 vehicles.

The terminal contains the different offices of companies operating inside the airport (flight companies, police and customs) and the airport management company (EGSA) which is a division tied to the central direction in Constantine. Other services available include



Algeria post office, medical assistance, prayer rooms for men and women, a multiservice kiosk, a cafeteria and a nursing room. The airport's VIP lounge is reserved for officials.

## **2.1 Methodology:**

The study used a five-point Likert scale questionnaire distributed in Mars 2015 to measure the satisfaction of the users of Batna's Airport towards the following quality dimensions:

- Q1:** Reception and Courtesy (06 elements)
- Q2:** Access to the airport and parking (05 elements)
- Q3:** Signposts (07 elements)
- Q4:** Cleanliness (05 elements)
- Q5:** Waiting (06 elements)
- Q6:** Atmosphere and Comfort (06 elements)
- Q7:** Information (05 elements)
- Q8:** Shops and services (06 elements)

The response rate was nearly 97% since the questionnaire was distributed by hand inside the airport, which makes a total of 155 usable answers. The collected data was treated by SPSS 20 and Microsoft Excel 2013. The results of that descriptive study have already been published (Belkacem Bouzida & Boubakour, 2019) showing a global satisfaction of 61.7% but this study only uses the data regarding the quality dimensions and the gender of the respondents.

First, we have ensured the reliability and fitness of our data than we have conducted an exploratory factor analysis to establish the validity of the data. A multivariate discriminate analysis is performed to identify the gender differences and finally we conclude with a multiple regression analysis to examine the impact of the quality dimensions on the overall customer satisfaction.

## **2.2 Reliability and Fitness of the Study:**

The reliability of the study was measured by Alpha Cronbach. The value of the test was found at  $0.885 > 0.7$ . The sample included 87 men (56.1%) and 67 women (43.9%) with a value of the Chi-square of  $2.329 > 0.05$ , therefore we can say that there are no significant differences between male and female distribution of our sample as shown in table 1. In other

words, even if the rates of male and female participants are not equal but that would not affect the results or the significance of our study.

**Table 4.** Sample Characteristics

Gender	Frequency	Rate (%)	p <sup>a</sup>
Male	87	56.1	2,329
Female	67	43.9	
Total	155	100	

<sup>a</sup>Chi-Square Test

**Source:** Made by the researchers based on SPSS analysis

### 2.3. Exploratory Factor Analysis:

The aim of a factor analysis is to determine the quality dimensions that cause the most of variance between the study samples. The first step to realize the exploratory factor analysis is the visual examination of the correlations matrix. All correlations were greater than 0.3, which is the needed level for this analysis and they are significant at  $p < 0.01$ .

The second step implies the assessment of the overall significance of the correlation matrix. Bartlett Test of sphericity has an approximate Chi-Square of 664.218 which is significant at  $p < 0.001$ . This further confirms the suitability of the data to perform a factor analysis.

The last step is to measure the sampling adequacy by Kaiser-Meyer-Olkin index (KMO). A high value (close to 1) means there is a high degree of inter-correlations among the variables. The result of this test is 0.88 indicating the suitability of the data for a factor analysis.

The final pattern matrix results for the eight service quality dimensions are shown below in Table 02. Considering the matrix factor structure, the eight dimensions validity is good and assessing the internal consistency reliability, the results of Cronbach's Alpha range between 0.801 and 0.905. A value of at least 0.7 is acceptable.

An eigen value greater than one is significant and the first factor alone has an eigenvalue of 4.788 and explains 59,848% of the variation in the data between the two groups. The significant loading factors indicate the good quality of the model and to proceed with the discriminate analysis.

**Table 5.**Factor Analysis of Service quality

Scale Items	Factor Loadings (Varimax Rotation)							
	Factor 1	Factor2	Factor3	Factor4	Factor5	Factor6	Factor7	Factor8
Q1	0,879 <sup>a</sup>	0,098	-0,121	-0,023	-0,383	0,042	-0,140	-0,298
Q2	0,098	0,816 <sup>a</sup>	-0,410	-0,133	-0,305	0,219	-0,144	0,007
Q3	-0,121	-0,410	0,888 <sup>a</sup>	-0,158	0,067	-0,166	-0,201	-0,105
Q4	-0,023	-0,133	-0,158	0,941 <sup>a</sup>	-0,127	-0,188	0,012	-0,159
Q5	-0,383	-0,305	0,067	-0,127	0,837 <sup>a</sup>	-0,406	-0,027	0,104
Q6	0,042	0,219	-0,166	-0,188	-0,406	0,860 <sup>a</sup>	-0,245	-0,137
Q7	-0,140	-0,144	-0,201	0,012	-0,027	-0,245	0,920 <sup>a</sup>	-0,246
Q8	-0,298	0,007	-0,105	-0,159	0,104	-0,137	-0,246	0,902 <sup>a</sup>
Eigenvalue	4,788	0,762	0,588	0,531	0,462	0,337	0,316	0,216
Total variance explained (%)	59,848	9,527	7,345	6,632	5,779	4,216	3,956	2,697
Cronbach's Alpha	0.838	0.801	0.873	0.855	0.905	0.848	0.834	0.832

**Source:**Made by the researchers based on SPSS analysis

#### 2.4. Multivariate Discriminant Analysis (MDA):

In order to answer the research question: Are there differences in customer satisfaction toward Batna's Airport services between men and women, we realized a multivariate discriminant analysis.

Firstly, we calculated the mean differences between men and women respondents, which are shown in Table 3 as well as the standard deviations of the customers' satisfaction. Different means were recorded between men and women while all means for men are less than those of women. This indicates that women show more satisfaction towards airport's services quality. Their standard deviations are also less than those recorded for male respondents.

**Table 6.**Means and Standard Deviations

Gender	Men N=(87)		Women N=(68)		Mean Difference
	Mean	St. Dev.	Mean	St. Dev.	
Q1: Reception and Courtesy	3,243	0,891	3,537	0,641	0,294
Q2: Access to the airport and parking	3,115	0,851	3,215	0,726	0,100
Q3: Signposts	3,248	0,844	3,340	0,824	0,092
Q4: Cleanliness	3,106	0,969	3,206	0,780	0,100
Q5: Waiting	3,222	0,930	3,289	0,916	0,067
Q6: Atmosphere and Comfort	3,293	0,884	3,370	0,641	0,077
Q7: Information	3,081	0,877	3,212	0,824	0,131
Q8: Shops and services	2,632	0,850	2,772	0,797	0,140

**Source:** Made by the researchers based on SPSS analysis

The results of the discriminate analysis are shown in table 04 below. The chi-square value of the study is significant at  $p < 0.514$  with a score of 7.212 (8 degrees of freedom) which proves the discriminate group membership. The canonical correlation of 0.217 allows us to conclude that this model accounted for the square of the canonical correlation, which is 4% of the variance in the dependent variable. In order to define the quality dimensions that cause the most differences between men and women, canonical discriminate function coefficients were analyzed.

The result of F-statistics show that a significant difference exists in the score of the first quality dimensions: Reception and courtesy ( $p < 0.05$ ). In order to identify the exact items that cause the most variance between male and female airport users, a detailed ANOVA test was executed and only the significant elements with  $p < 0.05$  have been reported here (All elements studied for the eight quality dimensions figure in annex 01).

- Reception and courtesy at the information desk
- Reception and courtesy at the shops and services
- Telephone reception
- Availability of taxis from/to the airport
- Car rental Services

**Table 7 .** Summary of interpretive measures for discriminate analysis

	Unstandardized CDFC	Standardized CDFC	Univariate F-Ratio	Sig.
Q1: Reception and Courtesy	1,684	1,333	5,249*	0.023*
Q2: Access to the airport and parking	0,414	0,331	0,596	0.441
Q3: Signposts	-0,342	-0,286	0,467	0.495
Q4: Cleanliness	0,038	0,034	0,482	0.489
Q5: Waiting	-0,800	-0,739	0,201	0.655
Q6: Atmosphere and Comfort	0,083	0,065	0,365	0.547
Q7: Information	0,009	0,007	0,901	0.344
Q8: Shops and services	-0,114	-0,094	1,091	0.298
Functionsat group centroids :		Wilks Lambda	0,953	
Men	-0,196	Canonical Correlation	0,217	
Women	0,250	(Canonical Correlation) <sup>2</sup>	0,004	

Description: Box M's test was not statistically significant (Box's M= 56.831,  $p < 0.03$ ) indicating equal covariance matrices of both groups.

CDFC= Canonical discriminate function coefficients

**Source:** Made by the researchers based on SPSS analysis

The discriminate procedure and the separation of the two groups are presented in table 05. The correct predictions produced by the discriminate function represent 57,4% while 73.6% are for men and 26.4% for women. The classification accuracy is counted by dividing the N° of predicted men of the total: 87/155 (56.1%).

The discriminant model's classification accuracy found is 57.4%, 1.3 points better than that of the maximum chance model, and 7.4% better than the proportional chance criterion accuracy.

**Table 8.** Classification matrix for discriminant function

Actual Group		Predicted Group		Total
		Men	Women	
Men	Count	64	23	87
	%	73.6	26.4	100
Women	Count	52	16	68
	%	76.5	23.5	100
Total	Count	116	39	155
	%	74.9	25.1	100

Overall percentage of cases correctly classified by discriminate function: 57.4%  
 Percentage accuracy based on maximum chance criterion: 56.1%  
 Percentage accuracy based on proportional chance criterion: 50%

**Source:** Made by the researchers based on SPSS analysis

## 2.5. Multiple Regression Analysis:

In order to examine the relationship between the overall satisfaction of the airport's users and the different quality dimensions based on gender differences, a multiple regression analysis was realized. The obtained regression coefficients were used to identify the quality dimensions with the highest influence on the global satisfaction based on gender. The model uses the global satisfaction as the "dependent variable" and the eight dimensions of quality as the "independent variables".

Strong correlations were registered between the eight quality dimensions and the global satisfaction, ranging from 0.686 to 0.0843 for male respondents and 0.629 to 0.821 for female ones. In order to make sure this strong correlation would not affect the regression analysis, we have tested for colinearity problems using tolerance scores and VIF (Variance Inflation Factor) and they were in the recommended limits. Tolerance values were greater than 0.3 and VIF less than 3.3, which confirms the absence of colinearity problems and indicate that the study model is of a good quality.

The regression coefficients reveal significant results for all dimensions for both groups. This proves that the quality dimensions have an impact on the overall satisfaction for each gender. The values of  $R^2$  and adjusted  $R^2$  mean that the eight dimensions explained a variance of satisfaction in both male and female satisfaction with F-statistics in ANOVA test are all significant for both groups.

The influencing factors have almost similar impact on the overall satisfaction with the dimension of waiting on top for female airport users ( $\beta=.2$ ) followed by Information and Signposts having equal impact, shops and services then cleanliness, access to the airport and finally both dimensions of reception and courtesy and atmosphere and comfort come last. As for male users, cleanliness is the most influential ( $\beta=.166$ ) and the rest of the dimensions have almost the same impact: waiting, reception and courtesy, atmosphere and comfort, information, shops and services, access to the airport, and finally signposts.

**Table 9.**Influence of quality dimensions of global satisfaction

Predictors	Customer Satisfaction ( $\beta$ )	
	Female	Male
Q1: Reception and Courtesy	0,140*	0,159*
Q2: Access to the airport and parking	0,159*	0,152*
Q3: Signposts	0,180*	0,150*
Q4: Cleanliness	0,170*	0,173*
Q5: Waiting	0,200*	0,166*
Q6: Atmosphere and Comfort	0,140*	0,158*
Q7: Information	0,180*	0,156*
Q8: Shops and services	0,174*	0,152*

\*  $p < 0.05$

**Source:** Made by the researchers based on SPSS analysis

## 2.6. Results and Discussion:

The findings indicate that male and female users of Batna's airport show different levels of satisfaction towards the airport's quality dimensions. Female users have expressed higher levels of quality perception than male users. Yet the mean differences were minimal to the following dimensions: Signposts, the atmosphere and comfort, and the waiting. The differences in the mean were equal between the cleanliness and the access to the airport and parking, and the highest mean difference has been expressed in reception and courtesy (0.294).

In general, the means were practically medium on a five-point scale; all of them range from 2.632 to 3.537, with the lowest for both groups are for shops and services. Meaning that both male and female do not have a high perception for the quality of the airport services and

available shops. All this prove the existence of gender-based differences in customer satisfaction towards Batna's airport services, for that, we accept the first hypothesis.

As for the elements that produced more differences , only in one quality dimension that gender discriminated significantly which is the reception and courtesy, with male respondents more satisfied than female respondents. The rest of the quality dimensions seem to be equally important to the airport's users as shown in the multivariate discriminate analysis which was proven to be a good statistic model for discriminate prediction.

The quality dimensions do not have the same impact on the overall satisfaction, and this statement differs according to gender. Female's satisfaction is mostly influenced by waiting while cleanliness affects male's satisfaction more than other quality dimensions. Other factors have an impact as well and it is practically the same for men. Putting the different factors in order according to their impact on customer satisfaction produces different results between male and female groups. Therefore, we also accept the second hypothesis.



### **3. Conclusion:**

*Keeping track of the changing customer demands and perceptions is not a choice but an obligation for companies; notably in light of the competitive markets and the constantly higher customer expectations. Identifying customer perception differences helps them establish different programs for every segment of their customer portfolio (Gümüř & Ekři, 2014), which ensures the maintaining of the satisfaction level or even raising it. Managers would know what elements they should focus on when allocating the company resources (Mokhlis, 2012) hence, avoid unnecessary spending. Managers of Batna's airport would understand which elements to concentrate on if they want to attract more male users and enhance their level of satisfaction same for female users. Increasing the number of the airport's users meaning there is a greater demand for air transportation services, hence more fees obtained from the different airport operators, which ensures more profitability for the airport management company and vice versa.*

*The main dimension to focus on in order to enhance customer satisfaction is the shops and services at the airport, which was mainly in shortage due to the high fees to be paid to the airport management company in light of the lack of air travel demand. To attract more female users, the reception and courtesy must be re-shaped to fit this category.*

*Even that this study contributes to the understanding of Algerian services consumers in general and airports' users in particular, further studies could treat a bigger sample, apply the same model on different airports or study different segments touching different demographic characteristics like differences based on age, education level or professional status. The more we understand these segment differences and their impact on customer satisfaction, the better we provide service quality accordingly.*

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5. Appendices:

**Appendice 1.** Elements in every quality dimension

Reception and Courtesy	<ol style="list-style-type: none"> <li>1. Reception and courtesy at the information desk</li> <li>2. Reception and courtesy at the registration</li> <li>3. Reception and courtesy at the shops and services</li> <li>4. Courtesy of police and customs officers</li> <li>5. Courtesy at the baggage check</li> <li>6. Telephone reception</li> </ol>
Access to the airport and parking	<ol style="list-style-type: none"> <li>1. Road signs to the airport</li> <li>2. Availability of taxis from/to the airport</li> <li>3. Availability of public transportation from/to the airport</li> <li>4. Pedestrian paths at the airport</li> <li>5. Easiness to park at the parking</li> </ol>
Signposts	<ol style="list-style-type: none"> <li>1. Signposts leading to the terminal</li> <li>2. Signposts to the registration office</li> <li>3. Signposts to the boarding gate</li> <li>4. Signposts to shops and services</li> <li>5. Signposts to the parking</li> <li>6. Signposts for disabled persons</li> <li>7. Location of luggage carts</li> </ol>
Cleanliness	<ol style="list-style-type: none"> <li>1. General cleanliness of the terminal</li> <li>2. Cleanliness of the outside surroundings</li> <li>3. Cleanliness of the parking</li> <li>4. Cleanliness of the bathrooms</li> <li>5. Cleanliness of the shops and other services</li> </ol>
Waiting	<ol style="list-style-type: none"> <li>1. Waiting at the passport check</li> <li>2. Waiting at the registering desk</li> <li>3. Waiting at the hand luggage control</li> <li>4. Waiting in the departure lounge</li> <li>5. Waiting for baggage check at departure</li> <li>6. Waiting for luggage check on arrival</li> </ol>
Atmosphere and Comfort	<ol style="list-style-type: none"> <li>1. General atmosphere at the terminal</li> <li>2. Comfort at the terminal</li> <li>3. Security at the parking</li> <li>4. Seat's availability at the boarding area</li> <li>5. Comfort of seat at the boarding area</li> <li>6. Transport of passengers by bus from/to the airplane</li> </ol>
Information	<ol style="list-style-type: none"> <li>1. Information on display screens</li> <li>2. Audio announcements in the boarding area</li> <li>3. Information of parking fees and payment</li> <li>4. Information given by phone</li> <li>5. Information given on demand by the reception desk</li> </ol>
Shops and services	<ol style="list-style-type: none"> <li>1. The shops</li> <li>2. The cafeteria</li> <li>3. Other available services</li> <li>4. Car rental Services</li> <li>5. Availability of luggage carts</li> <li>6. Lighting and brightness</li> </ol>