

# **IMPROVING AIR PASSENGERS' EXPERIENCE DURING FLIGHT DISRUPTION: THE CASE OF ENFORCING THE DENIED BOARDING REGULATIONS (DBRs) AT CHIOS AIRPORT "OMIROS"**

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## **ABSTRACT**

Over the past few decades, air travel is no longer considered a luxury, but a commodity, as passengers are faced with the choice of traveling to various destinations at a lower cost and higher safety than ever before. Nevertheless, passengers' overall experience does not meet their expectations about excellent customer service, as flying results in various problems. This article focuses on the importance of understanding and improving aviation consumers' experiences of disruption at Chios Airport by investigating the implementation of the regulation known as the Denied Boarding Regulations (DBRs). The results show that passengers are unaware of their legal rights and dissatisfied with the outcome of their complaints concerning the main sources of disruption: flight delay/cancellation denied boarding, and baggage delay, loss, or damage. Furthermore, "refund of flight cost", "rescheduling/rebooking (free)", "financial compensation", "information on legal rights" and "flight status information" are critical factors for delayed or cancelled flights.

**KEYWORDS:** Transport Marketing, Aviation Passenger Rights, Air Transport, Airline Passenger Satisfaction, Air Passenger Expectations, Hellenic Civil Aviation Authority.

## 1. INTRODUCTION

Aviation plays a vital role in global business and the tourism industry through a fast-growing transportation network. Nowadays, flying has changed from being a luxury for a few to a mode of transport for all, whether travelling for business purposes, official duties or for holidays. Alexandre de Juniac, IATA's Director General and CEO, said that "In 2000, the average citizen flew just once every 43 months. In 2017, the figure was once every 22 months. Flying has never been more accessible. And this is liberating people to explore more of our planet for work, leisure and education". At the same time, ATAG's Executive Director, Michael Gill, stated that "Advances in air transport have changed the way people and businesses connect with each other. More people in more parts of the world than ever before are taking advantage of safe, fast, and efficient travel". Angela Gittens, the Director General of Airports Council International, concludes: "Airports are crucial links in the air transport value chain that drive economic and social benefits for the local, regional, and national communities they serve. Airports act as catalysts for employment, innovation, and improved global connectivity and trade"<sup>1</sup> (ATAG, 2018). Indeed, over 4.1 billion passengers were carried by the world's airlines in 2017, showing an increase on demand (Revenue Passenger Kilometers - RPKs) of 7.6% as compared to 2016, representing an additional 280 million trips by air (IATA, 2018; 2018a).

Due to this increase to the number of people traveling each year, the protection of air passengers' rights has been of great importance internationally, as 22% of air passengers, according to the Eurobarometer have faced problems in the last 12 months when traveling (ECC-Net, 2016). In other words, increased air transport also increases air traffic resulting in airport congestion, air traffic constraints and additional airport security measures.

Although disruption is relatively rare, it can cause major problems for aviation consumers, with delayed, cancelled, diverted or overbooked flights cause significant financial and non-financial harm to passengers. In other words, as congestion and delays result in a large cost on society, efforts to reduce these costs should be planned worldwide (Ball, et.al. 2010). In other words, aviation passenger rights are one of the most important consumer rights, making thus superior quality of service and understanding of customer expectations a key to the success and survival of airlines in a very competitive environment (EEC-Net, 2016). The European Commission introduced a series of passenger rights through Regulation (EC) 261/2004, establishing common rules for passengers in the event of denied boarding, flight cancellation or long delays (ICAO, 2013). These rights are intended to ensure that if passengers have the misfortune to be affected by a flight disruption, they should be given the

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<sup>1</sup> <https://www.atag.org/component/news/?view=pressrelease&id=110>

assistance they need. Understanding passengers' experiences during their flight stops is particularly useful in improving the value of air transport consumers. Also, ensuring that passengers gain information on the implementation of the Regulation (EC) 261/2004 and are properly cared when their flight is interrupted, will help us to gain knowledge about airlines' compliance with the regulation (CAA, 2014).

Consequently, effective strategic marketing planning will enable airline managers to satisfy customers in a more effective way, as the knowledge of their rights and a better service quality will affect their willingness to travel, which in turn will affect their recommendations to others through word-of-mouth. In other words, this study could be beneficial for policymakers in designing new transport marketing strategies, considering that air transport affects hospitality and tourism.

This research aims to understand the actual passenger's flight experience during flight disruption and inform them about the implementation and enforcement of the DBRs. More specifically, the main purposes of the study are to investigate the most frequent reasons for flight disruption in the case of 224 respondents flying from Chios Airport "Omiros", to explore their aspects during flight delay or cancellation, denied boarding and baggage loss or delay, as well as to summarize the most important factors for passengers in an event of flight delay or cancellation.

This research is organized as follows. Following the introduction, a general overview of customer satisfaction and expectations in airline services along with an analysis of air passenger's protection and rights are presented in the literature review section. The research methodology used in this study is then discussed using quantitative data research. Data analysis is outlined in section 4, using univariate and multivariate data analysis. Finally, contributions, limitations and extensions are considered in Section 5.

## **2. LITERATURE REVIEW**

### **2.1 CUSTOMER SATISFACTION AND EXPECTATIONS IN THE AVIATION INDUSTRY**

In the past decades, the aviation sector has become even more challenging, making many airlines increase airline passengers' satisfaction through service quality to differentiate themselves from competitors. As mentioned in the introduction section passengers' safety is a basic requirement in the aviation industry. This could be achieved through standardization

of ground equipment and procedures. As an airport is a complex system of facilities, the process of airport planning will lead to greater customer satisfaction (Kazda and Caves, 2007).

Yee et al. (2008, p. 662) argued that "There is fundamental relationship among employee satisfaction, service quality, customer satisfaction, and firm profitability", while Halil et al. (2008, p. 266) claimed that "Customer satisfaction increases profitability, market share, and return on investment". The pioneers in the SERVQUAL model's conceptualization were Gronroos (1982) and Parasuraman, Zeithaml and Berry (1988), who introduced the concept of service quality as a result of customers' evaluation, as compared with their prior expectations. Additionally, Gronroos concluded that airline passengers' satisfaction is influenced by the contacts with employees and physical and technical resources, i.e. in-checking desks, seats, meals, etc. "The passengers' interactions with such human and non-human resources during the pre-flight, in-flight and post-flight production processes will certainly affect his evaluations of the service, and on the service, he perceives he has received" (Gronroos, 1993, p.38).

Airline managers must not only understand customers' needs but also exceed them. Service quality and customer satisfaction are key determinants to make airline companies' services stand out amongst their competitors. Suppose the airline company keeps service quality at high level. In that case, it will positively affect customer satisfaction and repurchase intention, which will lead to a bigger share in its market. Several related studies illustrate this emphasis on service quality and customer satisfaction in the Airline industry. Halil et al. (2008), by using a multiple-item industry-specific scale measuring perceived service quality (AIRQUAL) concluded that service quality perceptions are associated with airline passengers' satisfaction and repurchase intentions. In the context of studies on aircraft transport, Archana and Subha (2012) investigated excellent passenger satisfaction as one of the greatest assets for air business, with the delivery of high passenger service quality key factor for airlines survival and competitiveness. In this frame, they examined which airline service quality dimensions – i.e. in-flight services, in-flight digital services, and airline back-office operations – are positively related to airline image and passengers' satisfaction intentions. Similarly, Abdullah et al. (2007), argued that it is important for airlines to understand customers' expectations by developing passenger-focused services and implementing strategies to sustain customer loyalty. More specifically, they found a positive relationship between satisfaction with airline services and both future use of the airline and the likelihood of recommending it to others, with empathy, tangibles and assurance the most significant factors of airline customers' perception of service quality. Furthermore, airline passengers' perceptions about quality are

enhanced through the effect of online communities, which “serve as a networking platform that brings together positive and negative comments” (Kavoura and Kefallonitis, 2018).

According to American Customer Satisfaction Index (ACSI, 2018) among airline customer experience benchmarks, on-time arrival and baggage handling were listed as critical elements of the customer experience, which in turn determines airline customer satisfaction. According to a research done by J.D. Power and Associates (2010; 2012), the key operational metrics used to measure airline satisfaction according to the US Department of Transportation, are on-time arrival, mishandled bags, denied boarding, and customer complaints. As air passengers perceive their travel as an experience, an excellent airport experience should include safety and security measures, efficiency, on-time, and hassle-free performance and pleasure. In other words, it is crucial to understand the key drivers of customer satisfaction, which can be achieved by managing customer expectations about service quality. «Excellent customer service is defined as the synergy created when an airport’s ability to exceed its customers’ needs and expectations consistently matches the customers’ perception that their needs and expectations are well met» (Paternoster, 2007, p. 219). Finally, Aksoy et al. (2003, p. 343) suggest that passengers’ expectations of domestic and foreign carriers, which are based on differences from the customers’ viewpoint, are key influencing parameters of the airline industry's service decisions. “The customer, rather than marketing, is at the center of modern business philosophy, and customer service satisfaction is the primary aim”.

## **2.2 AIR PASSENGER 'S PROTECTION AND RIGHTS**

As previously mentioned, although air travel is considered a commodity, passengers’ expectations about delivering high-quality service are often neglected. “The deterioration in quality is tied to several factors, including operational delays due to airspace or airport congestion and insufficient contingency planning in cases of severe weather. Also, of significance is the increased travel time associated with the passenger compliance of security measures” (ICAO, 2013, p.1-2). Indeed, time natural disasters (i.e. the closure of European airspace triggered by the Icelandic volcano eruption in April 2010), or cases of severe weather cause air travel disruptions, resulting thus in increasing attention to the issue of consumer protection (ICAO, 2013). Sherry, Wang and Donohue (2007), investigated a new metric for passenger trip time, “expected value of passenger trip delay”, which accounts for flight delays or cancellations as well as passenger trip delay, that is correlated with airline passengers’ satisfaction and loyalty.

From 1991 until today, with the liberalization of air transport, problems with passengers' protection, which stem mainly from the multiplication of air carriers, have increased. The number of passengers who, despite their will, are not allowed to board an aircraft on which they have confirmed detention remains high (Hatzinikolaou - Angelidou, 2005). According to ICAO (2010), the world's airlines transported approximately 2.3 billion passengers and 38 million tons of freight on scheduled services while concurrently forecasting passenger traffic to grow at a rate of 4.8% per year through 2036. A recent study estimated the total cost of all US flight delays in 2007, which was \$32.9 billion, with \$16.7 billion costs to passengers, based on their time lost due to schedule buffer, flight delays and cancellations, and missed connections (Ball et al., 2010). Concerning European baggage handling as compared with USA, 15-20 bags and 6 per 1000 passengers were mishandled respectively, with main contributory factors worldwide transfer bag mishandled (61%) (Kazda and Caves, 2007).

For this reason, in past years, the issue of airline passengers' protection has been of great importance. In 2004, the European Community adopted Regulation 261/2004/EC amending the shortcomings of the original Regulation 295/1991 to strengthen passenger rights. Regulation 261/2004/EC, known as the Denied Boarding Regulations (DBRs), included the rules for the protection of passengers, in particular in the event of denied boarding due to overbooking, giving information to them for their rights, care and assistance, reimbursement and financial compensation (CAA, 2014). The European Union also adopted Regulation 889/2002/EC, defining air carriers' liability for passengers and their luggage. As passenger protection has attracted increasing attention, other regions have been taken respective measures, such as the United States Department of Transportation in 2011, applying a rule to U.S. and foreign air carriers increasing compensations for passengers involuntarily denied boarding, the Latin American Civil Aviation Commission in 2004, adopting Recommendation A16-8 (*Rights of the Users*), protecting passengers holding confirmed reservations who have been denied boarding involuntarily, or the Civil Aviation Authority in Singapore, which under a different approach educated passengers on basic aspects of air travel, i.e. what to consider when purchasing airline tickets etc. (ICAO, 2013). Table 1 summarizes the passengers' rights according to the regulation 261/2004/EC and the Regulation 889/2002/EC (Official Journal of the European Union L 46, 17 February 2004; Official Journal of the European Communities L 140, 30 May 2002).

**Table 1.** A Summary of passenger's rights according the Regulations 261/2004/EC and 889/2002/EC

<b>Flight cancellation</b>	<b>Flight delay</b>
<p>·In the event of a flight cancellation, the operating air carrier must provide passengers with the following options:</p> <p>(a) your alternative transport, under comparable conditions, to your final destination; or</p> <p>(b) transferring you under comparable transport conditions to your final destination another day serving you if there are seats available or</p> <p>(c) refund of your ticket and, if applicable, return flight to the original point of departure.</p> <p>·In addition, they are entitled to free meals and refreshments depending on waiting time, and hotel, accommodation (if the flight is in the next few days), transfer between airport and place of accommodation, communication facilities.</p> <p>·Finally, they are entitled a compensation between € 125 and € 600, depending on the kilometer distance</p>	<p>· In the event of a flight being delayed, the carrier must offer free soft drinks, communication, meals and overnight accommodation as well as transfer between airport and accommodation (depending on the delay time).</p> <p>· When the delay is at least five (5) hours, you can choose the passenger to receive the ticket and not to fly.</p> <p>· If the passenger reaches his final destination more than three (3) hours late, you can receive the same compensation as the passengers of a cancelled flight unless the delay was caused by extraordinary circumstances, which could not have been avoided, even if all reasonable measures have been taken by the air carrier.</p> <p>· Compensation is between € 125 and € 600, depending on the kilometer distance</p>
<b>Denied boarding</b>	<b>Loss /delay /damage of luggage</b>
<p>·The carrier is looking for volunteers, in exchange for benefits under conditions.</p> <p>·Passengers who resign from their reservations are also provided with assistance in accordance with Article 8, i.e. the right to a refund or transfer by another flight or other means of transport.</p> <p>·Also, if there are not enough volunteers to allow the remaining passengers with reservations to board the aircraft, the air carrier may then deny passengers their boarding despite their will. In this case, the carrier shall promptly compensate them in accordance with the provisions of Article 7 (right to compensation) and provide them with assistance in accordance with the provisions of Articles 8 (Right to reimbursement or re-routing) and 9 (right of care)</p> <p>·Compensation is between € 125 and € 600, depending on the kilometer distance.</p>	<p>· A maximum carrier's liability is limited to 1000 Special Drawing Rights per passenger.</p> <p>· After 21 days of delay in receiving the baggage, it is considered as lost.</p> <p>· In order to determine the amount of compensation, the airline requests the passenger a list of items of luggage.</p> <p>· In the event of damage to the luggage, the passenger must write and complain within seven days.</p> <p>· In case of delay, the passenger must write and complain within twenty-one days</p>

**Source:** Adapted from the Regulation 261/2004/EC (<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=OJ%3AL%3A2004%3A046%3ATOC>) and the Regulation 889/2002/EC (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32002R0889&from=en>)

### **3. METHODOLOGY**

Extended bibliographical research on airline customer's expectation and satisfaction with services provided, as well as air passenger's protection and rights as presented in the previous sections, led to the questionnaire design. A total of 224 copies of the questionnaire were distributed to the respondents using convenience sampling. Customers who had experienced disruption in their travel over the last 12 months were interviewed at the departing room of Chios Airport "Omiros" (IATA: JKH) for the period from July to September 2017. All selected respondents were passengers who have used different air carriers of scheduled flights (i.e. Astra Airlines, Aegean Airlines-Olympic Air and Sky Express), travelling at different times or days, at random, to minimize bias in a representative sample, indicating thus the different traffic levels of the airport.

The questionnaire included forty questions, divided in four parts, and apart from the general information and the demographic profile of the respondents (gender, age, educational level, professional status, personal monthly income, marital status, country of origin, travel frequency, airline company, purpose of trip) respondents were asked to categorize the main sources of their disruption: flight delay or cancellation, denied boarding, and baggage delay, loss, or damage. In addition, questions investigated the importance of the main parameters influencing the above sources of disruption were included (e.g. "What do you think would be most important to you on a flight that was delayed - i.e. over 3 hours" - or cancelled?"). A five-point Likert scale was used, ranging from 1 - "not important" to 5 - "very important" (Voxaki, 2017; Salamoura, Iakovaki and Voxaki, 2018; Salamoura and Voxaki, 2019).

### **4. DATA ANALYSIS**

#### **4.1 DEMOGRAPHIC PROFILE OF THE RESPONDENTS**

To proceed with respondents' answers, SPSS version 23.0.0 was used for statistical analysis of the survey data. First, to depict the respondents' profile and problems faced by passengers on their flight, univariate analysis with descriptive statistics of frequencies and percentages was used. According to the findings, most of the respondents were male, from 37 to 42 years old, with a secondary level of education, private employees, with a monthly income from 501-1000 €, married with children, travelling from Greece with Olympic Air / Aegean from 2 to 4 times in the last 12 months, mainly for holidays, having encountered problems with delays or cancellations in their flights and lost/damaged or delayed luggage. Table 2 reports the demographic profile of the respondents analytically.



**Table 2.** Passengers' profile (n=224)

Demographics	% of total respondents	Demographics	% of total respondents
<b>Gender</b>		<b>Marital status</b>	
Male	53,13%	Single	24,55%
Female	46,88%	Married with children	43,30%
<b>Age (years)</b>		Married-without children	26,34%
-24	8,48%	Divorced	3,13%
25-30	9,82%	Widowed	2,68%
31-36	14,28%	<b>Country of origin</b>	
37-42	20,54%	Greece	78,57%
43-49	17,86%	USA	19,64%
50-56	15,18%	Canada	1,79%
57+	13,84%	<b>How many times have you flown in the last 12 months?</b>	
<b>Education Level</b>		Once	25,45%
Primary education	12,50%	2-4 times	54,02%
Secondary education	49,55%	> 5 times	13,84%
Bachelor's degree	33,04%	Many times each month	6,70%
Master's degree	4,45%	<b>Which airline do you travel with?</b>	
Doctorate degree	0,45%	Olympic Air / Aegean	51,79%
<b>Professional Status</b>		Astra Airlines	32,59%
Civil servant	20,09%	Sky Express	15,63%
Private employee	45,98%	<b>What was the purpose of your trip?</b>	
Freelancer	11,61%	Holidays	42,41%
Senior executive	4,91%	Professional reasons	29,91%
Student	4,46%	Health	13,84%
Retired	7,14%	Studies	7,59%
Unemployed	5,80%	Army reasons	2,68%
<b>Personal Income, Monthly</b>		Other (specify)	3,57%
until 500€	24,45%	<b>What problem did you encounter during your trip?</b>	
501€ - 1000€	41,07%	Flight delay	41,70%
1001€ -1500€	20,09%	Flight cancellation	10,03%
1501€ -2000€	7,14%	Denied boarding	9,40%
2001€ -2500€	4,02%	Baggage delay	35,30%
2501€ -3000€	1,34%	Baggage lost	0,60%
> 3000€	0,89%	Baggage damage	2,80%

## 4.2 UNIVARIATE DATA ANALYSIS

### 4.2.1 FLIGHT DELAY OR CANCELLATION

According to the findings, the three main reasons for flight delay – which was approximately one hour long in a percentage of 32% - or cancellation were: delay associated with another airport/airline, weather, and problem with the aircraft. Passengers who canceled their flight had to wait for a day to fly to their destination (32,43%). Most passengers did not complain about the delay / cancellation of their flight and of those who did so, were mainly addressed to the airline and less to other operators. They were also dissatisfied with the outcome of their complaint and did not know their legal rights, while at the same time, they expected the airline to solve their problem as quickly as possible, at the minimum cost, time, effort, and personal expenses. Clear and accurate information about their flight status - especially when there is a possibility of resolving any disruption - can provide passengers with safety and reassurance, making thus honesty in communication an important factor for building trust between passengers and the airline (CAA, 2014). That's why Passengers were unhappy with the care they received.

### 4.2.2 DENIED BOARDING

Concerning Denied Boarding, there were not many cases where airlines refused to board a passenger, and in cases where they denied boarding, they were looking for volunteers who were willing not to board the aircraft.

**Table 3.** Denied Boarding

Denial of boarding (n=224; n # of respondent)	% of total respondents				
	YES	NO			
When traveling, was any case where passengers were refused boarding?	15,18%	84,82%			
If so, was the carrier looking for volunteers not to board the aircraft?	97,06%	2,94%			
What was offered to passengers refused to board the aircraft?	Rescheduling/ Free Rebooking	Compensation	Refund of Flight Costs	Food and drink	Nothing
	46,30%	29,90%	17,9%	4,50%	1,5%
How satisfied are you with the way the airline faced denied boarding?	Dissatisfied	Slightly Satisfied	Satisfied	Quite Satisfied	Very Satisfied
	5,88%	8,82%	17,65%	47,06%	20,59%

To these passengers, free booking was provided, followed by financial compensation, reimbursement, and some kind of assistance, such as food and beverages.<sup>2</sup> Finally, passengers were quite satisfied with the way the airline faced denial of boarding. Table 3 summarizes the above results.

#### *4.2.3 BAGGAGE DELAY, LOSS OR DAMAGE*

As far as Loss, Delay or Damage of Baggage, passengers' main problems were baggage delay and overweight. The passengers did not claim compensation when their luggage was damaged. This low "rate of claims" can be explained by the low level of their awareness about their legal rights, as well as the perceived failure of airlines to inform them about it fully. At the same time, they were slightly dissatisfied with the information given from airlines, as they believe that information on travelers should be more readily available. They also believed that the maximum compensation should be increased, that air carriers do not provide sufficient information on their baggage size and weight policy, and that the rules on the size and weight of luggage and cabin baggage should be harmonized among air carriers (BEUC, 2010). Finally, passengers have a common understanding that their luggage rights vary according to the airline with which they travel. Only half of the airline passengers (56.25%) know that they have the same rights as all airlines. Table 4 summarizes the above results.

### **4.3 MULTIVARIATE DATA ANALYSIS**

Then, multivariate data analysis - factor analysis - was conducted to summarize the most important factors for passengers in the event of flight delay or cancellation. First, our data's suitability was checked by Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity. KMO for flight delay was 0,731 and sphericity sig: .000 <0.05, while KMO for flight cancellation was 0,750 and sphericity sig: .000 <0.05, both acceptable values.

In the second step the number of factors was determined by considering those factors that have eigenvalues above 1 (Guttman - Kaiser), using the Scree test (Cattell), where factors interpreting the 70-80% of total variance were included. Factor analysis for flight delay resulted in nine factors, but only for the first two factors - which account for almost 57.95% of the original items' variance - the eigenvalues were above 1.0. Respectively, factor analysis concerning flight cancellation resulted in nine factors, but only for the first two factors, which

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<sup>2</sup> [https://ec.europa.eu/transport/sites/transport/files/themes/passengers/air/doc/complain\\_form/eu\\_complaint\\_form\\_en.pdf](https://ec.europa.eu/transport/sites/transport/files/themes/passengers/air/doc/complain_form/eu_complaint_form_en.pdf)

explain almost 62,158% of the original items' variance, the eigenvalues were above 1.0. In the third step, the Varimax Rotation Method was used to make factors more meaningful and easier to interpret, resulting in two factors for both flight delay and cancellation.

**Table 4.** Loss, delay or damage of luggage (n=224)

Loss / delay / damage of luggage	% of total respondents				
	YES	NO			
Did you have trouble with your luggage in one or more flights?	79,02%	20,98%			
If yes, please specify what exactly happened	<b>Delay</b>	<b>Damage</b>	<b>Loss</b>	<b>Mishandled</b>	<b>Overweight</b>
	55%	7,40%	0,90%	4,30%	32,50%
Do you know your rights in case your luggage is lost, delayed or damaged?	<b>YES</b>	<b>NO</b>			
	25%	75%			
In case of damage, did you request compensation for your luggage?	<b>YES</b>	<b>NO</b>			
	15,82%	84,18%			
How satisfied are you with the information given to you about the loss, damage or delay of your luggage?	<b>Dissatisfied</b>	<b>Slightly Satisfied</b>	<b>Satisfied</b>	<b>Quite Satisfied</b>	<b>Very Satisfied</b>
	1,13%	52,54%	36,72%	6,21%	3,39%
What do you think will be the best way to deal with losing, damaging, or delaying luggage?	<b>Increase the current maximum compensation</b>	<b>Automatic compensation</b>	<b>Increase the days of making a complaint</b>		
	44,20%	39,73%	16,07%		
Do you believe that air carriers provide sufficient information about their policy on the size and weight of luggage or cabin baggage?	<b>YES</b>	<b>NO</b>			
	15,63%	84,38%			
Do you think that rules on the size and weight of luggage or cabin baggage should be harmonized among air carriers?	<b>YES</b>	<b>NO</b>			
	89,73%	10,27%			
Do you think that passenger rights within all airlines are the same?	<b>YES</b>	<b>NO</b>			
	56,25%	43,75%			

The first factor included five variables: "refund of flight cost", "rescheduling/rebooking (free)", "financial compensation", "information on legal rights" and "flight status information" during a delay, all of them critical high value "hard" factors for delayed or cancelled flights. The second factor included four variables: "comfortable waiting area", "transfer to home or hotel", "overnight accommodation" and "food and drink", also play an important role - lower value "soft" factors - for the passenger when there is a delay or cancellation in his flight" (Table 5). Indeed, considering all the misfortune engaged in the case of flight disruption, passengers must foremost take care of basic problems like refund of flight costs, or free rebooking and flight status information and secondarily deal with themes like comfortable waiting area or transfer to home or hotel, which also play an important role for their journey.

**Table 5.** Rotated Component Matrix

Q:"What do you think would be most important to you on a flight that was delayed (i.e. over 3 hours) or cancelled?"					
DELAY			CANCELLED		
Rotated Component Matrix <sup>a</sup>			Rotated Component Matrix <sup>a</sup>		
	Component			Component	
	1	2		1	2
Refund of flight costs	0,871		Refund of flight costs	0,891	
Rescheduling/rebooking (free)	0,846		Financial Compensation	0,83	
Financial Compensation	0,819		Rescheduling/rebooking (free)	0,825	
Information on legal rights	0,782		Information on legal rights	0,804	
Flight staus information	0,662		Flight status information	0,684	
Comfortable waiting area		0,829	Transfer to the home or hotel		0,849
Transfer to the home or hotel		0,799	Comfortable waiting area		0,816
Overnight accommodation		0,568	Overnight accommodation		0,764
Food and drink		0,561	Food and drink		0,556
Extraction Method: Principal Component Analysis.			Extraction Method: Principal Component Analysis.		
Rotation Method: Varimax with Kaiser Normalization.			Rotation Method: Varimax with Kaiser Normalization.		
a. Rotation converged in 3 iterations.			a. Rotation converged in 3 iterations.		

Finally, Cronbach's  $\alpha$  (Alpha) was used to test the internal consistency of the intended measure. As shown in Table 6 below, the Cronbach's Alpha coefficient for the five items of "high-value factors" for delayed flights was 0.856, for the four items of "lower value factors" for delayed flights was 0.650, for the five items of "hard" factors for cancelled flights was 0.886, and finally for the four items of "soft" factors for delayed flights was 0.745. Consequently, considering that values  $> 0,70$  are acceptable in social sciences and that 0.6 is the minimum acceptable level of Cronbach's Alpha (Hair et al., 2010), one may conclude that

the reliability is adequate for the entire construct. Indeed, flight status information or the ability to rebook flights were identified as the most important variables. In contrast, comfortable waiting area or transfer to the home or hotel were identified as the least important variables in a similar survey (CAA, 2014).

**Table 6.** Cronbach's  $\alpha$  (Alpha) Reliability test

DELAY				CANCELED			
Component 1		Component 2		Component 1		Component 2	
Reliability Statistics		Reliability Statistics		Reliability Statistics		Reliability Statistics	
Cronbach's Alpha	N of Items	Cronbach's Alpha	N of Items	Cronbach's Alpha	N of Items	Cronbach's Alpha	N of Items
0,856	5	0,65	4	0,863	5	0,745	4

## 5. CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

Air travel remains the largest and fastest growing industry which facilitates economic growth, world trade, international investment and tourism. According to the CEO of the International Air Transport Association<sup>3</sup>, "Airlines empower people's lives and turbo-charge the global economy through a worldwide network that safely carries more than 4 billion passengers and 62 million tones of freight each year. In challenging political, economic and environmental times, the ability of aviation – the business of freedom – to sustainably connect cultures and spread prosperity beyond borders has never been more important" (ATAG, 2018). Since airline transportation is a fast, safe and comfortable way of travelling, which has become more accessible in recent years, air traffic is getting busier year by year, which has increased the risk of problems such as flight delays and cancellations, and baggage loss or delay. In 2004, the European Community adopted Regulation 261/2004/EC, amending the shortcomings of the original Regulation 295/1991, to protect and strengthen airline passenger rights.

The aim of the current research was to better understand and improve consumers' experiences of disruption to their journeys and to explore the implementation of the regulation associated with air passenger rights according to the European Commission, as compared with actual data reported by respondents from the Chios Airport "Omiros". Based on the research results, it is clear that there is a lack of awareness of the rights among passengers, and they did not receive either much information about their legal rights or the necessary compensation as foreseen by the Air Passenger Rights Regulation, regarding delayed or cancelled flights. Furthermore, our analysis supported that those passengers who complained were mainly addressed to the airline and less to other operators. At the same time, they were not satisfied

<sup>3</sup> <https://www.atag.org/component/news/?view=pressrelease&id=110>

with the outcome of their complaint, as they expected the airline to solve their problem as quickly as possible, at the minimum cost, time, effort, and personal expenses. Concerning Denied Boarding, in cases where airlines refused boarding, they were looking for volunteers, willing not to board the aircraft. Simultaneously, passengers did not claim compensation for luggage damage, which can be explained by the low level of awareness about their legal rights, as combined with the perceived failure of airlines to inform them about it. Moreover, factor analysis investigated the parameters that were important for passengers who experience flight delay or cancellation, with "refund of flight cost", "rescheduling/rebooking (free)", "financial compensation", "information on legal rights" and "flight status information", play a major role in determining delayed or cancelled flights - critical high value "hard" factors - and "transfer to home or hotel", "comfortable waiting area", "overnight accommodation" and "food and drink", also play an important role - lower value "soft" factors - in the case of flight delay or cancellation.

While this paper is a preliminary study, an indication for further research would be to extend it to a larger sample from the same or other Greek airports, maybe with frequent flyers with a higher level of involvement with the airline, based on the available air traffic statistics. This could provide a better understanding of the differences between passengers' attitudes towards flight stop issues and the implementation of Regulation 261/2004/EC at these airports. At the same time, looking at the cost of flight interruptions to airlines operating in Greece and improving passenger satisfaction through investment in technological equipment for baggage handling could be very promising.

The findings have both managerial and research implications. There is a need for a consistent approach across the airline industry to inform passengers of their rights and make airport customers' experience as pleasant as possible. When flights are delayed or cancelled, or passengers are denied boarding, airlines should actively inform them about their rights and provide them with the assistance and compensation they are legally entitled to. Also, annual surveys should be planned concerning the necessary information and the assistance provided, as well as the total experiences and perceptions of passengers. Through these surveys, problem areas should be identified and improved, ensuring consistency between airlines' policies and compliance with European policy and air passenger rights regulations. Therefore, it is understood for airline managers that dealing with flight delays or cancellations should include all market players so that all can jointly improve their performance. Planning - between airports, airlines, air carriers and governments - is the best way to serve passengers, which in turn will eliminate the obstacles that still discourage some people from traveling. Concluding, "If airport management takes a strategic and holistic approach to customer

service and airport branding, customer satisfaction with the airport experience can be significantly improved and airport net revenues can be tracked" (Paternoster, 2007, p. 218). In other words, since "airline companies are very concerned about customer loyalty, they need to review and reexamine their strategies not only to sustain customer loyalty but also to remain competitive" (Abdulah et al., 2007, p.5), because "Only a coherent system based on all involved parties will guarantee strong air passenger rights and strengthen the trust in EU legislation" (ECC-Net 2016:77).

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