



## The Impact of Inflight Food Service Quality On Passenger Satisfaction in Egyptian Airlines

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### Abstract

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This study investigates the impact of inflight food service quality on passenger satisfaction. As the airline industry becomes increasingly competitive. This research focuses on key dimensions (core, external, and delivery) and their correlation with passenger satisfaction levels. Utilizing the method of combining quantitative online questionnaires. The research employed an online questionnaire distributed to passengers who had traveled on Egyptian airlines, focusing specifically on those Utilizing food and beverage services. A total of 360 responses were collected, providing a robust dataset for analysis. The questionnaire assessed various dimensions of food service quality and passenger satisfaction. Statistical analyses was conducted to identify significant relationships between food service quality and passenger satisfaction, while thematic analysis will provide deeper insights into consumer perceptions. The findings of this research have important implications for enhancing inflight service offerings in the Egyptian airline industry. By understanding the key factors contributing to passenger satisfaction, airlines can implement targeted improvements in their food service operations, ultimately fostering greater customer loyalty and competitive advantage. This study contributes to the existing literature on inflight service quality by providing empirical evidence from the Egyptian context, thus enriching the understanding of passenger preferences in aviation catering services.

### 1. Introduction

Despite the adoption of the open-skied policy, the aviation sector has been expanding steadily since the Second World War. The entire airline sector is founded on services, where the product is passed to the consumer during the journey process in the form of a satisfying overall experience. Any air service provider will find it challenging to complete this. (Giao et al., 2021). A business that specializes in offering air transportation as a service, whether it be for people, cargo, or a combination of the two, is an airline (Halpern, 2020). There are many distinct kinds of airlines, each one created to meet the needs of various local and global market segments. There are many different sorts of airlines, including those that are owned by the government, private companies,

and even freight. The types of aircraft employed by an airline will change depending on the transport focus, volume, and routes and destinations that the company normally serves (Halpern, 2020).

Airlines have become a necessary piece of our global transportation system, enabling travel to previously inaccessible locations. The availability of airlines has changed how we view the globe and how long it takes to go to faraway places. The demand for local and international travel, vacations, and freight requirements determines the types of airlines in the air transport business (Belobaba et al., 2015).

Catering to the airline industry, the aviation sector benefits from growing global interactions. It may also increase competition among airline catering service providers, as on-board catering has always been regarded as one of the most critical services to end passengers. Targets and timetables can be so demanding that they cause employees to become stressed. Although the airport caterers are responsible for the supply of catering services, the logistics for all items are generally handled by the airline (Law, K. M., 2011).

## **2. Literature Review and hypotheses development:**

### **2.1 An Overview of Airlines Catering**

Catering in the airline industry one of the aviation sector benefits from the growing number of global interactions. It may also increase competition among airline catering service providers, as on-board catering has always been regarded as one of the most important services to end traveler. Targets and timetables can be so demanding that they cause employees to become stressed. Although the airport caterers are responsible for the supply of catering services, the logistics for all items are generally handled by the airline (Law, 2011).

In-flight dining has long been a feature of corporate development and marketing efforts. The goal of the first powered flight, which took place in 1903, was to transport traveler to far locations in a short amount of time. Soon after, in the 1920s, in-flight catering was introduced to meet the needs of traveler on long-haul flights traveling at 600 miles per hour. Food, drinks, games, and in-flight shopping keep traveler amused. Furthermore, the quality of in-flight services has increased to fulfill passenger expectations by providing higher-quality food and the ability to purchase a meal that meets their needs (Halizahari et al., 2021).

### **2.2 Airlines industry and types of airlines**

With the adoption of the open skies policy, the aviation sector, which has been expanding steadily since the Second World War, the entire airline sector is founded on services, where the product is passed to the consumer during the journey process in the form of a satisfying overall experience. Any air service provider will find it challenging to complete this. (Giao et al., 2021).

There are many distinct kinds of airlines, each one created to meet the needs of various local and global market segments. There are many different sorts of airlines, including those that are owned by the government, private companies, and even freight. The types of aircraft employed by an airline will change depending on the transport focus, volume, and routes and destinations that the company normally serves, airlines have become a necessary piece of our global transportation system, enabling travel to previously inaccessible locations. The availability of airlines has changed how we view the globe and how long it takes

to go to faraway places, the demand for local and international travel, vacations, and freight requirements determines the types of airlines in the air transport business ((Halpern, 2020).

### **2.3 Types of Airline Services**

Few people know that airlines have been around since 1909 when they began operations ‘this airline, run by the German business DELAG, flew airships as opposed to fixed-wing aircraft. Because to safety concerns as well as restrictions on speed, weather, and carrying capacity, airship transportation has become less common. Fixed-wing aircraft have replaced rotary-wing aircraft as the preferred aircraft for airlines ‘ as the industry developed, several types of airlines were required, which led to the creation of air transportation services targeted at various market segments, The airline industry is a cutthroat, expensive, and challenging one to break into and run a successful, thriving corporation. Many of the economic challenges have forced airlines to focus on particular market segments and form partnerships with other airlines in different segments in order to provide a comprehensive service to their clients. This has led to diversity in the kinds of airlines and the functions that each plays in the always-evolving field of air transportation, Types of Airline Services Low-Cost Carrier or Budget, Airline Full-Service Airline, Regional Airlines National Airline, International Airlines, Charter Airlines, Alliance Airlines, Freight or Cargo Airlines and Legacy Carrier Airlines (Belobaba et al., 2015).

### **2.4 Flight catering**

Pan Am US uses restaurant-style tables with flower vases and cutlery, and its stewards are uniformed. The lunch was provided by Western airlines (Sarkis, 2017). The Impact of On-Board Food Features on Patron Satisfaction and Loyalty while Airborne. In 1928, Lufthansa introduced the first full-hot meal service on the Berlin-Paris route with their "Flying Dining Car" on Sunday, April 29. The galley of this aircraft was completely operational, allowing the steward to prepare and serve hot meals (Ferrer et al, 2014). In The aircraft industry, catering the aviation industry gains from the increasing number of international contacts. Given that onboard catering has always been considered one of the most crucial services for final passengers, it might also lead to more rivalry among airline catering service providers. Timetables and targets might be so rigorous that they stress out workers. The airline often handles the logistics for all items, even if the airport caterers are in charge of providing catering services (Law, K. M, 2011).

Even more difficult are airline catering services. Airline catering service providers oversee the catering and logistics of these complicated operations for carriers all over the world. Onboard catering service material logistics between suppliers, warehouses, and caterers varies dramatically from traditional material flows between suppliers, producers, and passengers in other industries (Hovora, 2001).

#### **2.4.1 Segmentation of the Inflight Catering Market**

Inflight service is the term used to describe the food provided to passengers on a commercial airplane. Specialized airline catering services frequently make these meals, which are then brought to passengers on an airline service cart (Townsend, 2016). According to Bata et al. (2006), one of the two bottom-line operations where an airline frequently cuts costs to be efficient is food services. Limiting the frequency and type of meals given is one such idea that is currently in vogue, there are various market segments for inflight catering, including food type, flight type, aircraft seating class, catering type, flight time, and

geography. The market segments are based on food type and include meals, bakery and confectionery, beverages, and other food types. Condiments and more related add-ons, like, such as jams, sauces, salt, pepper, margarine, sugar, and others, are provided in little sachets and are included in the sector of other food categories. The market is divided into full-service carriers, low-cost carriers, and various flight types depending on the type of flight, Business jets, and hybrid carriers are other flying types. ((El-deen, et al., 2016).

The aviation industry benefits from the increasing number of international exchanges, while the international service sector's aviation business is defined by a small number of high-value passenger transactions. Given that onboard catering has always been considered one of the most crucial services for final passengers, it might also lead to more rivalry among airline catering service providers. Timetables and targets might be so rigorous that they stress out workers. The airline often handles the logistics for all items, even if the airport caterers are in charge of providing the catering services (Chai, et al., 2013). Scheduling synchronization between airlines, caterers, suppliers, and end passengers on flights is essential for improved supply chain performance. Considering how crucial scheduling is to the supply chain, an attempt has been made to investigate the effects of scheduling anxiety on aircraft catering operations. (Law, 2011)

In recent years, the in-flight catering industry has gotten much attention. Compared to logistics, actual food production for in-flight catering has reduced from 90% in the early 1980s to only 10% of total activities today (Chai, et al., 2013).

## 2.5 Service Quality as a Concept

Armstrong, Kotler, Harker, and Brennan (2018) define passenger satisfaction as an emotion of satisfaction or dissatisfaction regarding a company's performance relative to expectations following the use of a good or service. Oliver further noted that a post-purchase assessment of passengers, known as passenger consumer sustainability in consumption, will reflect passenger pleasure.

Goods, services, and passengers' potential to help the business later on (profitability). Client satisfaction is sometimes understood to represent the start of client loyalty, which is demonstrated by the occurrence of recurring transactions and The readiness of clients to spread the news about goods or services to others or even to promote them 'The way a business provides its services concerning the expectations of its clients is referred to as its service quality. Clients make service purchases in response to specific requirements. People have standards and expectations for how a company's service delivery meets their demands, whether they know them or not. A business that provides high-quality services aims to meet or exceed the expectations of its clientele. Satisfaction (Farooq et al., 2018)

The consistency with which the developed product is displayed is considered quality Thai (2015). This definition is in line with that of Ali et al. (2016), who defined quality as anything that combines the product's characteristics to satisfy the needs of the external Passenger. Product quality differs from service because the former is concrete while the latter is intangible. For example, the American Society for Marketing defines service as benefits or activities for sale or connected to a particular product.

### 2.5.1 Measuring Service Quality (SERVQUAL)

Whether management can accurately understand what passengers want and anticipate is an issue in the aviation industry, expectations have a significant role in determining how well and how satisfied a passenger is with their services. Now is the time to incorporate the "voice of the consumer" into the design process using cutting-edge methods like experimental design, quality function development. Following the completion of the service, the provider should evaluate how successfully the client's expectations were met. (Chou, et al, 2011)

The SERVQUAL model is a reliable and valid condensed multiple-item scale that may be used to define and explain consumers' perceptions and expectations of services, improving the quality of services and raising passenger satisfaction, it is possible to use SERVQUAL in a variety of sectors. SERVQUAL, which is utilized for service quality dimensions, is then customized or adjusted to meet the typical characteristics of that specific company. In addition to the five SERVQUAL dimensions employed in this study (tangibles, reliability, responsiveness, assurance, and empathy), three additional factors have been added to help with the research's goal and fit with the particulars of the airline sector. On-the-ground services, tangibles, dependability, responsiveness, assurance, empathy, safety records, and image are the dimensions that are being looked at. The new, enhanced SERVQUAL instrument with five dimensions was created by (Parasuraman et al., 2015.)

### 2.6 passenger's satisfaction

Conversely, the process of integrating the behavioral and attitudinal indicators of commitment and repeat business is what is known as passenger loyalty. Numerous variables, including purchase intentions, word-of-mouth communications, price sensitivity, and complaint behaviour, have been employed in the literature to measure loyalty (Hwang et al., 2023).

Measuring the quality of services rendered in the aviation industry has gained significant relevance in recent times. The aerospace industry as a whole may credit numerous contributions. For instance, Walia et al. (2021) shown that passenger happiness is considerably and favorably correlated with loyalty by analyzing the range of components involved in the quality of airline services that have a direct meaningful communication with passenger satisfaction.

In particular, Prentice and Kadan (2019) confirmed that the general quality of airport service was significantly related to returning to the destination and using the airport again. Koklic et al. (2017) looked at the relationships between the quality of the personnel and satisfaction with the airline and the intention to repeat and recommend the airline. They found that personnel quality positively affects satisfaction and that satisfaction, in turn, affects the intention to repeat and recommend. Merkert and Assaf (2015), on the other hand, examined airport efficiency by incorporating perceived service quality and profitability into their analysis. They concluded that omitting quality can lead to a distortion of the airports' overall efficiency ranking.

There are also a number of research available on the subject of travelers' opinions regarding airport quality. By using artificial intelligence to investigate visitors' opinions on airport services, (Miskolczi et al. ,2021) shown that travelers belonging to Generation Z (digital natives) and Y (millennials) find airport services more appealing. Previous research has concentrated on examining how various passenger

characteristics, such as nationality, affect how different people perceive the quality of the services they receive (Bellizzi et al., 2018)

Fakfare et al. (2021) investigated the asymmetric impact of airport quality features on passenger satisfaction in the terminal, with a focus on passenger satisfaction through the evaluation of service quality.

Nevertheless, Bogicevic et al. (2016) found the airport features that improve passenger happiness without accounting for various user characteristics.

This conducted a similar analysis and identified the critical elements influencing passenger satisfaction in the setting of airports based on the characteristics of airport service quality that travelers most frequently noted in their comments posted on an airport assessment website. Isa et al. (2020) came to the conclusion that there was a substantial positive association between general passenger satisfaction and certain aspects of the airport service quality. Pandey (2016) demonstrated that while certain aspects of the service quality at the airports under investigation needed to be improved, overall, it was a satisfactory level. Bezerra and Gomes (2015) determined the parameters of airport service quality and looked at the implications of these. There was a correlation between the overall passenger happiness and a few of the airport service quality parameters. Pandey (2016) demonstrated that while certain aspects of the service quality at the airports under investigation needed to be improved, overall, it was a satisfactory level. Bezerra and Gomes (2015) defined the categories of airport service quality and looked at how these factors, together with related variables, affected traveler' overall happiness. (Han and Hyun, 2017)

In addition, Dayarathna et al. (2017) assessed the degree of passenger satisfaction with the facilities in the departures, arrivals, and transit terminal building; Correia et al. (2008) evaluated the general service level of terminals according to Kankaew (2023) examined the impact of architectural design on passenger satisfaction in airport settings.

According to Yang et al. (2015), passenger satisfaction was not as high as first anticipated for each of the categories under investigation. Pantouvakis and Renzi (2016) assessed how satisfaction levels differ based on nationality and identified the precise elements of service quality that can result in higher traveler satisfaction in an international airport scenario.

However, the majority of earlier research in the airline sector concentrated on particular aspects of service quality (airline staff competency, luggage handling, punctuality, flight schedule, cost, safety records, image, aircraft attributes, reservation, and ticket purchasing). Furthermore, only four aspects of food service quality were examined in the majority of earlier studies (Laws, 2005). These aspects were meal quality, meal quantity, menu selection, and prompt beverage and meal. It appears that opinions about the causal relationship between Passenger Satisfaction and on-board foodservice quality (such as meal flavor, fragrance, color, texture, and temperature) are divided in the literature and among studies (Hwang et al., 2023).

A person's perception of a product's performance in relation to their expectations will determine whether they are satisfied or unsatisfied; if the performance meets their expectations, they are satisfied (Kotler and Keller, 2012). According to Archana and Subha (2012), a flight company's ability to offer traveler rewards that go above and beyond their expectations is what is deemed a value-added service. In today's competitive environment, high levels of passenger satisfaction are one of the most valuable assets for the airline industry. It cannot be stressed how important client happiness is, according to Bateson and Hoffman. The service company would not be in business without clients.

According to Morrell (2017), as the rivalry brought on by deregulation has grown fiercer, service quality in the airline industry has also gotten more attention service quality is an antecedent of the traveler

satisfaction, and the connection between perceived service quality and satisfaction is based on empirical evidence.

## **2.7 passengers' Loyalty**

Customer loyalty is a crucial factor in the airline industry, impacting competitive advantages such as share-of-wallet and market share. Passenger loyalty can be divided into three categories: behavioral, attitudinal, and method which combines both behavior and attitude. Attitudinal loyalty focuses on repeat purchases, suggesting a tendency for passengers to frequently acquire goods or services from the same organization. Trust, dependability, and a sense of community are the cornerstones of passenger loyalty.

In the airline industry, the concept of passenger loyalty is complex and dependent on several factors. The standard of services is essential, with airlines that consistently deliver excellent passenger service, comfortable aircraft, quick check-in and boarding procedures, and attentive passenger support is more likely to foster loyalty. Frequent flyer programs also play a role in fostering loyalty, offering exclusive privileges, incentives, Airlines that consistently provide excellent experiences via various interactions, including reservations, checking in, in-flight experience, and handling problems, are more likely to have stronger loyalty. A passenger's opinion of the airline may be greatly impacted by any irregularity or unpleasant experience, leading to a decline in allegiance (Etim et al., 2023). Researchers have shown a direct and indirect relationship between service quality passenger satisfaction and behavioral intentions. However, there is disagreement among researchers and in the literature on the causal relationship between passenger satisfaction and onboard food service quality. Mohd Zahari et al. (2011) found that the level of passenger satisfaction was significantly impacted by the quality, quantity, and menu choices of meals.

## **2.8 Re-purchasing and re-flying**

The importance of travelers' impressions of service quality in determining what they might do after using services was emphasized. When deciding whether to buy another plane ticket for their subsequent trip with the same airline, what they previously experienced may come to mind and be helpful. It was discovered that traveler used word-of-mouth to express both their pleased and dissatisfied experiences with the service quality they received. These are all examples of behavioral intentions. (Huang, 2010).

The positive correlation between behavioral intentions (such as the desire to spread word of mouth and make repeat purchases) and passenger satisfaction has been the subject of numerous research, both of which have attested to this relationship. This is evident throughout the food service industry, as factors related to dining satisfaction influence the behavioral intentions that follow a meal (Ryu et al., 2012).

## **3. Conceptual Framework of the Study and Hypotheses**

Based on the above discussion, the following hypotheses are posited:

- H1** Inflight food service quality has a statistically significant impact on passenger satisfaction.
- H2** Inflight food service quality has a statistically significant impact on passenger loyalty.
- H3** Passenger satisfaction has a statistically significant effect on passenger's Loyalty.
- H4** There is a statistically significant relationship between the Passenger's satisfaction and Re-filing intention.
- H5** There is a statistically significant relationship between the Passenger's loyalty and Re-filing intention.

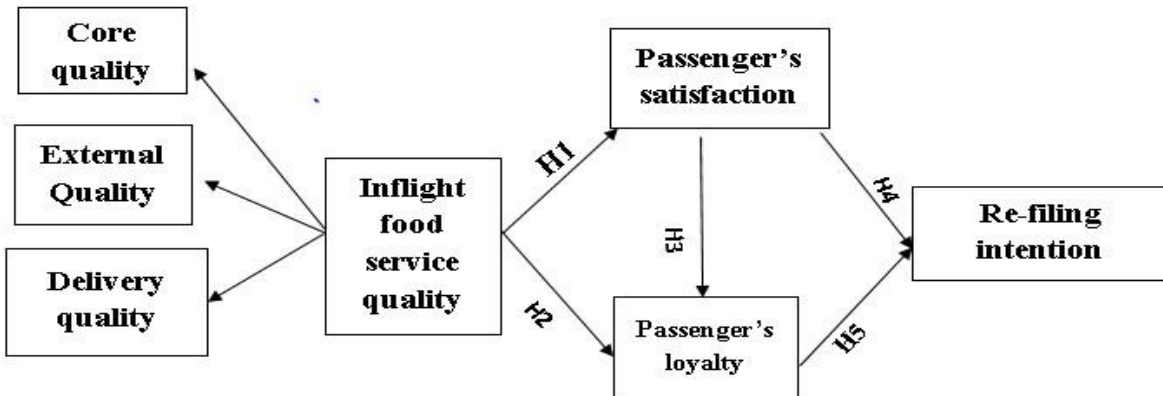


Figure (1) Final structure equation model and standardized estimates for passenger satisfaction and loyalty

## 4. Methodology

### 4.1 Data collection

The study collected data through an online survey, targeting general air travelers in Egypt via a marketing research company's survey system. Travelers who had flown on a full-service airline and had an in-flight meal within the past year were invited to participate by clicking a survey link provided in an email. At the start, participants were instructed to thoroughly read the research description, then complete the questionnaire based on their experiences with the full-service airline they identified. Responses were submitted through this process, 360 samples were recruited for this research, 62.8 percent of the sample (226 people) is males, and 37.2 percent (134 people) is females.

As stated in the previous chapter (methodology), the collected data was entered to an (Emos) software program. The sample was selected based on systematic random sampling from the traveler.

A thorough survey of the study population was conducted, with 25 questionnaires returned, producing a response rate of approximately 94%. In addition to regression testing analysis, arithmetic means, frequencies, and standard deviation were employed, and reliability analysis was carried out to gauge the stability of the questionnaire statements' results. The Statistical Package for the Social Sciences, version 25 Used (Emos) Structural equation modeling (SEM).

- Was employed to do statistical analysis on the survey data. Reliability was evaluated using Cronbach's alpha statistical approach
- The frequency distribution of answers to the pertinent questions and the mean and standard deviation were examined using descriptive analysis.
- To examine the connections between the variables, the Test of Hypotheses is applied

The aim of the second set of questions was to gauge the tactics used by the research population. A number of statements on a Likert scale (1–5 strongly disagree/strongly agree) make up this section.



## 4.2 sample characteristics

The questionnaire's questions were taken from a thorough literature review that was previously published. It was made up of closed-ended questions with predetermined response options for respondents to select from (Bryman, 2008)

In general, most of the similar questionnaires also began performing a characterization of respondents. The questionnaire used in this study consists of five axes. Part one of the questionnaire was concerned with the demographic and functional characteristics of the respondents. The questions included four items.

- 1- **Gender of respondents**, and respondents' age which was divided into five categories from 15 to less than 35 years, from 40 to less than 36 years, from 40 to less than 60 years, and from 60 years and above.
- 2- **Travel Purpose which** was divided into six categories: (1) work (2) Treatment, (3) Tourism, (4) Treatment (5) Events, (6) something else.
- 3- **Nationality** was divided into five categories (1) American, (2) Arabic, (3) Europe, (4) African, (5) Egyptian.
- 4- **Class of travel** was divided into five categories (1) business class, (2) tourism class, (3) economy class, (4) First class, and (5) other.
- 5- **Your recent flight with Egyptian Airlines** was divided into six categories (1) Egypt Air Company, (2) Air Cairo Airline Company, (3) Nile Airline Company, (4) Alexandria Airlines, (5) Sainai Airlines Company (6) Nesma airline company.
- 6- **Your recent flight with Egyptian Airlines was since** was divided into seven categories (1) A month, (2) 3 months, (3) 5 months, (4) 7 months, (5) 9 months, (6) 11 months, (7) A year ago.

## 4.3 Part two gathered information about

- 1- Inflight food service quality
- 2- Passenger's satisfaction
- 3- Passenger's loyalty
- 4- Re-flying intention

(Giritlioglu et al., 2014, and Chua et al., 2015, Mishal, M. A. (2015) and, Han, H et al, (2015)

The study evaluated core quality aspects (e.g., "The airline food and beverages were tasty") using seven criteria: (1) taste, (2) portion size, (3) freshness, (4) ingredients, (5) digestion, (6) temperature, and (7) health and nutrition. External quality (e.g., "The presentation of the food and beverages was visually attractive") was assessed with three items: (1) presentation, (2) color, and (3) variety. Delivery quality (e.g., "The food and beverages were served promptly") measured using five criteria: (1) speed of delivery, (2) timing, (3) sanitary utensils, (4) staff appearance, and (5) passenger care by the delivery staff.

Additionally, the survey questionnaire, which included these measures along with an introductory letter, was reviewed and refined by academic experts to ensure accuracy and relevance. The fifth Likert scale is used (1= strongly disagree; 2= disagree; 3= neutral; 4= agree; 5= strongly agree). Three items were used to measure overall satisfaction with flight experiences (e.g., "Overall, I am satisfied with my experience when using this airline"); three items evaluated passenger attachment to in-flight food and beverages (e.g., "I love the in-flight food and beverages served by this airline"); two items evaluated passenger attachment to these items as well as re-flying intentions.

#### 4.4 Reliability

Reliability by the degree of interrelatedness between the items is measured by internal consistency. Cronbach's alpha was computed to evaluate internal consistency. A Cronbach's alpha score of 0.989 was deemed satisfactory for reliability, as was a value greater than 0.70.

#### 5 Population and Sampling

The target population was also airline traveler in Egypt. The sample determination in this part was through the purposive sampling technique, where respondents are selected based on their appropriateness to the study.

- The main objective of this study is to investigate inflight food service quality and its impact on passenger satisfaction and passenger loyalty in Egyptian airlines.
- The most suitable population of the present study includes all traveler of the six Egyptian Airlines.

#### 5.4 Demographic Data

The respondents' data and properties are summarized using basic descriptive statistics such as frequencies and percentages to present a description of the gathered data. Table (1) illustrates the frequency and percentage of demographic features of respondents in the study sample.

Table (1) demographic features of respondents in the study sample.

Sample Characteristics (n= 350)		Count	%
Gender	Male	226	62.8%
	Female	134	37.2%
Nationality	Egyptian	291	80.8%
	African	19	5.3%
	European	7	1.9%
	Arab	39	10.8%
	American	4	1.1%
Age	15-35	204	56.7%
	36-40	84	23.3%
	41-60	64	17.8%
	+60	8	2.2%
Flight Class	Tourist Class	85	23.6%
	Economy Class	104	28.9%
	Business Class	81	22.5%
	First Class	90	25.0%
Purpose of Travel	Work	90	25.0%
	Treatment	35	9.7%
	Tourism	141	39.2%
	Events and Conferences	44	12.2%
	Others	50	13.9%
Airline	EgyptAir	242	67.2%
	Air Cairo	29	8.1%
	Nile Air	35	9.7%

	Alexandria airlines	14	3.9%
	Air Sinai	16	4.4%
	Nesma Airlines	22	6.1%
	Other	2	0.6%
The last time you traveled with Egyptian Airlines?	A month ago	93	25.8%
	3 months ago	52	14.4%
	5 months ago	47	13.1%
	7 months ago	48	13.3%
	11 months ago	29	8.1%
	1 year ago	91	25.3%

According to the demographic data table (1), the results indicated that:

- 80.8 percent of the sample (291 people) is Egyptians, and 10.8 percent (39 people) is Arabs. 56.7 percent of the sample (204 people) is from 15 to 35 years old, 23.3 percent (84 people) are from 36 to 40 years old, 17.7 percent (64 people) are from 41 to 60 years old, and 2.1 percent (8 people) are 60 years and over.
- As for the characteristics of flights, 28.9% of the sample travels using economy class (104 people), 25 percent (90 people) use first class, 23.6 percent of the sample (85 people) use tourist class, and 22.5 percent of the sample (81 people) use Business class.
- 39.2 percent of the sample (141 people) travel for the purpose of tourism, 25 percent (90 people) travel for work, 12.2 percent (44 people) travel to attend events and conferences, and 9.7 percent of the sample (35 people) travel for treatment. 67.2% of the sample travels using EgyptAir (242 people), 9.7 percent (35 people) use Nile Air, and 28.1 percent of the sample (29 people) use Air Cairo. The Demographic and sample characteristics shown in Table 1.

## 6. Psychometric properties

The study used the questionnaire as the main tool for collecting data, In addition to the demographic data and characteristics of flights, the questionnaire is divided into four parts, the first part concerns items measuring the independent variable (Inflight food service quality) with its three dimensions (core - external - delivery), where the core quality dimension consists of 7 items, the external quality dimension consists of 3 items, and the the delivery quality dimension consists of 3 items.

The second part of the questionnaire measures the Passenger's satisfaction as a moderate variable consists of 7 items. Also, the third part of the questionnaire measures the Passenger's loyalty as a moderate variable consists of 7 items. The last part of the questionnaire measures the Re-filing intention as a dependent variable consists of 5 items.

### 6.1 The validity (Structural validity)

Table 2

Indicators	GFI	CFI	TLI	RMSEA	SRMR
<b>Evaluation value</b>	<b>&gt; 0.9</b>	<b>&gt; 0.9</b>	<b>&gt; 0.9</b>	<b>&lt; 0.08</b>	<b>&lt; 0.08</b>
<b>Part1 Inflight food service quality</b>	0.935	0.983	0.973	0.08	0.0147
<b>Part2 Passenger's satisfaction</b>	0.990	0.999	0.996	0.041	0.0057
<b>Part3 Passenger's Loyalty</b>	0.979	0.995	0.988	0.074	0.0075
<b>Part4 Re-filing Intention</b>	0.990	0.998	0.996	0.052	0.0061

Structural validity measures the degree to which the scores are an adequate reflection of the dimensionality of the construct to be measured. In this study, the structural validity of the questionnaire was assessed by confirmatory factor analyses (CFA).

A quinary factor model of the questionnaire was tested.

Unidimensionality was examined by CFA on the polychoric correlation matrix with Weighted Least Squares with Mean and Variance adjustment (WLSMV) estimation. The Comparative Fit Index (CFI), Tucker Lewis Index (TLI), Root Means Square Error of Approximation (RMSEA), and Standardized Root Mean Residual (SRMR) evaluate model fit. We report scaled fit indices, which are considered more exact than unscaled indices as shown in **Table 2. Figure 1 present the model.**

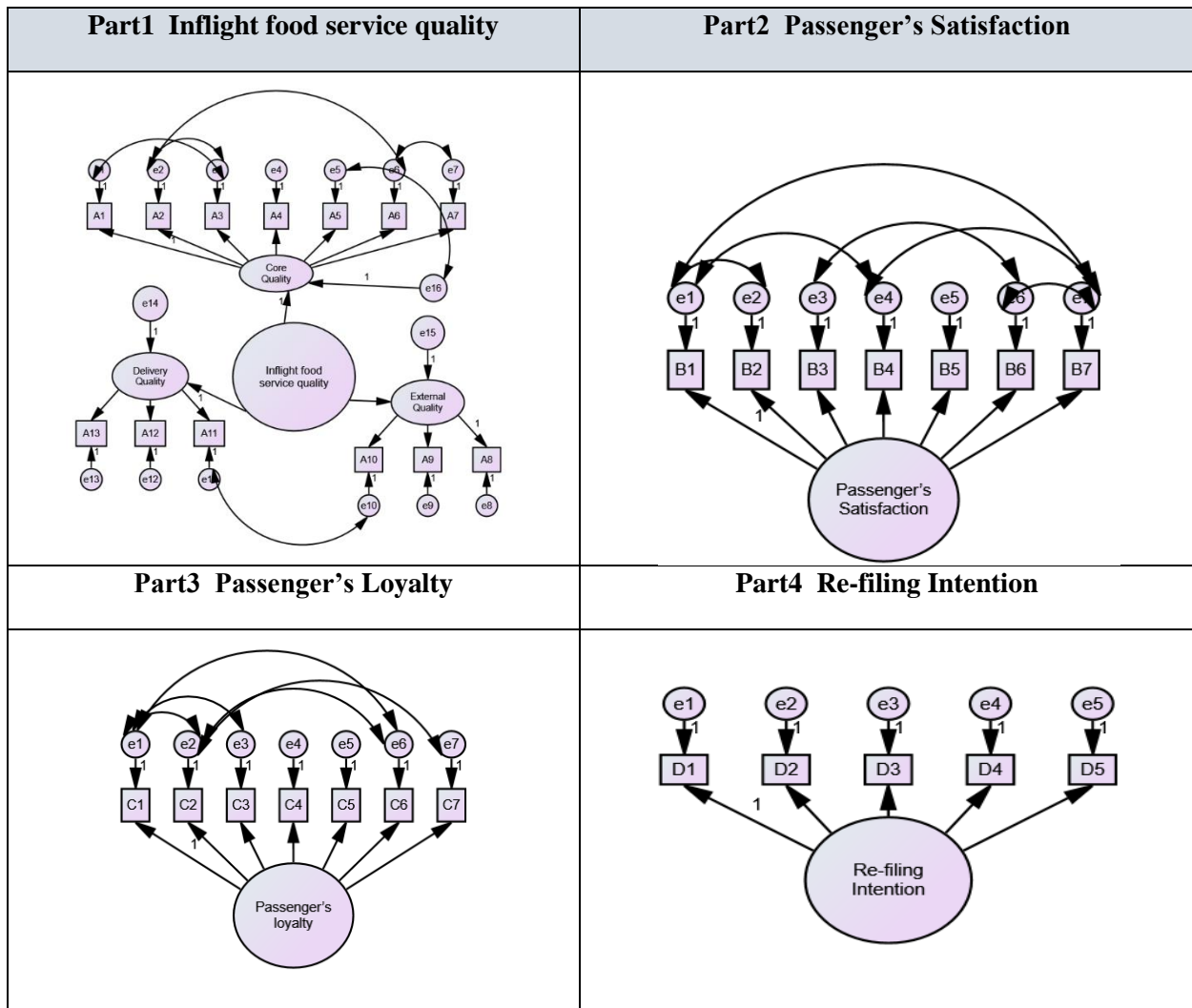


Figure 2 Structural validity by confirmatory factor analyses (CFA), Using IBM Amos ver. 25.

## 6.2 Reliability

Investigating stability and consistency serves as a gauge for measurement dependability. The degree of a model's dependability in assessing the desired construct is known as reliability.

Reliability by Internal consistency measures the degree of the interrelatedness among the items. Internal consistency was assessed by calculating Cronbach's alpha. A Cronbach's alpha value is 0.989, >0.70 was considered sufficient evidence for reliability. **Table 3 show item-total Statistics.**

Table 3 Item-total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
A1	129.46	675.324	0.861	0.988	B4	129.51	673.928	0.864	0.988
A2	129.44	676.816	0.807	0.988	B5	129.46	673.480	0.894	0.988
A3	129.56	673.334	0.815	0.988	B6	129.45	675.702	0.883	0.988
A4	129.42	674.300	0.850	0.988	B7	129.37	676.940	0.872	0.988
A5	129.43	675.433	0.848	0.988	C1	129.48	677.275	0.800	0.988
A6	129.43	674.880	0.850	0.988	C2	129.44	676.804	0.864	0.988
A7	129.37	677.382	0.826	0.988	C3	129.44	674.726	0.867	0.988
A8	129.43	675.304	0.836	0.988	C4	129.41	677.580	0.849	0.988
A9	129.39	675.426	0.858	0.988	C5	129.45	676.683	0.838	0.988
A10	129.57	671.594	0.838	0.988	C6	129.48	674.050	0.825	0.988
A11	129.44	674.798	0.852	0.988	C7	129.43	675.455	0.894	0.988
A12	129.43	675.594	0.847	0.988	D1	129.37	678.039	0.868	0.988
A13	129.41	676.354	0.841	0.988	D2	129.45	676.432	0.860	0.988
B1	129.37	677.503	0.888	0.988	D3	129.42	678.150	0.872	0.988
B2	129.45	676.967	0.884	0.988	D4	129.46	676.205	0.812	0.988
B3	129.50	675.643	0.829	0.988	D5	129.40	676.753	0.848	0.988

### 6.3 Descriptive Statistics

#### 6.3.1 Inflight food service quality

Table 4 Descriptive Statistics of Inflight food service quality dimensions and items

DIMEN- SIONS	ITEMS	strongly disagrees		Disagrees		neutral		Agrees		strongly agrees		Total	
		F	%	F	%	F	%	F	%	F	%	Mean	Rank
Core Quality	A1	6	1.7%	20	5.6%	50	13.9%	119	33.1%	165	45.8%	4.158	6
	A2	10	2.8%	16	4.4%	46	12.8%	118	32.8%	170	47.2%	4.172	5
	A3	11	3.1%	24	6.7%	58	16.1%	106	29.4%	161	44.7%	4.061	7
	A4	9	2.5%	21	5.8%	37	10.3%	116	32.2%	177	49.2%	4.197	2
	A5	7	1.9%	21	5.8%	42	11.7%	119	33.1%	171	47.5%	4.183	4
	A6	7	1.9%	22	6.1%	42	11.7%	113	31.4%	176	48.9%	4.192	3
	A7	8	2.2%	19	5.3%	29	8.1%	125	34.7%	179	49.7%	4.244	1
External Quality	A8	11	3.1%	17	4.7%	35	9.7%	126	35.0%	171	47.5%	4.192	2
	A9	8	2.2%	18	5.0%	37	10.3%	119	33.1%	178	49.4%	4.225	1
	A10	9	2.5%	35	9.7%	44	12.2%	115	31.9%	157	43.6%	4.044	3
Delivery Quality	A11	9	2.5%	20	5.6%	37	10.3%	125	34.7%	169	46.9%	4.181	3
	A12	8	2.2%	18	5.0%	44	12.2%	119	33.1%	171	47.5%	4.186	2
	A13	8	2.2%	17	4.7%	41	11.4%	121	33.6%	173	48.1%	4.206	1

Core Quality mean (4.17), std. dev (0.914). Delivery Quality mean (4.19), std. dev (0.942).

External Quality mean (4.15), std. dev (0.942).

Total of Inflight food service quality mean (4.17), std. dev (0.905).

The table represents an analysis of the Core, External, and Delivery quality dimensions of items A1 through A13. Based on the data, the following observations are made, **Central Propensity** the overall mean score, which shows a general trend in the direction of agreement with the quality criteria, falls between 4.044 (A10) to 4.244 (A7). Upon closer inspection, individual goods may show differences. The greatest average scores, for example, are seen in items A7, A9, and A13, indicating more agreement over their quality. **The distribution** of a possible skew toward agreement is shown by the percentages across response categories. Respondents who strongly disagree or disagree may be less in number than those who agree or highly agree. **The Rank** It appears that the "Rank" column ranks the items according to their average satisfaction; A7 has the highest average satisfaction (rank 1), while A10 has the lowest (rank 3) for each of the three quality aspects (Core, External, Delivery). So this result was consistent with (Han and Hwang, 2017; Koklicet al., 2017).

## 7. Passenger satisfaction

Table 5 Descriptive Statistics of Passenger satisfaction items

ITEMS	deeply dissatisfied		dissatisfied		neutral		satisfied		very satisfied		Total	
	F	%	F	%	F	%	F	%	F	%	Mean	Rank
B1	5	1.4%	14	3.9%	3	10.8%	130	36.1%	172	47.8%	4.250	1
B2	7	1.9%	13	3.6%	4	12.2%	146	40.6%	150	41.7%	4.164	3
B3	10	2.8%	17	4.7%	5	14.2%	126	35.0%	156	43.3%	4.114	5
B4	10	2.8%	16	4.4%	5	15.0%	124	34.4%	156	43.3%	4.111	6
B5	9	2.5%	16	4.4%	4	12.8%	128	35.6%	161	44.7%	4.156	4
B6	8	2.2%	14	3.9%	4	12.2%	138	38.3%	156	43.3%	4.167	2
B7	8	2.2%	13	3.6%	3	9.2%	133	36.9%	173	48.1%	4.250	1

Total of Passenger satisfaction mean (4.17), std. dev (0.886).

Based on the data, the following observations can be made Central Tendency the mean score for all items ranges from 4.111 (B4) to 4.250 (B1 & B7), indicating a general trend towards satisfaction with the food service. However, there may be room for improvement.

Distribution Similar to the previous table, a visualization (histogram or box plot) would be helpful to confirm the distribution. The percentages suggest a potential skew towards satisfaction, with fewer reporting deep dissatisfaction or dissatisfaction compared to satisfied or very satisfied. And it was consistent with (Han and Hwang, 2017; Koklicet al., 2017),

## 8. Passenger loyalty

Table 6 Descriptive Statistics of Passenger loyalty items

ITEMS	strongly disagrees		Disagrees		neutral		agrees		strongly agrees		Total	
	F	%	F	%	F	%	F	%	F	%	Mean	Rank
C1	9	2.5%	21	5.8%	41	11.4%	131	36.4%	158	43.9%	4.133	7
C2	10	2.8%	9	2.5%	44	12.2%	140	38.9%	157	43.6%	4.181	3
C3	9	2.5%	15	4.2%	47	13.1%	121	33.6%	168	46.7%	4.178	4
C4	7	1.9%	13	3.6%	47	13.1%	126	35.0%	167	46.4%	4.203	1
C5	9	2.5%	12	3.3%	53	14.7%	122	33.9%	164	45.6%	4.167	5
C6	12	3.3%	19	5.3%	45	12.5%	116	32.2%	168	46.7%	4.136	6
C7	7	1.9%	13	3.6%	49	13.6%	128	35.6%	163	45.3%	4.186	2

Total of Passenger loyalty mean (4.17), std. dev (0.904).

This table (items C1 through C7) seems to be a survey of traveler' opinions regarding statements about in-flight food service on Egypt Air flights. Based on the data, and it was consistent with (Han and Hwang 2017).

The overall mean score for all questions is 4.133 (C1) to 4.203 (C4), suggesting that there is a broad trend in favor of agreeing with the comments (which are probably good remarks regarding the food service).

But a closer examination of specific goods may show differences. As an example, the item with the highest average score, C4, indicates a stronger level of agreement with that particular assertion. Histogram or box plot, similar to the preceding table, would be useful in verifying the distribution. The data indicates a possible bias in favor of satisfaction, as fewer traveler expressed extreme displeasure or discontent than those who were satisfied or extremely satisfied.

Rank It appears that the "Rank" column ranks the items according to their average satisfaction; B1 and B7 have the highest average satisfaction (rank 1), while B4 has the lowest (rank 6).

## 9. Re-flying intention

Table 7 Descriptive Statistics of Re-flying intention items

ITEMS	strongly disagrees		disagrees		neutral		Agrees		strongly agrees		Total	
	F	%	F	%	F	%	F	%	F	%	Mean	Rank
D1	7	1.9%	11	3.1%	39	10.8%	133	36.9%	170	47.2%	4.244	<b>1</b>
D2	10	2.8%	10	2.8%	47	13.1%	136	37.8%	157	43.6%	4.167	<b>4</b>
D3	7	1.9%	10	2.8%	45	12.5%	142	39.4%	156	43.3%	4.194	<b>3</b>
D4	12	3.3%	14	3.9%	45	12.5%	124	34.4%	165	45.8%	4.156	<b>5</b>
D5	9	2.5%	12	3.3%	43	11.9%	123	34.2%	173	48.1%	4.219	<b>2</b>

Total of re-flying intention means (4.20), std. dev (0.887). This table represents an additional poll of travelers' opinions of Egypt Air aircraft' in-flight food service (items D1 through D5). Below is a summary of the findings derived from the information. This result was consistent with Kim, 2010; Lee, 2011)

Central Tendency There is a general trend towards agreement with the assertions (presumably positive claims regarding the food service), as indicated by the mean scores, which range from 4.156 (D4) to 4.244 (D1). The item with the greatest average score, item D1, indicates the highest level of agreement with that particular assertion. This result was consistent with (Lee et al., 2010).



**10. Discussion**

**10.1 Test of Hypotheses**

**10.1.1 Hypothesis 1: There is a statistically significant positive effect of Inflight food service quality on passenger’s satisfaction.**

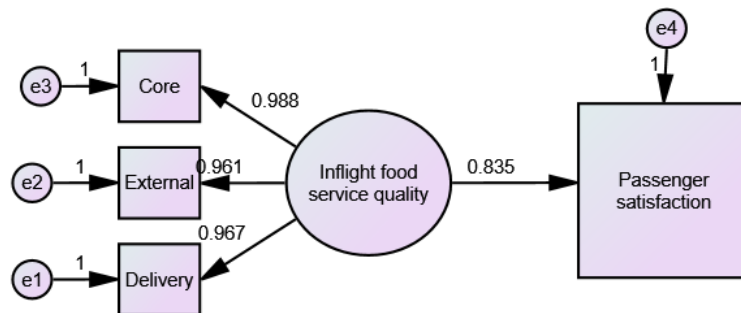
The first hypothesis was tested using the liner regression analysis. Results are presented on table 8.

Table 8 Liner Regression Analysis Showing the effect of Inflight food service quality on passenger’s satisfaction (n= 360)

	B	T	P.value	R	R <sup>2</sup>	F	P.value
<b>(Constant)</b>	5.358	6.302**	0.000	0.835	0.697	824.213**	0.000
<b>Inflight food service quality</b>	0.440	28.709**	0.000				

\*\* Significant at  $\alpha < 0.01$ .

The result revealed a significant positive effect of Inflight food service quality on passenger’s satisfaction ( $R^2 = 0.697$ ,  $F= 824.213$ ,  $P. < 0.01$ ). This indicates that the significant positive effect of Inflight food service quality contributed significantly (70%) to passenger’s satisfaction. Figure 2 shows a regression model.



**Figure 3** Liner Regression Analysis Showing the effect of Inflight food service quality on passenger satisfaction, using IBM Amos ver. 25.

This result proves that (Inflight food service quality positively effects on passenger satisfaction.) This result was consistent with Giritlioglu et al., 2014; Kim, 2010)

**10.1.2 Hypothesis 2: There is a statistically significant effect of Inflight food service quality on passenger loyalty.**

The second hypothesis was tested using the liner regression analysis. Results are presented on Table 8.

Table 8 Liner Regression Analysis Showing the effect of Inflight food service quality on passenger’s loyalty (n= 360)

	B	T	P.value	R	R <sup>2</sup>	F	P.value
<b>(Constant)</b>	12.998	6.810**	0.000	0.760	0.577	488.834	0.000
<b>Inflight food service quality</b>	1.413	22.110**	0.000				

\*\* Significant at  $\alpha < 0.01$ .

The result revealed a significant positive effect of Inflight food service quality on passenger’s loyalty ( $R^2 = 0.577$ ,  $F= 488.834$ ,  $P. < 0.01$ ). This indicates that the significant positive effect of Inflight food service quality contributed significantly (58%) to passenger’s loyalty. Figure 3 shows a regression model.

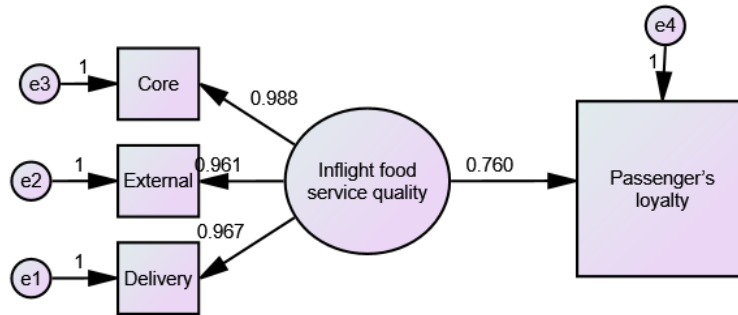


Figure 4 Liner Regression Analysis Showing the effect of Inflight food service quality on passenger’s satisfaction passenger’s loyalty, using IBM Amos ver. 25.

That mean this result shows that Passenger’s satisfaction positively effects on Passenger’s loyalty. Result was consistent with (Lee, 2011; Lee et al., 2010)

**10.1.3 Hypothesis 3: There is a statistically significant effect of passenger’s satisfaction on passenger’s loyalty.**

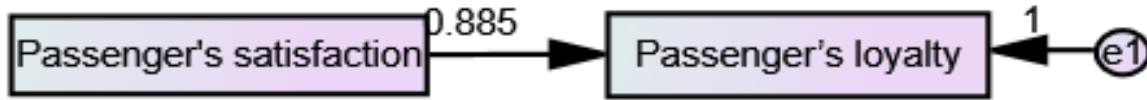
The third hypothesis was tested using the liner regression analysis. Results are presented on table 9.

Table 9: Liner Regression Analysis Showing the effect of passenger’s satisfaction on passenger’s loyalty (n= 360)

	B	T	P.value	R	R <sup>2</sup>	F	P.value
<b>(Constant)</b>	3.903	5.426**	0.000	0.885	0.784	1296.128	0.000
<b>Passenger’s satisfaction</b>	0.867	36.002**	0.000				

\*\* Significant at  $\alpha < 0.01$ .

The result revealed a significant positive effect of passenger’s satisfaction on passenger’s loyalty ( $R^2 = 0.784$ ,  $F= 1296.128$ ,  $P. < 0.01$ ). This indicates that the significant positive effect of passenger’s satisfaction contributed significantly (78%) to passenger’s loyalty. Figure 9 shows a regression model.



**Figure 5** Liner Regression Analysis Showing the effect of passenger satisfaction on passenger’s loyalty, using IBM Amos ver. 25.

This means that this table showed that **the Inflight food service quality positively effects on passenger loyalty**, this result agree with (Ha and Jang, 2010; Han and Hyun, 2017)

**10.1.4 Hypothesis 4: There is a statistically significant effect of passenger’s satisfaction on re-filing intention.**

The fourth hypothesis was tested using the linear regression analysis. Results are presented on table10.

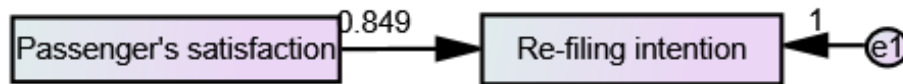
Table: 10 Liner Regression Analysis Showing the effect of passenger’s satisfaction on re-filing intention (n= 360)

	B	T	P.value	R	R <sup>2</sup>	F	P.value
(Constant)	3.239	5.424**	0.000	0.849	0.720	922.745	0.000
Passenger’s satisfaction	0.607	30.377**	0.000				

\*\* Significant at  $\alpha < 0.01$ .

The result revealed a significant positive effect of passenger’s satisfaction on re-filing intention ( $R^2 = 0.720$ ,  $F= 922.745$ ,  $P. < 0.01$ ). This indicates that the significant positive effect of passenger’s satisfaction contributed significantly (72%) to re-filing intention.

Figure 10 shows a regression model.



**Figure 6** Liner Regression Analysis Showing the effect of passenger’s satisfaction on re-filing intention, using IBM Amos ver. 25.

This result was consistent with Passenger’s satisfaction related to Re-filing intention.

**10.1.5 Hypothesis 5: There is a statistically significant positive effect of passenger’s loyalty on re-filing intention.**

The fifth hypothesis was tested using the liner regression analysis. Results are presented on table 11.

Table 11: Liner Regression Analysis Showing the effect of passenger’s loyalty on re-filing intention (n= 360)

	<b>B</b>	<b>T</b>	<b>P.value</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>F</b>	<b>P.value</b>
<b>(Constant)</b>	4.949	7.215**	0.000	0.784	0.615	571.982	0.000
<b>Passenger’s loyalty</b>	0.296	23.916**	0.000				

\*\* Significant at  $\alpha < 0.01$ .

The result revealed a significant positive effect of passenger’s loyalty on re-filing intention ( $R^2 = 0.615$ ,  $F= 571.982$ ,  $P. < 0.01$ ). This indicates that the significant positive effect of passenger’s loyalty contributed significantly (62%) to re-filing intention. Figure 6 shows a regression model.

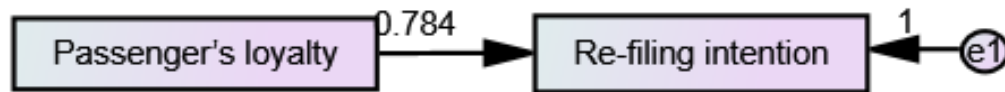


Figure 7 Liner Regression Analysis Showing the effect of passenger’s loyalty on re-filing intention, using IBM Amos ver. 25.

This result was consistent with Passenger’s loyalty positively related to Re-filing intention (Girtlioglu et al., 2014, and Chua et al., 2015).

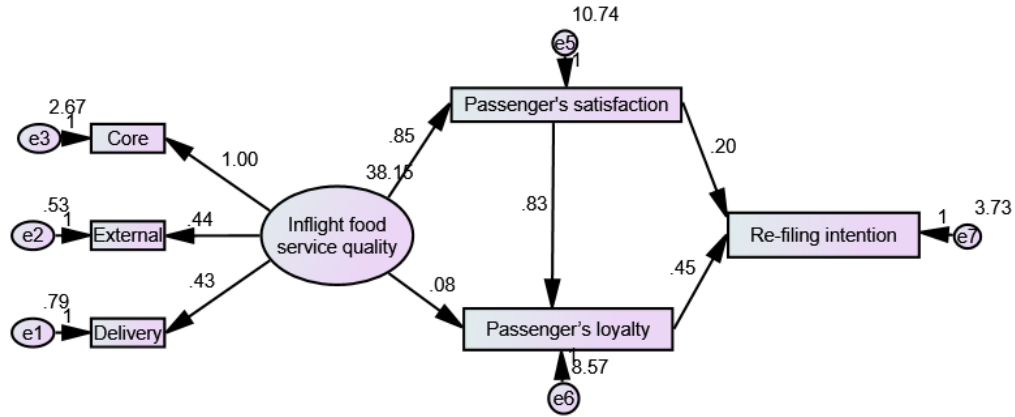
**10.2 The Model of "There is a statistically significant positive effect of Inflight food service quality on passenger’s satisfaction and passenger’s loyalty in building re-flying intention"**

According to results of the last five hypotheses, the main hypothesis was tested using the Structural Equation Modeling (SEM). Results are presented on table 12.

Table 12 Model Fit Indicators of Structural Equation Modeling (SEM) (n= 360)

<b>Indicators</b>	<b>GFI</b>	<b>CFI</b>	<b>TLI</b>	<b>RMSEA</b>	<b>SRMR</b>
<b>Evaluation value</b>	<b>&gt; 0.9</b>	<b>&gt; 0.9</b>	<b>&gt; 0.9</b>	<b>&lt; 0.06</b>	<b>&lt; 0.08</b>
<b>Model Value</b>	0.967	0.989	0.977	0.08	0.023

Model fit was examined by many indicators, the Comparative Fit Index (CFI), Tucker Lewis Index (TLI), Root Means Square Error of Approximation (RMSEA), and Standardized Root Mean Residual (SRMR) evaluates model fit. We report scaled fit indices, which are considered more exact than unscaled indices as shown in Table 2. Figure 1 presents the model.



**Figure 7** Structural Equation Modeling (SEM) "the effect of Inflight food service quality on passenger’s satisfaction and passenger’s loyalty in building re-flying intention, using IBM Amos ver. 25.

This result was consistent with (Halizahari et al., 2021).

**10.2.1 Total, direct, and indirect effects between variables**

Total, direct, and indirect effects between variables were tested using Structural Equation Modeling (SEM). Results are presented on table 10.

Table 13 Total effects, direct effects, and indirect effects (n= 360)

On	Passenger satisfaction			Passenger loyalty			Re-flying intention		
	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect
Inflight food service quality	0.85	0.85	0	0.792	0.083	0.709	0.527	0	0.527
Passenger satisfaction	0	0	0	0.834	0.834	0	0.576	0.2	0.376
Passenger loyalty	0	0	0	0	0	0	0.451	0.451	0

According to the table, the results indicate that

- The previous table suggests that the total mean regarding the direct effect of Inflight food service quality on Passenger satisfaction = 0.85
- There is no indirect effect of Inflight food service quality on Passenger satisfaction so, the total effect of Inflight food service quality on Passenger satisfaction = 0.85.
- The relationship between passenger loyalty and the quality of in-flight food service is 0.083.
- Passenger loyalty and the quality of in-flight food service have an indirect relationship of 0.709.
- Thus, the overall impact of the quality of in-flight food service on passenger loyalty is 0.792.
- No direct effect of Inflight food service quality on Re-flying intention The indirect effect of Inflight food service quality on Re-flying intention = 0.527. So, the total effect of Inflight food service quality on Re-flying intention = 0.527
- It is also obvious from the table that the direct effect of Passenger satisfaction on Passenger loyalty = 0.834

- No indirect effect of Passenger satisfaction on Passenger loyalty so, the total effect of Passenger satisfaction on Passenger loyalty = is 0.834 the direct effect of Passenger satisfaction on Re-flying intention = is 0.2
- Re-flying intention and passenger satisfaction have an indirect relationship of 0.376. Thus, 0.576 is the overall impact of passenger satisfaction on the intention to fly again.
- Re-flying intention and passenger loyalty have a direct relationship of 0.451. No indirect relationship between passenger loyalty and the inclination to travel again thus, passenger loyalty's overall impact on the intention to fly again is 0.45.

### 10.3 Conclusion

The full-service airline industry has undoubtedly seen fierce competition recently due to the swift growth of low-cost carriers and the creation of new airlines worldwide. A growing number of sophisticated and demanding travelers is another challenge for full-service airline management.

This study provided full-service airline operators with adequate information about enhancing in-flight food and beverage quality, given the airline industry's extremely competitive and demanding nature. Improving this aspect is essential for boosting passenger satisfaction and encouraging repeat flights. The study also provided full-service airline management with a comprehensive comprehension of the process's underlying mechanism that generates passengers' intentions to travel again. As a result, the current theses effectively expanded the body of knowledge regarding passenger behaviour in the airline business.

This thesis provided an integrated model to theoretically illustrate why improving the quality of food and beverages served in flight on full-service airlines is essential to encouraging passengers to desire to fly with the airline again. Effective management of in-flight food and drink could be a strategy for the full-service airline industry's loyalty enhancement process, according to management perspectives, given the substantial importance of this aspect of the trip experience.

Like other catering or restaurant settings, in-flight meals are distinctive because they occur in a different context. In-flight meals support the primary service of providing a means of transportation and reflect a secondary service. However, they are constrained by an eating atmosphere that does not support this primary service.

It is almost equal to offering a dining encounter. Our conception illuminates the distinct dimensionalities precisely because of these viability concerns: the essential (core), apparent (external), and compassionate (delivery) components of passengers' meals while they are in the air. Furthermore, our findings confirm that, even in complex contextual contexts, in-flight dining is a potent tool for increasing passenger pleasure and intention to return. By taking this vantage point, the study closes the knowledge gap on the function of food and drink and its relational influence in intricate contextual domains.

### 10.4 Recommendations

#### 10.4.1 Recommendations for Egyptian airline

In the airline industry, passenger pleasure and experience are greatly influenced by the food and drink service. The following suggestions aim to enhance the standard of food and drink services provided on Egyptian flight steps:

-These important recommendations can be summarized as follows

- Workers' training Employees in the food and beverage industry are required to receive ongoing training. This covers hygienic practices, professional services, and high-quality education.
- Diversify list to accommodate the needs of every passenger, a range of lists must be offered. It is possible to offer health, solution, and vegetable Rajang alternatives.
- Taste and quality Food and drink quality have to be considered. This can be accomplished by serving delectable food and using fresh ingredients.
- Timing and quick service Food needs to be served quickly and efficiently. Passenger value efficient service.
- Managing complaints Grievances must be taken seriously and addressed quickly. More often than not, passengers recall their unpleasant experiences.
- Sterilization and cleanliness Public areas, kitchens, and tools need to be kept tidy. A service's cleanliness speaks volumes about its professionalism.
- Value and cost Options for both quality and cost must be provided. Travelers want to get a fair deal for their money.
- Lastly, enhanced food and beverage offerings support a better traveler experience and higher satisfaction with Egypt's flight procedures.
- Customized meals and unambiguous nutritional information are a couple of instances of this. Regularly collect passenger feedback and use it to improve processes and raise the bar for food service.

#### **10.4.2 Recommendations for passengers**

- We recommend you visit the airline website either a few days before departure or when you purchase your plane ticket to select and reserve your meal if your flight is lengthy and the airline you are flying with offers the airline food selection option. However, the following points are carefully observed before proceeding
- Keep careful consideration to the time you reserve your meal Make sure you have enough time before you depart. Depend in on the resources available in the catering department and other people involved in preparing and serving meals, some airlines, for instance, enable you to reserve a meal up to 24 hours prior to departure, while other airlines require you to select your meal several days in advance.
- Take note of the policies regarding disablement and changes When are travelers allowed to modify or cancel their food order? Depends on each airline's specific policies and capabilities.
- Examine how the meal order is logged. Which platform allows you to do this? Are you recording, for instance, on the airline's website or by phoning the passenger support line and doing the same?
- Meal recording for club members Do you belong to the airline's passenger club? It's a good idea to check the list of services and advantages offered to different tiers of members on the airline's passenger club website or platform, as you might be eligible for exclusive services.
- Cost of selecting a meal should there be a fee associated with selecting a meal on an airline, or is it free of charge? Be aware that while provisioning services could be restricted and free on some short excursions, they might cost more for extended trips if you want to select your food.

- Food suggestions for religious adherents you should check the airline's location if you're a Muslim, Hindu, or follow another faith with specific laws and guidelines on the slaughter and filling of food. Certain companies might provide customized meals based on the regulations of various faiths. Further information about it is available in the menu section.

### 10.5 Further Research

This study has certain drawbacks. First, the study's sample size is restricted to six airline firms, making it impossible to generalize the findings. Therefore, in order to increase the model's generalizability, it must be evaluated in various airlines. Second, the use of self-report questionnaires was one of the study's methodological drawbacks. Future research should employ qualitative techniques, such as focus groups or interviews, to gain a deeper comprehension of the variables affecting travelers' loyalty and happiness. Notwithstanding these drawbacks, this study has valuable ramifications for academics and airline executives alike.

The study comes to the conclusion that passengers' experiences and satisfaction levels during air travel are significantly influenced by the caliber of the in-flight food service. Increasing the quality of food service, standard can increase Egyptian Airlines' competitiveness and attract more traveler.

Finally, as perceived value and trust are known to have a big influence on passenger loyalty and happiness, adding these factors to the study's model will strengthen it. These factors might be included in the model of the current study by future researchers. Since this research is among the most significant and distinctive in Egypt's airline sector, it validates several prospects for additional study.

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## تأثير جودة خدمات الاغذية المقدمة علي متن الطائرة علي رضا الركاب في الخطوط الجوية المصرية

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### الملخص باللغة العربية :

تبحث هذه الدراسة في تأثير جودة خدمة الطعام على متن الطائرة على رضا الركاب. مع تزايد التنافس في صناعة الطيران، يركز هذا البحث على الأبعاد الرئيسية (الأساسية، الخارجية، والتسليم) وعلاقتها بمستويات رضا الركاب. باستخدام طريقة دمج الاستبيانات الكمية عبر الإنترنت. استخدم البحث استبياناً عبر الإنترنت تم توزيعه على الركاب الذين سافروا على متن شركات الطيران المصرية، مع التركيز بشكل خاص على أولئك الذين يستخدمون خدمات الطعام والشراب. تم جمع ما مجموعه 360 استجابة، مما وفر مجموعة بيانات قوية للتحليل وادخلت البيانات المدمجة في برنامج حاسوبي (Emos)، لتحليل البيانات التي جُمعت عن طريق الاستبيان. وقد اختيرت العينة على أساس أخذ عينات عشوائية منتظمة من الركاب. النتائج دعمت بشكل كبير فعالية فرضيات البحث ووجود دلالات إحصائية إيجابية بين الفروض، مما يرفع رضا الركاب وولائهم عن شركة الطيران في الرحلات التالية. قام الاستبيان بتقييم أبعاد مختلفة لجودة خدمة الطعام ورضا الركاب، تم إجراء تحليلات إحصائية لتحديد العلاقات المهمة بين جودة خدمة الطعام ورضا الركاب، بينما ستوفر التحليلات الموضوعية رؤى أعمق حول تصورات المستهلكين. تتمتع نتائج هذا البحث بتداعيات مهمة لتحسين خدمات الطيران في صناعة الطيران المصرية. من خلال فهم العوامل الرئيسية التي تساهم في رضا الركاب، يمكن لشركات الطيران تنفيذ تحسينات مستهدفة في عمليات خدمة الطعام الخاصة بها، مما يعزز في النهاية ولاء العملاء ويفيدها بميزة تنافسية أكبر.

تساهم هذه الدراسة في الأدبيات الموجودة حول جودة الخدمة على متن الطائرة من خلال تقديم أدلة تجريبية من السياق المصري، مما يعزز فهم تفضيلات الركاب في خدمات التموين الجوي.

**الكلمات المفتاحية:** نية إعادة الشراء؛ خدمات الاغذية والمشروبات؛ جودة خدمة الطيران؛ جودة الخدمة؛ رضا الركاب؛ ولاء الركاب؛ نية إعادة الطيران.