

AIRLINE INDUSTRY AND GENERATION Z (CASE OF CROATIA AIRLINES)

Vuković, Tena

Undergraduate thesis / Završni rad

2020

Degree Grantor / Ustanova koja je dodijelila akademski / stručni stupanj: **RIT Croatia / RIT Croatia**

Permanent link / Trajna poveznica: <https://um.nsk.hr/um:nbn:hr:229:928395>

Rights / Prava: [In copyright](#)

Download date / Datum preuzimanja: **2021-03-07**

RIT

Repository / Repozitorij:

[RIT Croatia Digital repository - Rochester Institute of Technology](#)

Croatia



RIT Croatia

AIRLINE INDUSTRY AND GENERATION Z
(CASE OF CROATIA AIRLINES)

Tena Vuković

Mentor: Joseph Kevin Walker

Senior Capstone Project

Hospitality and Tourism Management

Dubrovnik, 2020

Abstract

This research effort addressed a number of issues associated with Gen Z fliers: how do they perceive various elements of the flying experience and are they satisfied with the flying experience provided by Croatian Airlines, an airline employing a hybrid airline business model. Kano and SERVQUAL models were combined to determine the meaning of flying elements and a SERVQUAL evaluation determined Gen Z's satisfaction with Croatian Airlines. The results indicated that when considering flying elements some differences exist between more frequent and infrequent fliers, with more frequent fliers expecting more from airlines. The results also suggest that Gen Z is largely satisfied with Croatian Airline's offer with specific areas of improvement possible.

Key words: full - service carrier, low - cost carrier, hybrid airline, Generation Z, customer satisfaction, service quality

Passenger Airline Industry: Overview

The airline industry has always been dynamic. In the last two decades, the driving factors of the development in the industry were technological progresses and market liberalisations (Wittmer & Bieger, 2011). However, other factors, such as organizational structure, finance, competition and consumer demand continue to affect the air transportation system as well (Tam & Hansman, 2003).

Tam and Hansman (2003) developed a conceptual model of the air transportation system and economy in order to better describe the relationship. As the economy fluctuates, so does the travel, hence the airlines are influenced by market supply and demand. Supply is controlled by the airlines through prices, networks and schedules, all of which directly influence demand. Moreover, the close connection of supply and market prices and profits dictates the new entrants to the market. During economic peaks, new airlines are encouraged to enter the market.

Since the year 2010 the airline industry has faced a boom in terms of profitability, cost controls and demand (O'Mara, 2019). Despite some airlines still encountering financial difficulties, profits have managed to surpass the average cost of capital. During this period, airlines managed to increase the number of city - pair routes, and decrease transportation cost (See Table 1). These circumstances allowed airlines to lower fares and granted passengers the opportunity to travel more. At the beginning of the decade, an average passenger flew once every 44 months, and by the year 2018 the time decreased to just 21 months (IATA, 2019).

International Air Transport Association (IATA), representing around 290 of the world's airlines that provide about 82% of global air traffic, suggested that the number of airline passengers in 2018 exceeded 4 billion. Moreover, expenditures of air travellers in 2018 were estimated to be around \$850 billion, showing an increase of 10% from the previous year (IATA, 2019).

Business Models in Passenger Airline Industry

2.1. Business Model

There is no widely accepted definition of the business model despite it being a commonly used term in the business world (Shafer, Smith & Linder, 2005). However, it is clear that the aim of the business model is to provide a concise description of the company's value generation system (Daft & Albers, 2015). Shafer et al. (2005) recognize 4 major categories of business model activities: strategic choices, the value network, creating value and capturing value. The last two components present the heart of the organization's structure. They are the main point of differentiation from the competition, both from the supply and demand side.

The passenger airline industry recognizes three basic business models: full - service carrier (FSC), low - cost carrier (LCC) and charter airline. Charter Airlines are often called "leisure" or "holiday" airlines, because in the past they were sold through the tour operators as a part of the holiday package. Nowadays, a number of charter flights operate on regular flights, however mostly on a seasonal basis (Vidović, Štimac & Vince, 2013). Some authors suggest the existence of a fourth business model, the so-called regional carriers (Daft & Albers, 2015).

Air traffic deregulations granted further development of the FSC (Gillen & Morrison, 2003), however market liberalisation encouraged the evolution of LCC (Graham & Shaw, 2008).

Up until recently, the distinction between the strategies was clear; however, ever increasing competition in the airline industry contributed to the emergence of a new strategy - “hybrid” airlines (Stoenescu & Gheorghe, 2017).

Since the focus of this paper will mostly be restricted to FSCs, LCCs and hybrid airlines, it will not go into details about the charter and regional carriers.

2.2. Full - Service Carriers (FSC)

FSCs are commonly called hub - and - spoke airlines, seeing that their business model aims at operating a hub and spoke system, meaning it connects a major city with a number of smaller ones. The main reason for the hub and spoke system is the positive correlation between the number of destinations and the aircraft load factor, which is followed by the inverse correlation between the aircraft load factor and the unit costs per passenger (Vidović et al., 2013). The network is broad, and covers from long to short hauls (Gillen & Morrison, 2003), with a possibility of connecting flights (Rozenberg, Szabo & Šebešćáková, 2014). It is sometimes also backed up with the non - hub flights (Vidović et al., 2013). In order to support such networks, FSCs prefer network alliances (Gillen & Morrison, 2003) as well as a mixed fleet ranging from smaller aircrafts to wide - body ones (Vidović et al., 2013). The pricing strategy of FSCs is founded on the tariff system, where various tariffs symbolize distinctive classes, mostly economy and business (Rozenber et al., 2014). The tariff system is a complex yield management strategy,

with a broad price range (Vidović et al., 2013). The tariff system is established in accordance with bundled service packages (Gillen & Morrison, 2003).

The popular examples of FSCs are Lufthansa, Air France and Turkish Airlines.

Most European national carriers represent full - service carriers (Vidović et al., 2013).

2.3. Low - Cost Carriers (LCC)

The LCC business model has its origin in the 1970's in the USA, followed by its appearance in Europe in 1990's (Vidović et al., 2013). US airline Southwest Airlines is considered to be the first LCC (Dobruszkes, Givoni & Vowles, 2017). The common examples of other LCCs are Ryanair, Vueling and Eurowings.

As opposed to the hub and spoke system, LCCs operate on the point - to - point system, offering no possibility of connection flights either from their own network or by partnering with others (Rozeberg et al., 2014). This system maximizes daily block - hours, especially with the help of the smaller airports, which are not overcrowded, hence diminish the possibility of delays, and charge lower fees. The aim is to continuously reduce costs and hence achieve cost leadership (Vidović et al., 2013). Additional cost reduction comes from the use of a homogeneous fleet with high seat density (Rozenberg et al., 2014). The homogeneous fleet lowers fuel and maintenance costs, whereby high seat density decreases unit costs per passenger (Vidović et al., 2013). The pricing strategy of LCCs is founded on the dynamic pricing, meaning the prices vary depending on the time of the purchase and occupancy of the aircraft. Furthermore, as the point to point system suggests, the foundation is one - way fare with only one class and no on board service

included in the ticket price (Rozenberg et al., 2014). The service is completely unbundled (Gillen & Morrison, 2003), hence selling products and services on board, as well as on the website, such as seat reservation, yields an additional revenue (Rozenberg et al., 2014).

Table 2 concisely illustrates the differences between FSCs and LCCs.

2.4. Hybrid Airlines

The first LCC appeared before deregulation in 1978. However, the deregulation implemented by Congress allowed more LCCs to enter the American domestic market. Some of them did not survive more than a few years given the fact that low fares were not an adequate differentiator on the market (Gillen & Gados, 2008). However, some did succeed and their market share grew rapidly, presenting a challenge for the FSCs. As a reaction to this challenge, FSCs decided to tweak their business models, imposing adjustments on the LCCs. Both altered their business models in a sense they included the characteristics of others' (Klophaus, Conrady & Fichert, 2012). Some authors recognize this approach as airline business model convergence (Daft & Albers, 2015) or hybrid model (Vidović et al., 2013). The research done by Stoenescu and Gheorghe (2017) reveals that more than fifty percent of respondents travel on both LCCs and FSCs, suggesting that the line between the two is becoming more blurred. Moreover, the research suggests that the complexity of passengers' needs requires airlines to adapt their business models by providing competitive packages, supplementary services and extensive networks.

Klophaus et al. (2012) developed a classification framework of such airlines together with the general business models into following:

1. *Type I*: “Pure LCC” (e.g., Wizz Air, Ryanair)
2. *Type II*: “Hybrid Carriers with Dominating Low - Cost Elements” (e.g., Vueling, easyJet)
3. *Type III*: “Hybrid Carriers with Dominating FSC Characteristics” (e.g., Eurowings, Norwegian)
4. *Type IV*: “FSC” (e.g., Air Italy, Air Berlin)

Generation Z

3.1. Defining Gen Z

Kupperschmidt (as cited in Agarwal & Vaghela, 2018) defines the term “Generation” as people or cohort who were born around the same time and hence live throughout the time together. Gen Z is the successor of the Millennials (Francis & Hoefel, 2018). When it comes to this generation, there is no strict beginning and ending mark. Despite some authors suggesting the popular marks, for the purpose of this paper we will use the framework developed by McKinsey (Francis & Hoefel, 2018), taking 1995 as a starting birth year, and 2010 as ending birth year.

3.2. Characteristics & Preferences

From birth, this generation has been in contact with the digital world (Francis & Hoefel, 2018). This exposure, however, did not lead to the creation of a strictly online generation, but a generation that is comfortable with cross - referencing both online and offline experiences and information (Francis & Hoefel, 2018), and technology has actually become the experience itself

(TEDx Talks, 2015). Because of this exposure, Gen Z is keen on not being limited in any way, especially when it concerns digital engagement (Sahni, 2019). Moreover, Gen Z grew up with transformative business models, such as Uber, or on-demand services, such as Netflix, and these business models create a foundation for new expectations (“Top Gen Z”, n.d.). Finding brands is unconventional, because “If you’ve always gone to Amazon and had stuff delivered within two hours, you have no context for having to go to the grocery store” (TEDx Talks, 2015). Unsurprisingly, the customer loyalty of this generation is tougher to acquire than ever before (Sahni, 2019).

The unique trait of this generation is that it views consumption as a voice of individual identity, hence businesses are expected to transform their offers in ways that deliver more personalized service than ever. The ethical aspect should be included in both marketing strategies and service delivery (Francis & Hoefel, 2018).

Gen Z is the most agile generation, living in the spur of the moment (Sahni, 2019).

The travel company Booking.com released a commissioned research paper in 2019 conducted on the Gen Z travellers and their intentions (“Gen - Z Unpacked”, 2019). This research conducted on more than 5,400 respondents in 29 countries, including Croatia, suggests that Gen Z travelers strive to balance the life goals with well planned travel. Sixty - five percent claim that “travelling and seeing the world” is the priority when thinking of how to spend money, and seventy percent prioritize allocating money on experiences rather on any material possessions. The environmental impact that travelling has on a destination plays a crucial role in the decision making process, as implied by fifty - four percent of the respondents.

3.3. Airlines Serving Gen Z Travellers: Example of United Airlines

Some carriers already took action and addressed the concerns of Gen Z travellers. United Airlines, one of the major American airlines, did a promotional campaign last year specifically designed for Gen Z. United offered passengers between 18 and 22 years of age a discount for flights booked during the last quarter of the year, however with specific rules, such as that the discount is available only for the “basic economy” class, which leans towards the business model of LCCs. In order to adhere to the notion of “consumption as a voice of individual identity” and to address the environmental issues, United stated that the company would offset carbon emission of the the first 25,000 Gen Z travellers participated in the promotion (Sampson, 2019).

Customer Satisfaction and Service Quality

4.1. Customer Satisfaction

According to Barsky (cited in Bozorgi, 2007), there are three determinants of customer satisfaction: (1) customer perception of quality, (2) expectations, and (3) preferences. In order to achieve customer satisfaction, firms should not only terminate the roots of complaints, but should also move beyond customers’ expectations and provide attractive qualities (Bozorgi, 2007). Thus, many researches on customer satisfaction are linked to service quality assessments. The two are combined into simple equation $Q = P - E$; where Q is service quality, P is perceptions and E is expectations. In cases when perceptions (P) equal expectations (E), service quality (Q) is satisfactory.

The exceptions within the model are, without a doubt, existing. The indifference zone is to be found when customers have not developed expectations, or simply do not desire a product/service (Bozorgi, 2007).

4.2. Service Quality and SERVQUAL

Parasuraman et al. (as cited in Bozorgi, 2007) developed a “SERVQUAL” scale for measuring service quality. According to authors, service quality is “a degree of discrepancy between customers’ normative expectations for the service and their perceptions of the service performance.” The instrument is a 22 - item scale, and is based on five dimensions: (1) Tangibles, (2) Reliability, (3) Responsiveness, (4) Assurance, and (5) Empathy.

The instrument’s utilization could help firms in understanding customers’ expectations and perceptions, so firms would be able to improve product/service (Parasuraman, Zeithaml & Berry, 1988). Through measurement of customers’ expectations and perceptions, a company could assess the product/service in terms of whether the product/service meets customers’ expectations, and determine the potential reasons behind not meeting the expectations (Aydin & Yildirim, 2012).

The design of the instrument can be adjusted to fit explicit needs of a research (Parasuraman, Zeithaml & Berry, 1988).

Kano Model

5.1. Theory of Kano Model

The Kano Model was developed as a means of identifying core customers' requirements, as well as spaces for product and service improvements through the analysis of the non-linear relationship between product quality/service performance and customer satisfaction (Chaudha, Jain, Singh & Mishra, 2010). In more simple terms, the model explores customers' minds and voices, and assists firms in filtering out elements that will satisfy, or will not satisfy customers' needs, hence what are requirements expected to be included in the offer (Hussain, Mkpojiogu & Kamal 2015).

The model proposes the theory of attractive quality, which classifies the product quality features into five dimensions: (1) must - be, (2) one - dimensional, (3) attractive, (4) indifferent, and (5) reverse (Chaudha et al., 2010).

1. *Must - be requirement (M)* - a basic requirement whose absence leads to extreme dissatisfaction and apathy towards the product or service. However, the fulfillment of the requirement will not increase satisfaction level seeing that the requirement is taken for granted.
2. *One - dimensional requirement (O)* - a linear requirement, meaning that satisfaction level is proportional to level of fulfillment, i.e. when the requirement is met, the satisfaction level increases and vice versa. Customers mostly demand these requirements.
3. *Attractive requirement (A)* - a requirement having the greatest impact on satisfaction level. Customers do not precisely express a need for the requirement, meaning the

absence does not decrease satisfaction level. However, presence maximizes satisfaction level.

4. *Indifferent requirement (I)* - a no preference requirement, meaning customers are not interested in its presence or absence.
5. *Reverse requirement (R)* - an inverse requirement, meaning customers do not find a need for it, but rather expect the reverse of it.
6. *Questionable requirement (Q)* - if Q, the question was phrased inaccurately, or a customer misunderstood the question, or an illogical response was delivered.

Figure 1 exhibits the graphic representation of the model.

5.2. Customer Satisfaction Coefficient (CS)

Berger et al. (as cited in Chaudha et al., 2010) introduced customer satisfaction coefficients in order to present the quantitative values of satisfaction and dissatisfaction, which are driven by fulfillment or unfulfillment of a requirement. The coefficient of satisfaction (CS) indicates intensity of influence a feature has on customer satisfaction or dissatisfaction.

CS is calculated as following:

$$SI = \frac{O + A}{M + O + A + I}$$

$$DI = - \frac{M + O}{M + O + A + I}$$

The positive coefficient of satisfaction (SI) equation is the intensity of satisfaction, whereas the negative coefficient of satisfaction (DI) equation indicates the extent of dissatisfaction. The minus sign represents the negative effect on satisfaction level, which is a consequence of unfulfillment of the requirement or its absence from the design of a product/service (Hussain et al., 2015).

The SI stretches from 0 to 1. Zero (0) indicates no influence on satisfaction in case of meeting the requirement (SI) or on dissatisfaction in case of not meeting the requirement (DI). As the value moves towards one (1), the greater the effect of meeting the requirement on satisfaction level (SI). As the value moves towards negative one (-1), the greater the effect of not meeting the requirement on dissatisfaction level (DI) (Hussain et al., 2015).

PAPER PURPOSE

Utilizing constructs and models previously discussed, this research strives to determine the following:

1. What is the classification of Croatia Airlines' current business model?
2. What are the required features according to Generation Z customers when flying?
3. What are Generation Z customer satisfaction rates on Croatia Airlines' current business model?

On the basis of the results, we will point out potential strategic choices for Croatia Airlines (CA), which will consequently boost Generation Z satisfaction levels.

METHODOLOGY

7.1. Kano Questionnaire

In this research, a combination of the Kano model and SERVQUAL's five dimensions was utilized for the purpose of finding answers to the question "What are the required features according to Generation Z customers when flying?" Both models have been used across various industries, including the airline industry, and are considered legitimate research tools.

In order to gain respondents, a Google Form type of a questionnaire was prepared and distributed in Croatian. The answers were collected between March 24th and April 1st, 2020 from a targeted sample base (Gen Z), and respondents were encouraged to pass on the survey.

The questionnaire was developed as a compilation from Aydin and Yildirim (2012), and Jeeradist, Thawesaengskulthai and Sangsuwan (2016), with necessary twists. Each feature is accompanied by a functional (positive) and dysfunctional (negative) form of a question, as illustrated in Table 3, seeing that both forms are required in order to determine the classification. Functional forms demonstrate a respondent's feelings when an airline possesses a certain feature, whereas a dysfunctional form demonstrates a respondent's feelings when an airline does not possess the feature. For each statement the respondent could choose from one of the following answers: (1) I like it, (2) This is how it should be, (3) I am neutral, (4) I can live with this, and (5) I dislike it. The total number of features amounts to 22, and each feature was allocated to one of the five SERVQUAL dimensions: Tangibles, Reliability, Responsiveness, Assurance, and Empathy (See Table 4), however respondents were not aware of this categorization.

SERVQUAL model was adopted for it specifies customers' feelings, and is applicable across various industries and organizations.

Based on each participant's response, the features were arranged into Kano's categories, depending on the highest total for each of the categories. As explained in Hussain et al. (2015), the assessment rule is "M>O>A>I", and it determines which feature has more influence on the perceived quality (M = must - be, O = one - dimensional, A = attractive, I = indifferent).

7.2. Customer Satisfaction Questionnaire

Nearly the same template was distributed as a supplement to the Kano Questionnaire for the purpose of identifying Gen Z customer satisfaction rates on CA. However, instead of the both functional and dysfunctional forms, only the functional form of the statements was utilized. Moreover, the Likert scale had been adjusted to the following: (1) Greatly exceeded expectations, (2) Exceeded expectations, (3) Matched expectations, (4) Less than expected, and (5) Much less than expected. In order to make the results more valid, an additional number was added to the scale - (6) Not applicable.

Croatia Airlines: Business Model

The business model of CA was determined through the observation of the official web page and observation while using the services.

Following the comparison of LCCs and FSCs through Table 2, i.e. the aforementioned descriptions of each business model, the same table was developed for the purpose of determining the business model of CA (See Table 5).

The observation suggests that, according to the Klophaus et al. (2012) framework, CA business model falls in the category of “Hybrid Carriers with Dominating FSC Characteristics.”

It is essential to mention that “No frills” process design applies to domestic flights, and in terms of water being served on the flight.

Moreover, “Secondary” airports apply to the domestic airports Osijek, Rijeka, Pula, and Zadar, as stated by Naletina, Petljak & Sremac (2018).

Kano Results

The total number of respondents was 67, and all surveys were completed correctly and were usable. From the total, 13% (9) of respondents have not flown at all in the last twelve months. The respondents were later separated into frequent (have flown six or more times) and infrequent travellers (have flown less than six times) depending on the answers, which resulted in the total number of frequent travellers being 24, or 36%.

9.1. Kano Model and SERVQUAL: General

The overall results’ summary suggest that Gen Z classified the 22 features into following dimensions:

1. Must-have requirement (M): 4 (18,18%)

2. One-dimensional requirement (O): 9 (40,91%)
3. Indifferent requirement (I): 9 (40,91%)
4. Attractive requirement (A): 0 (0,0%)

Table 6 exhibits concise classification of features.

Both Tangibles and Responsiveness dimensions include all of the aforementioned requirements, with 2 out of 4 features in each dimension being classified as I requirements, 1 M requirement per dimension, and 1 O requirement per dimension.

Reliability is the only dimension not including I requirements. Moreover, 3 out of 4 features were classified as O requirements, and the remaining feature is classified as an M requirement.

Assurance is the second dimension with a great number of O requirements, with a total of 3 out of 5 features classified as such. Out of the remaining 2 features, 1 is an M requirement, whereas 1 is an I requirement.

Empathy dimension, on the other hand, enjoys highest levels of indifference, seeing that Gen Z classified 4 out of 5 features as an I requirement, and the remaining one is an O requirement.

9.2. Kano Model and SERVQUAL: Frequent vs Infrequent Travellers

When responses are divided on the basis of frequent versus infrequent travellers, the results suggest a bit of changes in some features, more specifically 41% of features display a change in classification.

The summarized classification for frequent travellers is as following:

1. M requirement: 9 (40,91%)

2. O requirement: 5 (22,72%)
3. I requirement: 8 (36,37%)
4. A requirement: 0 (0,0%)

The summarized classification for infrequent travellers is as following:

1. M requirement: 6 (27,27%)
2. O requirement: 7 (31,82%)
3. I requirement: 9 (40,91%)
4. A requirement: 0 (0,0%)

An interesting discovery is a considerable discrepancy in M features, seeing how divided results demonstrate higher expectations, especially from the frequent travellers. As opposed to general classification into more linear (O) requirements than basic (M), frequent travellers lean more towards basic requirements. Infrequent travellers confirm the previous implication of lower expectations. Still, there are no A requirements even in this analysis.

The most interesting change is apparent for Q19 (“Having passengers’ best interest at heart”). The general results suggest that the feature is an O requirement. However, if results are separated on the basis of frequent and infrequent travel, then they suggest that frequent travellers find this feature an I requirement, whereas infrequent travellers classify it as an M requirement.

Tables 7 and 8 exhibit a deeper insight in the classification depending on the frequency of travel.

9.3. SI and DI Coefficients: General

As previously explained, coefficient scores (SI and DI) for each feature imply intensity of the impact that fulfillment or unfulfillment of requirement has on customers satisfaction.

Q17 (“Passengers feel safe in transactions”) is the feature with one of the highest SI values, above 0,55, meaning that it has a very strong influence on customer satisfaction when the requirement is met.

The highest values for DI coefficient are to be found in features Q5 (“Providing service at the time promised”), Q7 (“Having quick and efficient procedures for delayed or missing baggage”), and Q17 (“Passengers feel safe in transactions”), all above - 0,75. These values indicate features which have the strongest influence on customer dissatisfaction when the requirement is not met.

Interestingly, Q12 (“Having capability to respond to emergency situations”) is a feature that has the highest values for both coefficients. Further consideration (the feature being classified as an O requirement) leads to an implication of its significance for the Gen Z.

Q21 (“Giving individual attention”) has the lowest SI value, whereas Q2 (“Providing in - flight entertainment”) has the lowest DI value, hinting little impact on customer satisfaction or dissatisfaction. Seeing that Q21 has second lowest DI value, the results suggest this requirement is not of high value for the Gen Z.

Table 9 exhibits SI and DI coefficients for all the features together with their classifications.

Croatia Airlines: Gen Z Satisfaction Results

In addition to the 13% of non-flyers, 11% have not flown with CA in the last year, hence only 76% of total respondents (N = 51) can be taken into valid consideration when analyzing the customer satisfaction survey. Moreover, 11 respondents are to be classified as frequent CA travellers in the last year. However, given the response rate this research did not give special attention to the distinction between frequent and infrequent travellers while analysing the satisfaction results.

10.1. Plurality Analysis

The plurality analysis is explicitly based on the number of respondents. Looking at the expectations Likert scale, the answers were divided as following:

1. Plurality of positive responses: # of (1) Greatly exceeded expectations, plus # of (2) Exceeded expectations.
2. Plurality of negative responses: # of (4) Less than expected, plus # of (5) Much less than expected.
3. Plurality of neutral responses: # of (3) Matched expectations

Responses rated as (6) Not applicable (N/A) for specific features were excluded from the plurality analysis.

The overall results' summary finds that 17 features out of 22, or 77%, have a higher number of positive plurality responses than negative among the 51 respondents. Furthermore, a total of 6 features' positive plurality exceeds both neutral and negative responses.

On the other hand, 15 features, or 68%, have the plurality of neutral responses as the most numerous, i.e. more numerous than either positive or negative plurality, and 1 feature had a tie between neutral and negative plurality.

Table 10 exhibits a more clear presentation of plurality analysis.

10.2. Numerical Analysis

The plurality analysis was converted into the numerical analysis in order to more clearly evoke the results. To do so, the Likert scale was converted into the numeric values, with 5 being the highest value assigned to the response (1) Greatly exceeded expectations, 4 being assigned to the response (2) Exceeded expectations, and so on. Responses rated as (6) Not applicable for specific features were excluded from the numerical analysis as well.

According to this numeric format, the features can be classified as following:

1. $x < 3$ - not meeting expectations
2. $x = 3$ - meeting expectations
3. $x > 3$ - exceeding expectation

CA is either meeting or exceeding expectations in all four M requirements. Out of 9 O requirements, 7 are meeting or exceeding expectations. The analysis of I requirements suggests that 6 out of 9 features match or exceed expectations.

We can also examine SERVQUAL dimensions. Interestingly CA does not meet expectations in 3 out of 4 Tangibles. In Responsiveness and Empathy dimensions CA matches or exceeds expectations for all features, yet Empathy dimension consists of 4 I requirements out of 5 in total. Both Reliability and Assurance dimensions contain one feature which does not meet expectations.

Table 11 exhibits a more complete presentation of numerical analysis.

Discussion

The purpose of this research was to point out Gen Z customers' requirements when flying, unveil Gen Z's satisfaction rates for the Croatian flag carrier Croatia Airlines, and consequently develop a potential strategy. The following potential strategy will be focused on CA, however any carrier could acquire the same.

As explained before, the Kano Model analyzes certain requirements and identifies the ones that are expected to be included in the offer, the ones that enhance customer satisfaction, and the ones that have no relevance. That being said, the M classification of given features (4 out of 22) suggests that generally Gen Z respondents have low expectations when looking at the standard offer and service. At the same time we can see the existence of linear requirements (9 out of 22), whose fulfillment is proportional to satisfaction level. The indifference towards a great number of features is suggested by the I classification (9 out of 22). The absence of A requirements

might suggest two various conclusions: (1) Gen Z want everything, or (2) Gen Z still does not understand its own wants.

Despite the classification of features, the overall CA satisfaction results suggest that Gen Z customers seem satisfied with the current business model (“Hybrid Carriers with Dominating FSC Characteristics”). According to Gen Z, CA exceeds expectations in all 4 M requirements. Nonetheless, additional attention should be given towards enhancing specific O requirements, seeing that CA does not meet expectations in 2 out of 9 O requirements, which will be mentioned below.

If we look at the SERVQUAL dimensions, we can say that CA should direct its attention towards Tangibles, seeing how 3 out of 4 elements do not meet customers’ expectations. Despite the Kano classification, the discrepancy between expectations and fulfillments is there, hence the Tangibles dimension requires greater attention. The not satisfactory Tangibles features range from modernized equipment to in - flight services, all of which require additional investments to boost satisfaction. Interestingly, CA exceeds expectations in all Responsiveness and all Empathy features.

In order to make a deeper analysis, CA satisfaction results will be compared to SI and DI coefficients.

From the results analyses we know that CA underperforms in five elements out of 22. If we look deeper into the SI / DI values and CA satisfaction results comparison, we can detect an element

with an extremely high DI value ($DI = -0,77$), and rated below expectations (mean = 2,70; $SD^1 = 0,92$) for CA - Q7 (“Having quick and efficient procedures for delayed or missing baggage”). Additionally, Q7 is classified as an O requirement, meaning that Gen Z customers likely demand this particular feature.

A second feature requiring special attention is Q3 (“Providing F&B service on - board”). This feature is classified as an O requirement, and according to the satisfaction results (mean = 2,76; $SD = 1$), CA underperforms in this element as well. Satisfaction coefficients for this feature are midway between extremely high intensity and no intensity at all ($SI = 0,48$; $DI = -0,54$).

Three additional features do not match Gen Z expectations as suggested by the satisfaction results: Q1 (“Having modernized equipment and comfortable seating”) with mean = 2,84 ($SD = 0,7$), Q2 (“Providing in - flight entertainment”) with mean = 2,82 ($SD = 0,77$), and Q13 (“Having good reputation”) with mean = 2,84 ($SD = 0,99$). However, all three are classified as I requirements, meaning that Gen Z customers do not give special significance to these elements. Moreover, Q2 (“Providing in - flight entertainment”) is the highlight of all requirements, with 60% of respondents claiming indifference towards the feature, and is accompanied by the lowest SI and DI values, leading us to believe there is almost no interest at all for this feature.

The results for Q12 (“Having capability to respond to emergency situations”) are interesting to note. The feature is classified as an O requirement, and at the same time has highest SI and DI values out of all requirements. Moreover, it has the highest satisfaction rate (mean = 3,68; $SD = 0,88$), hence presents an excellent example of focusing on a critical element.

¹ Standard Deviation

CA should direct its attention at the elements with high coefficient values, because these are the elements that yield higher satisfaction or dissatisfaction impacts. The examples of such features are Q7 (“Having quick and efficient procedures for delayed or missing baggage”), and Q3 (“Providing F&B service on - board”), hence CA should work on enhancing procedures or improving the offer in order to boost satisfaction rates and reduce potential DI impact.

However, this analysis emerges from the joint opinions of frequent and infrequent Gen Z travellers. Despite both markets being of paramount value for CA, frequent travellers are more likely to enjoy auxiliary benefits and yield revenue. Thus, CA should dig deeper into the analysis and adjust the model more towards frequent travellers. Consequently, substantial attention should be given to Q1 (“Having modernized equipment and comfortable seating”), and Q22 (“Performing frequent cabin service rounds”) noticing that, despite the two features generally being classified as indifferent, frequent travellers consider the two as basic (M) requirements.

As visible from this research, frequent travellers have higher expectations than infrequent. The evidence for such a conclusion arises from the fact that frequent travellers rated 9 elements as M requirements versus 6 for infrequent travelers; frequent travelers standards are higher as they expect more service aspects to be standard as opposed to extra. If we compare the satisfaction results with the frequent travellers classification of element, we can see that CA matches or exceeds expectations in 8 out of 9 elements. As suggested by frequent travellers, Q1 (“Modernized equipment and comfortable seating”) is an M requirement, however numerical analysis yielded a satisfaction value below 3 (mean = 2,84; SD = 0,7). Moreover, SI and DI values are midway (SI = 0,32; DI = - 0,5). A shift of focus should be made towards enhancing

the performance in this element. The Q22 (“Performing frequent cabin service rounds”) on the other hand exceeds the satisfaction, as suggested by mean = 3,21 (SD = 1,01), and has very similar SI and DI values as previously mentioned Q1, meaning CA should continue to provide the service as before.

If CA directs its attention at the crucial elements, and enhances the performance, it can launch a campaign emphasizing these elements, and target Gen Z customers. As stated in the previous sections, this generation lives in the spur of the moment, therefore Gen Z customers do not take time and plan their trips as the previous generation might be doing. Moreover, 65% claim they would rather spend money on travelling and seeing the world than on material goods. Airlines should be aware of this fact, hence do their best to accommodate needs and wants of this generation, especially because the loyalty of Gen Z is extremely hard to obtain. The exposure to digitalization enables the generation to choose from a variety of options, meaning that competitive advantage has never been more important. Seeing that it is the upcoming consumer generation, airlines should endure changes and assimilate according to Generation Z preferences.

Limitations

The current COVID - 19 pandemic affected the research in terms of number of respondents. The original plan of this research was to have a sample size of around 200 respondents through a combination of paper questionnaires and Google Forms questionnaires.

Additionally, the design of the questionnaire (chosen features) was taken from the older studies, hence there is a possibility that the utilized questionnaire might not entirely capture contemporary flying experience. The airline industry is a subject to a vast number of possible influences, from constant shifts in travel trends to economic situations.

Furthermore, Croatia Airlines satisfaction survey was analyzed on the basis of all respondents, meaning without the distinction between frequent and infrequent travellers. The reasoning behind was the lower number of respondents, with only 11 out of 51 frequent CA travellers. Therefore, separate analysis might suggest different opinions of frequent or infrequent travellers on certain features.

Future Research

Following previous sections, the first recommendation for the future study is to do a preliminary research on the best possible instrument in order to mitigate the aforementioned limitation. Because of the time limit, the author chose what had been believed to be the preferred option in terms of providing the most valuable insight.

The second recommendation is to repeat the research after the COVID - 19 pandemic. The reason behind this recommendation is that the author believes there is a possibility some customers' requirements will shift, hence there might be a need for a revised research.

The third recommendation is to make a more clear distinction between frequent and infrequent travellers, especially seeing that this research suggests valuable discrepancies between the two. The other possibility is to make a separate research on the two. This observation would be of great value for airlines in case they separate these two into different target markets.

References

- Agarwal, H., and Vaghela, P.S. (2018). Working Values of Gen Z: Bridging the Gap to the Next Generation. *National Conference on Innovative Business Management Practices in 21st Century*.
- Aydin, K. and Yildirim, S. (2012). The measurement of service quality with SERVQUAL for different domestic airline firms. *Serbian Journal of Management*, 7 (2), 219-230.
- Bozorgi, M.M. (2007). Measuring Service Quality in the Airline Using SERVQUAL Model - (Case of IAA). *Master Thesis* LTU, Sweden.
- Chaudha, A., Jain, R., Singh, A.R. and Mishra, P.K. (2010). Integration of Kano's Model into quality function deployment (QFD). *The International Journal of Advanced Manufacturing Technology*, 53, 689-698 (2011).
- Daft, J., and Albers, S. (2015). An empirical analysis of airline business model convergence. *Journal of Air Transport Management*, 46, 3-11.
- Dobruszkes, F., Givoni, M. and Vowles, T. (2017). Hello major airports, goodbye regional airports? Recent changes in European and US low - cost airline airport choice. *Journal of Air Transport Management*, 59, 50-62.
- Francis, T., and Hoefel, F. (November, 2018). Gen Z characteristics and its implications for the companies. In McKinsey&Company Official Webpage. Retrieved on February 24 2020 from <https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/true-gen-generation-z-and-its-implications-for-companies>.

- Gen - Z Unpacked: Booking.com delves into the intentions of Gen Z travelers as they get ready to experience the world, their way (2019). Retrieved on March 1 2020 from <https://destinationgenz.com>.
- Gillen, D., and Gados, A. (2008). Airlines within airlines: Assessing the vulnerabilities of mixing business models. *Research in Transportation Economics*, 24, 25-35.
- Gillen, D. and Morrison, W. (2003). Bundling, integration and the delivered price of air travel: are low cost carriers full service competitors? *Journal of Air Transport Management*, 9, 15-23.
- Graham, B. and Shaw, J. (2008) . Low-cost airlines in Europe: Reconciling liberalization and sustainability. *Geoforum*, 39, 1439-1451.
- Hussain, A., Mkpojiogu, E.O.C. and Kamal, F.M. (April, 2015). Eliciting User Satisfying Requirements for an e-Health Awareness System using Kano Model. *41st WSEAS International Conference on Applied Computer and Applied Computer Science*.
- International Air Transport Association (2019). International Air Transport Association Annual Review 2019. Seoul, June 2019.
- Jeeradist, T., Thawesaengkulthai N. and Sangsuwan, T. (2016). Using TRIZ to enhance passengers' perceptions of an airline's image through service quality and safety. *Journal of Air Transport Management*, 53, 131-139.
- Klophaus, R., Conrady, R. and Fichert, F. (2012). Low cost carriers going hybrid: Evidence from Europe. *Journal of Air Transport Management*, 23, 54-58.
- Naletina, D., Petljak, K., and Sremac, M. (2018). Characteristics and the overview of air traffic in the Republic of Croatia. *Scientific Journal of Maritime Research*, 32, 297 - 311.

- O'Mara, J. (2019). The State of Aviation Industry. Aviation Industry Leaders Report 2019. In KPMG Official Webpage. Retrieved on February 2 2020 from <https://home.kpmg/ie/en/home/insights/2019/01/aviation-industry-leaders-report-2019-state-of-aviation-industry.html>.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988). SERVQUAL: A multiple - item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, Vol. 64, N. 1, 12-40.
- Rozenberg, R., Szabo, S., and Šebešćáková, I. (October, 2014). Comparison of FSC and LCC and their market share in aviation. *International Review of Aerospace Engineering*, Vol. 7, N. 5, 149-154.
- Sahni, S. (September 28, 2019). Millennials and Generation Z are shaping the in-flight experience of the future. In frontM. Retrieved on March 1 2020 from <https://frontm.com/blog/millennials-and-generation-z-are-shaping-the-in-flight-experience-of-the-future/>.
- Sampson, H. (September 10, 2019). United wants Gen Z customers. Gen Z wants discounts and carbon offsets. In The Washington Post. Retrieved on March 1 2020 from: <https://www.washingtonpost.com/travel/2019/09/10/united-wants-gen-z-customers-gen-z-wants-discounts-carbon-offsets/>.
- Shafer, S.M., Smith, H.J., and Linder, J. C. (2005). The power of business models. *Business Horizons*, 48, 199-207. doi: 10.1016/j.bushor.2004.10.014
- Stoenescu, C., and Gheorghe, C.M. (2017). “Hybrid” airlines - Generating Value between Low-cost and Traditional. *Proceedings of the 11th International Conference on Business Excellence*. doi:10.1515/picbe-2017-0062

- Tam, R., and Hansman, R.J. (2003). An Analysis of the Dynamics of the US Commercial Air Transportation System. *Master Thesis* MIT, Cambridge, MA.
- TEDx Talks (November 18, 2015). What do we know about the generation after millennials? Retrieved on April 28 2020 from <https://www.youtube.com/watch?v=4f16o9Q0XGE>.
- Top Gen Z Questions Answered! (n.d.). Retrieved on April 28, 2020 from <https://jasondorsey.com/about-generations/gen-z/>.
- Vidović, A., Štimac, I., and Vince, D. (2013). Development of business models of low-cost airlines. *International Journal for Traffic and Transport Engineering*, 3, 69-81.
- Wittmer, A. and Bieger, T. (2011). Fundamentals & structure of aviation systems. In A. Wittmer, T. Bieger, and R. Müller (Eds.), *Aviation systems: Management of the integrated aviation value chain* (5-38). Berlin: Springer-Verlag Berlin Heidelberg.

Appendices

Table 1. *Unique City Pairs and Real Transportation Costs*

Source: IATA, 2019.

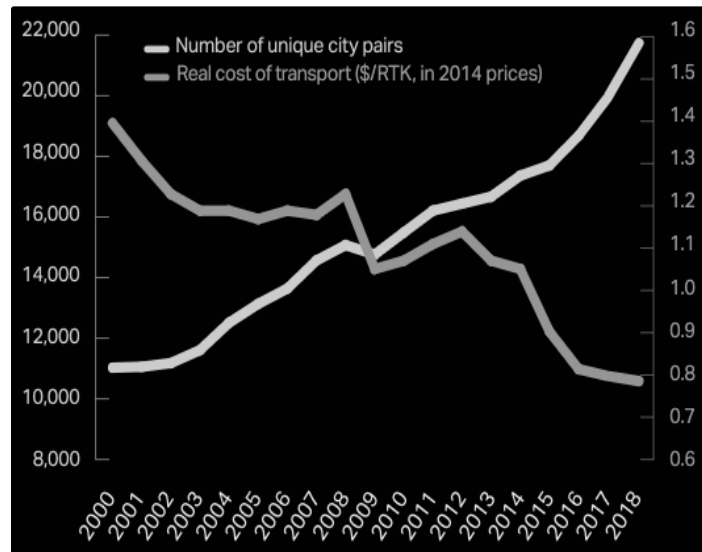


Table 2. *Differences between FSCs and LCCs*

Source: Compilation of Gillen and Morrison (2003), Rozenberg et al. (2014) and Stoenescu and Gheorghe (2017).

Characteristics	FSC	LCC
<i>Flights</i>	Hub & Spoke	Point to Point
<i>Network</i>	Long/Medium/Short Haul	Mostly Short Haul
<i>Fleet</i>	Mixed	Uniform
<i>Airports</i>	Major	Secondary
<i>Capacity Utilization</i>	Moderate	High
<i>Process Design</i>	Full Service Business & Economy	No Frills Economy
<i>Tariff</i>	Complex Reservation System Broad Price Range	Simple Reservation System Dependent on Time of Booking
<i>Product</i>	Bundling	Unbundling
<i>FFP</i>	Own or Network Alliances	No

Figure 1. *Kano Model Representation*

Source: Matzler and Hiterhuber (as cited in Jeeradist et al., 2016).

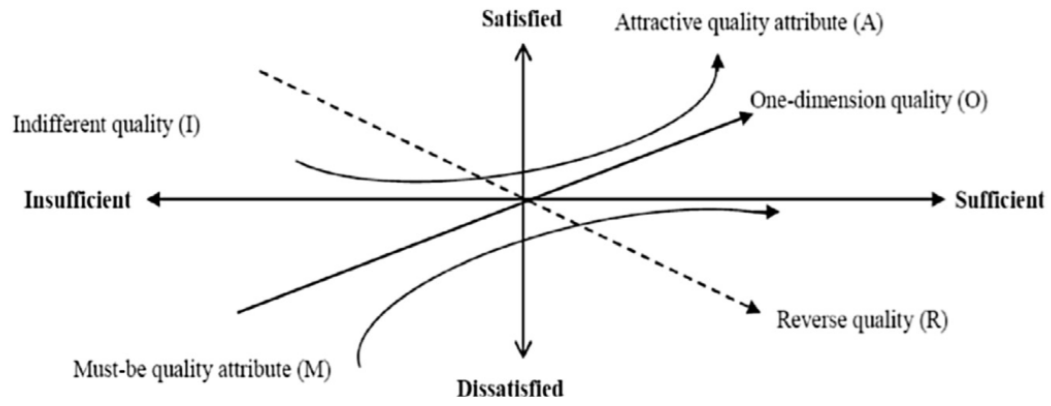


Table 3. *Functional and Dysfunctional Form of Question*

Source: author.

<p style="text-align: center;">(Q1) Functional: An airline has modernized equipment and comfortable seating.</p> <p style="text-align: center;">(Q1) Dysfunctional: An airline does not have modernized equipment and comfortable seating.</p>
--

Table 4. *Questionnaire: Functional Form*

Source: Compilation of Aydin and Yildirim (2012), and Jeeradist, Thawesaengskulthai and Sangsuwan (2016).

Tangibles

- Q1: An airline has modernized equipment and comfortable seating.
- Q2: An airline provides in – flight entertainment (magazines, newspapers, promotional materials, etc.).
- Q3: An airline provides F&B service on – board.
- Q4: An airline takes care of appearance and uniforms of employees.

Reliability

- Q5: An airline provides the service at the time promised.
- Q6: Employees perform the service right from the first time.
- Q7: An airline has quick and efficient procedures for delayed or missing baggage.
- Q8: An airline consistently provides in – flight services.

Responsiveness

- Q9: Employees understand the specific needs of passengers.
- Q10: Employees promptly take care of passengers' specific needs.
- Q11: Employees are never too busy to respond to passengers' requests.
- Q12: Employees are capable to respond to emergency situations.

Assurance

- Q13: An airline has a good reputation.
- Q14: Employees show sincere and responsive attitude to passengers complaints.
- Q15: The behavior of employees installs confidence in passengers.
- Q16: Employees have the knowledge to answer passengers' questions.
- Q17: Passengers feel safe in transactions.

Empathy

- Q18: An airline's schedules are convenient.
- Q19: Employees have passengers' best interest at heart.
- Q20: Employees demonstrate a spontaneous care and concern for passengers' needs.
- Q21: Employees give passengers individual attention.
- Q22: Employees perform frequent cabine service rounds.

Table 5. *Croatia Airlines: Business Model*

Source: author.

Characteristics	CA	Classification
<i>Flights</i>	Hub & Spoke	FSC
<i>Network</i>	Medium / Short Haul	FSC
<i>Fleet</i>	Mixed	FSC
<i>Airports</i>	Major / Secondary	FSC & LCC
<i>Capacity Utilization</i>	Moderate	FSC
<i>Process Design</i>	Full & No Frills	FSC & LCC
	Business & Economy	FSC
<i>Tariff</i>	Broad Price Range & Dependent on Time of Booking	FSC & LCC
<i>Product</i>	Bundling	FSC
<i>FFP²</i>	Network Alliances	FSC

Table 6. *Classification of Features: General*

Source: author.

M	O	I
Taking care of appearance and uniforms of employees	Providing F&B service on - board	Having modernized equipment and comfortable seating
Performing service right from the first time	Providing service at the time promised	Providing in - flight entertainment
Understanding specific needs of passengers	Having quick and efficient procedures for delayed or missing baggage	Taking prompt care of passengers' specific needs
Showing sincere and responsive attitude to passenger complaints	Providing in - flight services consistently	Being never too busy to respond to passengers' requests
	Having capability to respond to emergency situations	Having good reputation
	Behaviour of employees instills confidence in passengers	Having convenient schedules
	Having knowledge to answer passengers' questions	Demonstrating spontaneous care and concern for passengers' needs
		Giving individual attention
		Performing frequent cabin service

² Frequent – flier program

	Passengers feel safe in transactions Having passengers' best interest at heart	rounds
--	---	--------

Table 7. *Classification of Features: Frequent Travellers*

Source: author.

M	O	I
Having modernized equipment and comfortable seating	Providing F&B service on - board	Providing in - flight entertainment
Taking care of appearance and uniforms of employees	Having quick and efficient procedures for delayed or missing baggage	Taking prompt care of passengers' specific needs
Providing service at the time promised	Having capability to respond to emergency situations	Being never too busy to respond to passengers' requests
Performing service right from the first time	Having knowledge to answer passengers' questions	Having good reputation
Providing in - flight services consistently	Passengers feel safe in transactions	Having convenient schedules
Understanding specific needs of passengers		Having passengers' best interest at heart
Showing sincere and responsive attitude to passenger complaints		Demonstrating spontaneous care and concern for passengers' needs
Behaviour of employees installs confidence in passengers		Giving individual attention
Performing frequent cabin service rounds		

Table 8. *Classification of Features: Infrequent Travellers*

Source: author.

M	O	I
<p>Performing service right from the first time</p> <p>Understanding specific needs of passengers</p> <p>Being never too busy to respond to passengers' requests</p> <p>Showing sincere and responsive attitude to passenger complaints</p> <p>Having knowledge to answer passengers' questions</p> <p>Having passengers' best interest at heart</p>	<p>Providing F&B service on - board</p> <p>Providing service at the time promised</p> <p>Having quick and efficient procedures for delayed or missing baggage</p> <p>Providing in - flight services consistently</p> <p>Having capability to respond to emergency situations</p> <p>Behaviour of employees installs confidence in passengers</p> <p>Passengers feel safe in transactions</p>	<p>Having modernized equipment and comfortable seating</p> <p>Providing in - flight entertainment</p> <p>Taking care of appearance and uniforms of employees</p> <p>Taking prompt care of passengers' specific needs</p> <p>Having good reputation</p> <p>Having convenient schedules</p> <p>Demonstrating spontaneous care and concern for passengers' needs</p> <p>Giving individual attention</p> <p>Performing frequent cabin service rounds</p>

Table 9. *SI and DI Coefficients*

Source: author.

Customer requirements	M	O	A	I	R	Q	SI	DI
Tangibles								
Q1	22	11	10	23	0	1	0,32	-0,5
Q2	9	7	10	40	1	0	0,26	-0,24
Q3	13	21	9	20	2	2	0,48	-0,54
Q4	21	17	7	21	1	0	0,36	-0,58
Reliability								
Q5	23	26	7	8	1	2	0,52	-0,77
Q6	25	13	6	21	1	1	0,29	-0,59
Q7	20	29	2	13	1	2	0,48	-0,77
Q8	16	19	13	18	1	0	0,49	-0,53
Responsiveness								
Q9	22	19	8	17	0	1	0,41	-0,62
Q10	17	14	15	21	0	0	0,43	-0,46
Q11	21	16	5	23	1	1	0,32	-0,57
Q12	20	35	3	9	0	0	0,57	-0,82
Assurance								
Q13	16	18	7	24	0	2	0,39	-0,52
Q14	22	17	7	20	1	0	0,36	-0,59
Q15	22	26	2	15	2	0	0,43	-0,74
Q16	22	23	5	17	0	0	0,42	-0,67
Q17	18	34	4	11	0	0	0,57	-0,78
Empathy								
Q18	13	20	6	27	0	1	0,39	-0,5
Q19	20	22	3	20	2	0	0,39	-0,65
Q20	15	9	12	30	1	0	0,32	-0,36
Q21	12	7	9	35	4	0	0,25	-0,3
Q22	19	14	6	24	4	0	0,31	-0,52

Table 10. CA Satisfaction Survey: Plurality Analysis

Source: author.

	1	2	3	4	5	N/A	Total
Tangibles							
Q1	0	6	34	8	3	0	51
Q2	1	7	25	16	1	1	51
Q3	1	11	19	13	6	1	51
Q4	7	19	22	2	1	0	51
Reliability							
Q5	3	11	28	4	4	1	51
Q6	4	12	29	4	2	0	51
Q7	1	4	15	10	3	18	51
Q8	1	17	27	5	1	0	51
Responsiveness							
Q9	0	14	19	7	3	8	51
Q10	4	13	21	4	1	8	51
Q11	6	13	21	6	0	5	51
Q12	8	15	15	3	0	10	51
Assurance							
Q13	0	14	19	10	6	2	51
Q14	4	13	23	6	1	4	51
Q15	8	13	20	10	0	0	51
Q16	5	15	21	4	1	5	51
Q17	4	19	22	6	0	0	51
Empathy							
Q18	3	13	24	10	1	0	51
Q19	4	14	21	9	0	3	51
Q20	5	14	17	8	3	4	51
Q21	4	13	15	12	3	4	51
Q22	5	13	19	9	2	3	51

Table 11. *CA Satisfaction Survey: Numerical Analysis*

Source: author.

	5	4	3	2	1	N/A	MEAN	SD
Tangibles								
Q1	0	24	102	16	3	0	2,84	0,700
Q2	5	28	75	32	1	1	2,82	0,77
Q3	5	44	57	26	6	1	2,76	1
Q4	35	76	66	4	1	0	3,57	0,86
Reliability								
Q5	15	44	84	8	4	1	3,1	0,93
Q6	20	48	87	8	2	0	3,24	0,86
Q7	5	16	45	20	3	18	2,7	0,92
Q8	5	68	81	10	1	0	3,24	0,74
Responsiveness								
Q9	0	56	57	14	3	8	3,02	0,89
Q10	20	52	63	8	1	8	3,35	0,87
Q11	30	52	63	12	0	5	3,41	0,88
Q12	40	60	45	6	0	10	3,68	0,88
Assurance								
Q13	0	56	57	20	6	2	2,84	0,99
Q14	20	52	69	12	1	4	3,28	0,88
Q15	40	52	60	20	0	0	3,37	0,98
Q16	25	60	63	8	1	5	3,41	0,88
Q17	20	76	66	12	0	0	3,41	0,8
Empathy								
Q18	15	52	72	20	1	0	3,14	0,87
Q19	20	56	63	18	0	3	3,27	0,87
Q20	25	56	51	16	3	4	3,21	1,06
Q21	20	52	45	24	3	4	3,06	1,07
Q22	25	52	57	18	2	3	3,21	1,01