

The Factors Affecting Vietnam Airlines Service Quality and Passenger Satisfaction — A Mediation Analysis of Service Quality

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Abstract—This study was conducted to investigate and evaluate the overall service quality dimensions of the airline service. Quantitative method was carried out with a sample size of 300 respondents who travelled with Vietnam Airlines. The results indicated that better employee's services, facilities, image, timeliness, ground service, safety, baggage service, and perceived service quality were positively associated passenger satisfaction. In addition, this study showed that employee's services, image, and timeliness played the most important roles in predicting passenger satisfaction.

Index Terms—Passenger satisfaction, airline perceived service quality, path analysis, mediation analysis.

I. INTRODUCTION

Aviation is one of the most fundamental aspects that affect the global development significantly in the new century. It is considered as the “global connectivity that ultimately strengthens productivity and economic growth as a whole” [1]. Also, airline industry helps to generate employment to enhance living standards, minimizes the state of poverty, starvation and later on intensifies the economic growth of a country. The occupations related to aviation industry can be anything from “farmers taking charge of being food-on-board suppliers or products carried in the cargo to people working in the tourism industry – aviation is the leading job creator” [2]. According to the World Travel and Tourism Council in 2011, tourism contributes \$1.8 trillion in overall global economic activity and generates approximately 100 million jobs. And 51% of international tourism depends on air industry specifically. Furthermore, it has been estimated that by 2030, air service industry will have provided 82 million jobs and generated \$6.9 trillion in economic activity [3].

Southeast Asia airlines industry is primarily driven by two main types of airlines including full cost carriers (FCCs) and low cost carriers (LCCs) which are also known as full cost airlines and low cost airlines. The business model of full-cost airlines has been operated for quite some time in aviation industry. Generally, it provides large, complicated operations with numerous staff and different types of

aircraft to support both domestic and international flights [4]. Moreover, full-cost airlines normally provide various services that are not offered in low-cost model such as: free meals on board, varied in-flight entertainment, frequent flyer programs, better cabin service, etc.. Vietnam Airlines, the largest full-cost airline in Vietnam, has been changing and renovating rapidly throughout the years. It is originally established in 1956 under the name Vietnam Civil Aviation. Later on, Vietnam Airlines Corporation was operated as a state-owned enterprise in 1989. Together with its subsidiaries, the company runs a considerable domestic and international network [5]. Vietnam is a potentially rising market in tourism industry and has tremendous opportunities in expanding their business radically. With this tremendous opportunity, Vietnam Airlines has a strong desire to become the second largest full-cost airline in Southeast Asia by the year 2020 with the expansion of aircraft and flight network [6].

To remain its stability and competitiveness in such a global dynamic market, Vietnam Airlines should put a major emphasis on service quality in order to gain the highest level of passenger satisfaction. According to [7], passenger satisfaction is one of the most critical factors in airline industry and regarded as playing a crucial part in guaranteeing the business success in today's competitive world. This research aimed at 1) analyzing the impacts of service quality on passengers' satisfaction of Vietnam Airlines, 2) identifying the key items and factors directly affect perceived service quality in airlines service industry, 3) measuring the direct and indirect effects on Vietnam Airlines passenger satisfaction, and 4) recommending improving and developing suggestions for the company to better off its field based on the results and findings of the research.

II. LITERATURE REVIEW

A. Customer/Passenger Satisfaction

Nowadays, customer satisfaction is regarded as one of the most indispensable elements playing a vital part in determining the success and prosperity of a specific business in such a dynamic and fast-growing market. According to [8], customer satisfaction is defined as an emotional or affective response which surfaces and develops when meeting with any kind of service. After service is provided, a positive or negative reaction will emerge from customers getting that service. Also, [9] stated

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that “customer satisfaction is the outcome of the evaluative process between the impression during or after service is performed and the expectations before experiencing the service.” In specific situations, what people assume before using the service may contradict what we actually encounter during and after the service is performed.

In transportation context, the fact that passengers are satisfied with the services provided has a crucial effect on determining the long-term continuance of a specific carrier [10]. Dissatisfied passengers may lose their trust and not consider choosing the same airline again due to the bad service provided. Therefore, it is absolutely imperative for airlines to assure what customers expect and experience with their desired service quality [11].

B. Perceived Service Quality

Reference [12] shows perceived service quality is evaluated thoroughly by the actual performance of one service rather than the expected performance in a specific context. Also, [13] stated that the experience and perception of the actual performance directly affect a customer’s evaluation of the overall service quality. Since customers’ opinions or judgments are always varied, inconsistent and gradually formed through the experience they gain from the company that delivers service [14], [15], business needs to give a thorough study and concentrate on delivering and managing excellent service quality in order to conform to customer’s expectations as well as boosting the rate of customer satisfaction. “Higher level of service quality will lead to higher level of customer satisfaction thus service quality and customer satisfaction is intimately connected” as stated by [16]. Because of this strong interrelated connection between service quality and customer satisfaction, [17] stated that service quality can have great influence on “competitive advantage, market share and ultimately profitability” of a specific airline industry. Base on this, service quality could become an efficient tool or a powerful weapon for whatever business in order to approach and achieve the highest level of customer satisfaction.

C. SERVQUAL Model

The SERVQUAL model is “a concise multiple-item scale with good reliability and validity” that can be used to recognize and interpret customers’ perceptions as well as expectations of services which then improve the service quality and increase customer satisfaction [18]. Within the airline context, SERVQUAL has been applied by various researchers to measure the impacts of service quality [19]-[21]. Also, as proposed by [22], SERVQUAL is “an open model” and can be applied flexibly in different kinds of industries. SERVQUAL is regarded as “a basic skeleton” used for service quality dimensions which is then adapted or modified to fit the typical features and attributes making up that particular organization or industry [18]. In this research, apart from five SERVQUAL dimensions being used (tangibles, reliability, responsiveness, assurance and empathy), three more aspects are added to assist and meet with the purpose of this research as well as fitting with the distinctive characteristics of an airline industry. The ones being examined are the following dimensions: on-ground services, tangibles, timeliness (reliability), responsiveness, assurance, empathy, safety records and brand image.

D. On-Ground Services

On-ground services are among important factors affecting service quality that cannot be ignored in aviation context. Ensuring and providing good on-ground services can leave initially strong impression on passengers when they first get to know about the airlines. These services consist of all the activities such as the stage of gathering information about airports, airlines, flights; reservations and ticket purchases; airport check-in process [23]. Also, food and drink catering, baggage handling, lounge services are some of the items that are included in on-ground services as well [7], [24].

E. Tangibles

According to [18], tangible factor is “the appearance of physical facilities, equipment, personnel, and communication materials”. In aviation industry, we can associate tangibles factor with the appearance of staff and cabin crew, in-flight facilities. In-flight facilities are comprised of seat comfort, cleanliness of aircraft interiors, appearance of cabin crew, in-flight equipment (reading lights, call buttons, air-conditioners, etc.) and entertainment facilities (newspapers, TV screens, video games, etc.) [20]. According to [25], tangibles could also relate to the quality of food and beverage served on board as well as seat comfort (seat materials, pitch and size). As stated by [8], [18], [26], tangibles can play a fundamental role in forming customers’ perception of the general service quality.

F. Timeliness

Many eminent researchers such as [20], [27], [28] have used SERVQUAL model and chosen “reliability” as one of the most essential service quality dimension in the air service industry. According to [18], “reliability” dimension is the consistency of the service provided and doing it accurately and dependably the first time. Furthermore, as confirmed by [25], “reliability was a surrogate for on-time performance/timeliness in the air travel industry”. Also, according to [29], the term “reliability” should be renamed into “timeliness” as all the items used in this dimension are about the punctuality and accuracy of the service delivered. Therefore, in this research, “reliability” will be changed into “timeliness” to be applicable in this aviation context. Timeliness is one of the most important characteristics influencing service quality and later on customer satisfaction in the air travel industry [23], [30].

G. Responsiveness

Reference [18] stated that responsiveness is regarded as the firm’s readiness and willingness to provide and deliver the effective and qualified performance to assist its customers in any circumstances. In aviation context, “responsiveness” can be regarded to flight attendants or ground employees’ willingness to help passengers. Also, it can refer to all the activities including prompt handling of complaints, prompt service delivery, timely and efficient guidance to assist passengers or quick response to their requests [20], [23].

H. Assurance

As being stated, assurance is one of the most important dimensions in having a significant effect on customer satisfaction in the air service industry [20], [31]. Assurance

is the employee’s hospitality and kindness as well as their ability to build trust and reliability in customers, such as competence in performing the service, politeness and respect for the customer, the knowledge and experience that employees have in guiding or instructing passengers, a welcoming attitude instead of a distant and indifferent one [18].

I. Empathy

Empathy is the act of showing concerns and care towards customers’ personal matters; a real, sincere attitude and attention in solving their problems. This dimension consists of all the characteristics such as thorough understanding, dedication, sincerity, sensitivity, attentiveness towards customers’ wants and needs [18]. Empathy helps firms to understand their customers deeper as well as improving the overall service to assist customers in the future. Also, in any context, showing empathy can bring people closer and narrow down the gap of the relationship between them.

J. Safety Records

For many passengers, delivering a good service through three stages (pre-flight, on-flight and post-flight services) is an imperative condition to reflect good flight experience. However, safety record is the factor which should be put in first priority since it can exert a strong effect on the process of customers’ decision-making [32]. Since there have been many air risks and casualties caused due to weather conditions, flight crashes, terrorism and even pilots’ own mistakes been reported throughout the years, passengers tend to highly evaluate the safety records of whichever airlines they opt for because life security is the most important thing.

K. Brand Image

References [33], [34] stated that brands are more and more acknowledged as being indispensable assets that play an essential role in the marketing strategy. “Brand names tell the buyer something about product quality” and customers when they purchase or use the same brand of a particular product or service, they know about the quality of that product and service they are about to receive [35]. In the airlines industry, the objective of the brand image is to gain a competitive advantage with the purpose of separating its name, logo, symbol to become exceptional from a diversity of tough opponents [36]. In the service context, the name of the brand is assigned to a company’s name which is different from having specific brand names for tangible products in the goods industry [37]. For passengers travelling by air, based on the airlines’ brand name, they can choose the airline they want to use since the brand name of an airline may tell passengers a lot of things about its overall quality.

With the mentioned dependent and independent variables above, this study hypothesizes that:

H₁: Factors of on-ground services, tangibles, timeliness, responsiveness, assurance, empathy, safety records, and brand image affect perceived service quality.

H₂: Factors of on-ground services, tangibles, timeliness, responsiveness, assurance, empathy, safety records, and brand image affect passengers’ satisfaction.

H₃: Perceived service quality affects customer satisfaction.

H₄: Through perceived service quality, factors of on-ground services, tangibles, timeliness, responsiveness, assurance, empathy, safety records, brand image indirectly affect passengers’ satisfaction.

III. METHODOLOGY

A. Sample Size and Population

The population of this study was passengers who used to travel by plane with Vietnam Airlines. This research mainly employed quantitative approach with sample size of 300 passengers gathered at Tan Son Nhat Airport in Ho Chi Minh City, Vietnam.

B. Survey Instrument and Data Collection

A structured questionnaire was designed basing on the main concepts as well as important variables which were drawn from literature review in the field of consumer behavior. The questionnaire was directly delivered to passengers who sat in the waiting lounges or coffee areas at the Tan Son Nhat Airport. Most of the questions used five-point Likert scale which is equivalent to “1 = strongly disagree”, “2 = disagree”, “3 = neutral”, “4 = agree”, and “5 = strongly agree”.

C. Factor Analysis and Reliability

Two factors analyses were conducted using the principal extraction method and varimax rotation of 12 items of the dependent variables group related to perceived service quality and passenger satisfaction and 33 items of the independent variables group with factors affecting passenger satisfaction. Prior to further data analysis, the data screening was conducted to examine descriptive statistics on each item. From this early evaluation, all variables were found to be bivariate normally distributed and independent of one another with all cases. In this study, the factor analysis method was applied twice: one for the group of dependent variables with two variables of perceived service quality and passenger satisfaction and one for the group of independent variables including seven variables. The Kaiser-Meyer-Olkin measure of sampling adequacy was .894 for the group of dependent variables and .907 for the group of independent variables. (According to [38], the value needs to be 0.6 or above to be significant). Similarly, Barlett’s Test of sphericity was significant ($p < .000$), indicating sufficient correlation between the variables. Hence, KMO and Bartlett’s test proved the suitability of current data for factor analyses.

TABLE I: SUMMARY OF DEPENDENT VARIABLES WITH RELIABILITY COEFFICIENTS

Given Names	Number of Items	Alpha
1. Passenger satisfaction (PASATIS)	8	.879
2. Perceived Service Quality (SERQUA)	4	.773

Using the Kaiser-Guttman’s retention criterion of Eigenvalues greater than 1.0, a two-factor solution was conducted for the group of dependent variables consisting of 12 items which accounted for 57.3 % of the total variance explained and the Cronbach’s coefficients ranged from .773

to .879 indicating good subscale reliability as illustrated in Table I.

Also, a seven-factor solution provided the clearest extraction for the group of independent variables, consisting of 33 items. The seven factors contributed 64.9% of the total variance and the Cronbach's coefficients ranged from .617 to .931 which indicates good subscale reliability as shown in Table II.

TABLE II: SUMMARY OF INDEPENDENT VARIABLES WITH RELIABILITY COEFFICIENTS

Given Names	Number of Items	Alpha
1. Employee Service Factors (EMSEFA)	12	.931
2. Facilities (FACI)	6	.825
3. Image of Vietnam Airlines (IMAGE)	4	.868
4. Timeliness (TIME)	4	.789
5. Ground Services (GROSE)	3	.670
6. Safety of Vietnam Airlines (SAFE)	2	.708
7. Baggage Services (BAGSE)	2	.617

The two-factor solution and seven-factor solution of this study were considered the best solution because of their conceptual clarity and ease of interpretation.

IV. RESULTS

A. Sample Demographic

TABLE III: VIETNAM AIRLINES PASSENGERS PROFILE (N=300)

	Frequency	Percentage
Times of travelling		
- 1-5 times	195	65.0
- 6-10 times	67	22.4
- 10-15 times	19	6.3
- Above 15 times	19	6.3
Total	300	100.0
Gender		
- Male	128	42.7
- Female	172	57.3
Total	300	100.0
Marital Status		
- Single	182	60.7
- Married	118	39.3
Total	300	100.0
Age		
- 18-25 years old	100	33.3
- 25-35 years old	134	44.7
- 35-45 years old	45	15.0
- 45-55 years old	18	6.0
- Above 55 years old	3	1.0
Total	300	100.0
Education		
- High School	7	2.3
- Vocation College	11	3.7
- College	33	11.0
- Graduate	226	75.3
- Post-graduate	23	7.7
Total	300	100.0
Income		
- Below 5 million VND	57	19.0
- 5-10 million VND	117	39.0
- 10-15 million VND	68	22.7
- 15-20 million VND	34	11.3
- Above 20 million VND	24	8.0
Total	300	100.0

B. Factors Affecting Passenger Satisfaction

In order to examine the relationship between the

passenger satisfaction and all independent factors, Pearson Product-moment Correlation Coefficients (r) were employed. Table IV below indicates that there were substantially strong relationships between passenger satisfaction and two variables: image ($r=.630, p<.01$) and employee's service factors ($r=.554, p<.01$). The other five independent variables: facilities ($r=.386, p<.01$), timeliness ($r=.425, p<.01$), ground services ($r=.421, p<.01$), safety ($r=.400, p<.01$), baggage services ($r=.429, p<.01$) have moderately positive relationships with passenger satisfaction.

In addition, there was also positively significant relationship between passenger satisfaction and perceived service quality ($r=.541, p<.01$). That means the higher the perceived service quality the higher passenger satisfaction.

The total effect of one variable on passenger satisfaction could be divided into direct and indirect effects. The direct effect of an independent variable on passenger satisfaction was the unstandardized regression coefficient (β) and was considered as the path coefficient in the path model. The indirect effect of an independent variable on the dependent variable through the intervening variable was the total product of the effects of that independent variable on the intervening variables and the effect of the intervening variable on the dependent variable of passenger satisfaction [39].

C. Direct Effects on Passenger Satisfaction

The results from multiple regression analysis showed that there were four predictors having direct effects on passenger satisfaction: perceived service quality ($\beta = .479$), employee's service factors ($\beta = .145$), image ($\beta = .325$) and timeliness ($\beta = .171$).

D. Indirect Effects of Passenger Satisfaction

The results of multiple regression analysis indicated that perceived service quality was significantly affected by two out of seven independent variables: employee service factors ($\beta = .325, p <.05$), and image ($\beta = .302, p <.05$). In addition, perceived service quality had a direct effect on passenger satisfaction ($\beta = .479, p <.05$). Therefore, through the intervening variable, employee service factors and image had indirect effects on passenger satisfaction at ($\beta = .156$) and ($\beta = .145$) respectively.

E. Path Diagram of Passenger Satisfaction

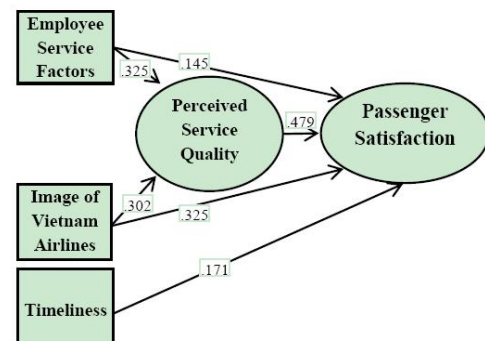


Fig. 1. Path coefficients of the structural equation.

Note: All coefficients in the model were significant at the .005 level.

F. Total Causal Effects of Passenger Satisfaction

Table V showed the direct and indirect effects of

independent variables on passenger satisfaction through the mediation of perceived service quality. As regards to the direct effects, the factor that had the strongest effect on passenger satisfaction was perceived service quality with $\beta = .479$, image of Vietnam Airlines had the second strongest effect with $\beta = .325$. Timeliness ranked third with $\beta = .171$, leaving the factor that had the least effect was employee service factors with $\beta = .145$. The total direct effects of these factors on passenger satisfaction was $\beta = 1.12$.

TABLE IV: CORRELATIONS OF PASATIS MODEL

	PASATIS	1	2	3	4	5	6	7
1. EMSEFA	.554*	1000						
2. FACI	.386*	.550*	1000					
3. IMAGE	.630*	.605*	.501*	1000				
4. TIME	.425*	.346*	.274*	.283*	1000			
5. GROSE	.421*	.478*	.366*	.405*	.351*	1000		
6. SAFE	.400*	.557*	.430*	.505*	.243*	.239*	1000	
7. BAGSE	.429*	.390*	.285*	.360*	.498*	.443*	.170*	1000
8. SERQUA	.541*	.658*	.449*	.642*	.338*	.432*	.482*	.339*
Mean	3.72	3.30	3.88	3.61	3.76	3.68	3.58	1.48
SD.	.631	.740	.584	.798	.651	.638	.870	.275

Note: *.Correlation is significant at the .005 level.

Regarding the indirect effects, employee service factors had the strongest indirect effect on passenger satisfaction through perceived service quality with $\beta = .156$ whereas image of Vietnam Airlines had the least indirect effect with $\beta = .145$. The total indirect effects on passenger satisfaction was $\beta = .301$.

Finally, regarding the overall effects, the factor that had the strongest effect on passenger satisfaction was perceived service quality with $\beta = .479$. The second strongest factor was image with $\beta = .470$. Employee service factors ranked third with $\beta = .301$. Timeliness ranked fourth with $\beta = .171$. The total effects on Passenger satisfaction was $\beta = 1.421$.

G. Significance of the Indirect Effects

Table V showed the results of the bootstrapping method recommended by [39] to test the significance of indirect effects or mediations. The output provided the bootstrapped confidence intervals (at the 95%). If there is a ZERO (0) lies within the interval range between the lower boundary (LL) and the upper boundary (UL), then we can conclude that, with 95% confidence, there is no mediation or indirect effect. On the other hand, if zero does not occur between the LL and the UL, then we can conclude that, with 95% confidence, the mediation or indirect effect is significant [40] As can be seen in the output of Table V, the indirect effects of EMSEFA and IMAGE on PASATIS through the mediation of SERQUA were estimated to lie between 0.1009 (LL) and 0.2520 (UL) and 0.0569 (LL) and 0.1836 (UL) with 95% confidence, respectively. Because zero is not in the 95% confidence interval, we can conclude that the indirect effects were indeed significantly different from zero at $p < .05$ (two tailed) and the mediation of SERQUA in this study was true.

TABLE V: DIRECT AND INDIRECT EFFECTS

Variables	Causal effects			LL	UL
	Direct	Indirect	Total		
EMSEFA	.145	.156	.301	.1009	.2520
IMAGE	.325	.145	.470	.0569	.1836
TIME	.171	--	.171		
SERQUA	.479	--	.479		
Total	1.12	.301	1.421		

V. DISCUSSIONS AND IMPLICATIONS

A. Discussions

The results of this study indicated that image of Vietnam Airlines was significant and was the most important factor that affected passenger satisfaction. According to [41], [42], airline's image is related to the reputation and have very important ranking among service quality dimensions to reach customer satisfaction. In Vietnam Airline case, since it is a full cost airline, passengers would have high expectations of the airline. Also, one of the best communication styles for Vietnamese people is the word-of-mouth. This method helps information spread quickly. Passengers travelling by plane would be aware and evaluate the quality of an airline through words and opinions from their friends, families and acquaintances.

This study also found out employee service factor had a significant effect on passenger satisfaction. This can be explained that the majority of Vietnam Airlines passengers are from average to high middle income groups and they think that Vietnam Airlines tickets are quite expensive in comparison to other airlines such as Jet Star and Vietjet Air. Because of that reason, passengers expected Vietnam Airline to provide the best performance or services from staff (both on-ground and on board) whom passengers spend most time interacting before, during and after flights to correspond with the high price they have to pay. Therefore, passengers had high expectations for the services from employees they received.

In addition, timeliness was proven to be a significant factor that affects passenger satisfaction. This result was consistent with the findings of [23], [30]. According to [27], customers expect the service to perform exactly and rightly what they are originally supposed to do. For the airline industry, to take passengers to the final destination is one of the main tasks. So, passengers expect the flights they experienced need to be timely, without any delays or cancels. Therefore, timeliness is also very important to determine the level of passenger satisfaction.

B. Implications

1) Perceived service quality

In conclusion, perceived service quality was the most important factor that had direct effect on passenger satisfaction. That means Vietnam Airlines should pay more attention to the overall service quality, e.g., with items 'high-quality meals on board' and 'many options of meals to choose from', Vietnam Airlines should improve the quality of meals served and offer more choices of meals regardless of short or long haul flights. The company can do that by hiring their own chefs to take care of the meals before getting portions on board or renew the menus regularly even with snacks or drinks. Usually, Vietnam Airlines only served hot and full meals in the long haul flights. Short haul flights do not provide passengers full choices or big portion of meals, some flights even do not offer meals. In addition, in term of 'high-quality additional services and equipment', Vietnam Airlines should pay attention to the extra equipment, e.g., the company should offer high-quality luggage racks, comfortable and spacy waiting lounges or modern equipment used on board like

new TV screens or offering interactive, easy-to-push buttons.

2) Image of Vietnam Airlines

Image of Vietnam Airlines ranked the second position among important factors influencing passenger satisfaction. The image is what customers think of when they still do not encounter or use the services yet. For Vietnam Airlines, the image directly affected passenger satisfaction. In order to increase the image, Vietnam Airlines should use more public media to popularize its image both domestically and internationally.

3) Employee service factors

Employee service factors in airlines industry is divided into two sectors: ground employees and cabin crews. Employee service is rather much an important factor since staff interacts directly or indirectly with passengers, or also represents the image of an airline. Vietnam Airlines is a full-cost airline so the price is indeed more expensive than most low-cost airlines; therefore, for passengers, a high price service needs to be excelled at various things. This makes it become a factor that significantly affects passengers' satisfaction. Improving this factor could help improve their passenger satisfaction directly. In addition, employee service factors had the strongest impacts on perceived service quality as well as directly and indirectly on passenger satisfaction. To improve it, Vietnam Airlines could open training classes to help their employees both on ground and on board to be more attentive and friendlier since there has been many complaints for improving on ground staff and flight attendants. Also, Vietnam Airlines staff should pay more attention to passengers' specific needs to create good impressions of passengers for their next flights.

4) Timeliness

Another influencing factor on passenger satisfaction was timeliness, the "on-time factor" of a service. To increase the level of timeliness, flight controllers should work closely and tightly to avoid any direction miscalculating and minimize the delaying time as much as possible. Also, Vietnam Airlines should try to avoid cases of cancelled flights since this will affect passengers badly. In this case, try to turn it into a delayed flight more than a cancelled flight.

VI. CONCLUSION

All the objectives of this study have been successfully attained. Firstly to analyze the impacts of service quality on passengers' satisfaction of Vietnam Airlines, secondly to identify the important items and factors directly affect perceived service quality in airlines service industry, thirdly to measure the direct and indirect effects on Vietnam Airlines passenger satisfaction, and finally to recommend improving and developing suggestions for the company to better off its field based on the results and findings of the research.

The results from this research showed that not all variables have direct or indirect effects on passenger satisfaction for various objective and subjective reasons.

VII. FUTURE RESEARCH

After completing the study, it has been figured out that some adjustments could be done to improve the quality of the research in the future.

First of all, we should target a bigger sample size and population. This research is conducted based on a sample size of 300 passengers, which certainly do not cover the whole population of passengers who travelled with Vietnam Airlines. Moreover, the majority of targeted population was passengers who were waiting for their flights so they somehow had been in a hurry or busy and not spending much effort or willing to fill in the survey. Therefore, this can affect the reliability as well as the overall evaluation of the research.

As mentioned by many passengers during the process of conducting the survey, lower flight prices or discount programs are things they would prefer to see in Vietnam Airlines to compete against other airlines. Therefore, price should be considered as another important factor together with the other eight variables to increase the reliability and accuracy of the research.

REFERENCE

- [1] J. Perovic, "The economic benefits of aviation and performance in the travel & tourism competitive index," *The Travel & Tourism Competitiveness Report 2013*, 2013, ch. 4.1.
- [2] P. Steele. (2012). Air transport provides jobs and sustainable economic growth. *ATAG press release*. [Online]. Available: <http://www.atag.org/our-news/press-releases/50.html?tmpl=Press-release>
- [3] International Air Transport Association (IATA), *IATA Annual Review 2012*, Beijing: Author, 2012.
- [4] D. M. A. Baker, "Service quality and customer satisfaction_a comparison bet legacy and low-cost airlines," *American Journal of Tourism Research*, vol. 2, pp. 67-77, 2013.
- [5] CAPA – Centre for Aviation. Vietnam Airlines Corporation. [Online]. Available: <http://centreforaviation.com/profiles/airline-groups/vietnam-airlines-corporation>
- [6] CAPA – Centre for Aviation. Vietnam Airlines aims to be 'No 2' in Southeast Asia by 2020. [Online]. Available: <http://centreforaviation.com/news/vietnam-airlines-aims-to-be-no-2-in-southeast-asia-by-2020-62857>
- [7] S. Aksoy, E. Atilgan, and S. Akinci, "Airline services marketing by domestic and foreign firms: differences from the customers' viewpoint," *Journal of Air Transport Management*, vol. 9, pp. 343-351. 2003.
- [8] T. R. Rust and R. L. Oliver, *Service Quality: Insights And Managerial Implications From The Frontier*, Thousand Oaks, CA: Sage Publications, pp. 1-19, 1994.
- [9] R. L. Oliver, "A cognitive model of the antecedents and consequences of satisfaction decisions," *Journal of Marketing Research*, vol. 49, Fall, pp. 41-50, 1980.
- [10] M. J. Rhea and D. L. Shrock, "Measuring distribution effectiveness with key informant report," *Logistics and Transportation Review*, vol. 23, no. 3, pp. 295-306, 1987.
- [11] M. Kossmann, *Delivering Excellent Service Quality in Aviation: A Practical Guide for Internal and External Service Providers*, England: Ashgate Publishing Limited, 2006.
- [12] R. L. Oliver, "A conceptual model of service quality and service satisfaction: Compatible goals, different concepts, in advances," in *Service Marketing and Management*, vol. 2, pp. 65-85, 1993.
- [13] R. N. Bolton and J. H. Drew, "A multistage model of customers' assessments service quality value," *Journal Consumers Research*, vol. 17, pp. 375-384, 1991.
- [14] Davidow and B. Uttal, "Service companies – focus or falter," *Havard Business Review*, vol. 67, no. 4, pp. 77–85, 1989.
- [15] A. Zeithaml, L. Berry, and A. Parasuraman, *Delivering Quality Service – Balancing Customer Perceptions and Expectations*, New York: The Free Press, 1990.
- [16] P. Kotler and K. L. Keller, *Marketing Management*, New Jersey: Pearson Education Inc, Upper Saddle River, 2009.
- [17] E. A. Morash and J. Ozment, "Toward management of transportation service quality," *Logistics and Transportation Review*, vol. 30, no. 2, pp. 115-140, 1994.

- [18] A. Parasuraman, V. A. Zeithaml, and L. L. Berry, "SERVQUAL: A multi item scale for measuring consumer perceptions of service quality," *Journal of Retailing*, vol. 64, no. 1, pp. 12-40, 1988.
- [19] Sultan and M. C. Simpson, "International service variants: Airline passenger expectations and perceptions of service quality," *Journal of service marketing*, vol. 14, no. 3, pp. 188-216, 2000.
- [20] R. Lindstrom, "Delivering excellent service quality in low cost aviation," M.S. Thesis of International Marketing Management, Copenhagen Business School, Copenhagen, Denmark, 2009.
- [21] M. S. Shanka, "Measuring service quality in ethiopian airlines," *Journal of Educational and Social Research*, vol. 2, no. 9, 2012.
- [22] A. Hoang and K. Mai, "Direct and indirect effects of customer satisfaction through product and service quality—A study of phu nhuan jewelry stores in Ho Chi Minh City, Vietnam," *Journal of Economics, Business and Management*, vol. 1, 2013.
- [23] F.-Y. Chen and Y.-H. Chang, "Examining airline service quality from a process perspective," *Journal of Air Transport Management*, vol. 11, pp. 79-87, 2005.
- [24] Park, R. Robertson, and C. Wu, "Modeling the impact of airline service quality and marketing variables on passengers' future behavioral intentions," *Transportation, Planning and Technology*, vol. 29, no. 5, pp. 359-381, 2006.
- [25] C. Young, L. Cunningham, and M. Lee, "Assessing service quality as an effective management tool: The case of the airline industry," *Journal of Marketing Theory and Practice*, vol. 2, no. 2, pp. 76-96, 1994.
- [26] M. K. Brady and J. R. Cronin, "Some new thoughts on conceptualizing perceived service quality: A hierarchical approach," *Journal of Marketing*, vol. 65, no. 3, pp. 34-49, 2001.
- [27] A. Parasuraman, V. A. Zeithaml, and L. L. Berry, "Refinement and reassessment of the servqual scale," *Journal of Retailing*, vol. 67, no. 4, pp. 420-450, 1991.
- [28] A. Brysland and A. Curry, "Service improvements in public services using SERVQUAL," *Managing Service Quality*, vol. 11, no. 6, pp. 389-401, 2001.
- [29] M. D. Clemes, C. Gan, T. Kao, and M. Choong, "An empirical analysis of customer satisfaction in international air travel," *Innovative Marketing*, vol. 4, no. 2, 2008.
- [30] R. G. Langevin, "Service quality: essential ingredients," *Review of Business*, vol. 9, no. 3, pp. 3-5, 1988.
- [31] D. Gilbert, Wong, and K. C. Robin, "Passenger expectations and airline services: A Hong Kong based Study," *Tourism Management*, vol. 24, no. 5, pp. 519-532, 2003.
- [32] S. A. Morrison and C. Winston, *The Evolution of the Airlines Industry*, Washington: The Brooking Institution, 1995.
- [33] Lim and A. O' Cass, "Consumer brand classifications: an assessment of culture-of-origin versus country-of-origin," *J. Prod. Brand Manag.*, vol. 10, no. 2, pp. 120-136, 2001.
- [34] M. S. Morling and L. Strannegard, "Silence of the brands," *Eur. J. Mark.*, vol. 38, no.1/2, pp. 224-238, 2004.
- [35] P. Kotler, G. Armstrong, J. Saunder, and V. Wong, *Principles of Marketing*, Hertfordshire: Prentice Hall Europe, 2005.
- [36] J.-W. Park, R. Robertson, and C.-L. Wu, "Modelling the impact of airline service quality and marketing variables on passengers' future behavioural intentions," *Transportation Planning and Technology*, vol. 29, no. 5, pp. 359-381, 2006.
- [37] L. Berry, E. F. Lefkowitz, and T. Clark, "In services, what's in a name?" *Harv. Bus. Rev.*, vol. 66, pp. 28-30, 1988.
- [38] J. Pallant, *SPSS Survival Manual: A Step By Step Guide to Data Analysis Using SPSS for Windows*, Maidenhead, Berkshire. U.K.: Open University Press, 2005.
- [39] J. K. Preacher and A. F. Hayes, "Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models," *Behavior Research Methods*, vol. 40, no. 3, pp. 879-891, 2008.
- [40] J. K. Preacher and A. F. Hayes, "SPSS and SAS procedures for estimating indirect effects in simple mediation models," *Behavior Research Methods, Instruments, & Computers*, vol. 36, no. 4, pp. 717-731, 2004.
- [41] C.-H. Wen and W.-Y. Yeh, "Positioning of international air passenger carriers using multidimensional scaling and correspondence analysis transport," *J. Winter*, pp. 7-23, 2010.
- [42] E. Yoon, H. J. Guffey, and V. Kijewsky, "The effects of information and company reputation on intentions to buy a business service," *J. Bus. Res.*, vol. 27, pp. 215-217, 1993.



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