

An Analysis of Air Travel Taxes, Fees and Charges for Passengers Traveling to and from Bangladesh in Asia

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Abstract

Taxes, fees and charges (TFCs) in air travel, particularly for international passengers, are considered as one of the major impediments to the development of the air transport industry. As these costs are passed on to passengers on top of the base fare, a long-standing policy discourse has persisted between airlines and government authorities concerning the appropriate level of TFCs for the overall betterment of the industry. From the perspective of Bangladesh's air transport industry, it has been argued, without any rigorous research, that the imposition of such costs on international travelers has been unreasonably high and inconsistent with international best practices and recommendations set forth by institutional bodies such as IATA and ICAO. This paper aims to provide a comparative analysis of the TFCs levied by the authorities in Asia, with a focus on Bangladesh, and sheds light on the policies in the context of established industry rules and recommendations in relations to this contention. Fourteen destinations from South Asia, East Asia, Southeast Asia and the Middle East, representing a sample of TFCs applied to journeys to and from Bangladesh, were analyzed to identify differences both in totality and in details. The study attempts to identify and measure the deviations using descriptive statistics and variance analysis. The results obtained are as follows: (i) taxes, fees and charges imposed by Bangladeshi authorities are significantly higher than those assessed by the other observed Asian countries; (ii) differences observed in the components of TFCs reveal that the Bangladeshi government's intention to earn higher revenue from international passenger travel is pursued to a degree inconsistent with industry practices and recommendations; (iii) no discernible relationship (positive or inverse) is observed between the distance of air travel and the TFCs levied.

Keywords

Taxes, Fees and Charges, TFC, International Air Travel, Correlation and Variance Analysis

1. Introduction

Taxes, fees and charges (commonly known as TFC), levied on top of the fare paid to the carrier, are a source of revenue for governments and other charging authorities, such as airports. Since the 1980s, the amount of TFCs collected through the airline industry has risen from less than USD 1 billion to over USD 64 billion [1]. The imposition of such taxes tends to hinder the further development of international air transport by increasing costs for travelers (through TFC on tickets) and by adding significant inconveniences as seen in the case of embarkation or disembarkation charges collected from the passenger while departure or arrival at the airport [2].

It has already made quite a few headlines in Bangladesh that such charges are quite significantly higher for travelers departing from Bangladesh to different destinations in Asia compared to those arriving in Dhaka. In other words, the Bangladesh government and airport authority have imposed TFCs on air travel at a much higher level, which has been discouraging the industry from reaching to its full potential. In response to the question why airfares are so high in Bangladesh, airline companies argued that the higher ticket prices are due to elevated government tariffs and various service charges at Bangladesh airports [3].

This research aims to analyze the taxes, fees and charges imposed on air travel passengers to and from Bangladesh, comparing the amounts charged by Bangladeshi authorities (from DAC) with those levied by authorities in other Asian countries (to DAC). The study examines the differences in the application of taxes and charges, highlighting that fees for services provided by the authorities for example at airport are preferable to the excessive use of taxes imposed by the government. Furthermore, the analysis will explore whether distance between departure and arrival point has any impact on the TFCs assigned.

ICAO in its [2] described taxes on the sale or use of international air transport may have the same effect or impact as tariffs on imports or exports. The study will provide evidence on whether the TFCs levied by the Bangladeshi authority have been applied in a discriminatory or excessive manner. The observation will include the impact of variables such as air travel distance and services offered on the total TFCs applied per passenger. As a result, aviation industry of Bangladesh will be able to avoid various types of risks: passengers will fly through less taxed areas, diminishing financial health for airlines, government may lose revenue from declining traffic volumes, reduced connectivity and competitiveness and suffering for local economies [4].

2. Literature Review

2.1. Definitions and Conceptual Framework

1. Definition of Aviation Ticket Taxes and Charges

According to International Civil Aviation Organization (ICAO), “a tax is a levy that is designed to raise national or local government revenues” [2]. Faber & Huigen [5] in their report on aviation ticket taxes defined, “Ticket taxes levy a tax on each origin-destination passenger departing from an airport in the country where the tax is applied, with the airline being responsible for collecting the tax and paying it to the government. The taxable event is therefore a departing passenger leaving on a commercial airline.” This differs from the definition of a charge: “a levy that is designed and applied specifically to recover the costs of providing facilities and services for civil aviation” [6].

2. Types of TFCs

1) Sales-based TFCs: These are commonly expressed as a percentage of the value of the airfare. The airfare is the airline revenue portion of a travel ticket, and does not include any of the additional, government and airport-imposed fees and charges. In a limited number of jurisdictions, sales-based TFCs are sometimes expressed as fixed amounts, and either, imposed on each ticket sale transaction or, imposed on each departure and/or arrival involving the consumption of a flight service on a travel ticket in such jurisdictions.

2) Transport-based TFCs: These are expressed as fixed amounts that are to be paid per passenger, either, when departing or arriving at an airport facility or for the use of a flight service by a passenger doing one of the two (2) aforesaid actions, which can also include a transfer or a transit.

3. Distinctions between Taxes, Fees, and Charges

The International Civil Aviation Organization (ICAO) Council describes the distinction between a tax and a charge as follows [6], “As considered by the Council, a charge is a levy that is designed and applied specifically to recover the costs of providing facilities and services for civil aviation, and a tax is a levy that is designed to raise national or local government revenues, which are generally not applied to civil aviation in their entirety or on a cost-specific basis.” In the same policy document, ICAO suggested Charges are levied on users for the purpose of recovering the costs of providing specific aviation facilities and services required for international civil aviation. Examples of such charges mentioned in the document include landing charges, air navigation services charges, passenger service charge. On the other hand, the term fees are used in the context of commercial activities or concessions, such as fuel concession fees. Also, from the TFC breakdown presented in the Appendix A of this study, some the recorded fee types include the passenger safety and security fee, which is a common category, along with the airport development or user development fee.

4. TFC a Barrier to Trade & Liberalization in Accordance to the Doc 8632 of ICAO-

a) TFCs are considered to have the same impact as tariffs on imports or exports.

And, these charges are considered inequitable as they are specific to particular group *i.e.* travelers.

b) TFC can have depressing and diverting effect on traffic volume so that the actual negative impact of the tax on the economy may outweigh the benefits from the revenue it raises.

c) For international flights, most government do not apply sales tax, consumption tax or VAT; this helps keep international air travel affordable and fair.

d) Taxes, sometimes levied upon international travelers at times of embarkation and disembarkation, have added disadvantage of causing inconveniences to the traveler by requiring him or her, for example, to check in earlier for his or her embarkation.

e) [6] , State should impose charges only for services and functions which are required for international civil aviation, not to generate government revenue via Tax or VAT. Value-based or consumption-based taxes should only be levied on domestic air travel since the transportation of a passenger on an international flight to a destination outside the borders of one particular country is to be considered an exported service and an extraterritorial activity [1].

5. Best Practices of TFC in Accordance to the International Air Transport Association (IATA) [1]

- 1) All TFCs should be transport-based;
- 2) TFCs should always be implemented with a future effective date;
- 3) The introduction of, or changes to, TFCs should be notified in advance;
- 4) TFC application rule should follow industry standard;
- 5) There should be no Tax on, or within, a Tax;
- 6) Exemption form TFCs should follow industry standards.

2.2. Legitimacy of Aviation Ticket Taxes

Faber & Huigen [5] in their report on aviation ticket taxes published in November 2018 developed elements of legal guidance for aviation taxes. The report analyzed five different legal cases relevant to the aviation ticket taxes: 01. Ticket tax Zaventem 02. Air passenger duty UK 03. Dutch aviation tax 04. Irish air travel tax 05. German air travel tax. In all these cases argument against the application of tax in court was based on Article 15 of the Chicago Convention: “No fees, dues or other charges shall be imposed by any contracting State in respect solely of the right of transit over or entry into or exit from its territory of any aircraft of a contracting State or persons or property thereon” [7]. Their finding from the verdict of the cases indicates that an aviation ticket tax is legally defensible, provided that it is not tied to fuel consumption, exempts transfer and transit passengers and applies uniform rates across the EU.

2.3. Considerations in Imposing Air Travel Taxes

Consideration to impose travel levy is often being labeled and driven by environmental taxes, but general consensus is that the main objective is revenue-genera-

tion (*i.e.* German Aviation Tax [8]. Air Passenger Duty by the British Government had no role in reducing carbon emission from air travel as it is found from the research of [9] that U.K. outbound tourists adjusted the budget allocation by increasing the relative share transportation expenditure, while correspondingly reducing the at-destination expenditure on items such as accommodation and food. A government can have several motivations to impose a tax on air passengers, which may include an environmental charge, providing funds for specific passenger related services, raising general government revenues, and funding specific non-transport initiatives [10]. In a comprehensive study on 18 articles published from 2007 to 2019, Jamaluddin, Palil, & Azemi, 2023 [11], identified two considerations in imposing air travel taxes: economic growth and sustainable development. In addition, five sub-themes were found, namely, revenue-raising, tourism strategies, fundraising initiatives, environmental, and pandemic.

2.4. Who Carries the Burden of Air Passenger Taxes

According to the findings of the study from Wozny [12] on “Tax incidence in heterogeneous markets: the pass-through of air passenger taxes on airfares” (2024), when an air passenger tax is imposed, airlines usually raise ticket price immediately and by about the same amount as the tax. So, passengers end up paying for most or all of the tax. When demand for the air travel is inelastic, meaning passengers are not very price-sensitive, airlines may absorb part of the tax to avoid losing too many passengers. Similarly, when the competition is intense, airlines are reluctant to absorb the tax because due to competition, their margins are already thin. Further, in the research, it has been revealed that air passenger tax reduces passenger numbers and air transport capacity significantly. It has been revealed through research that often taxes are over-shifted to consumers, means a dollar increase in taxes results in more than a dollar increase in total fare (see [13]).

2.5. Study in the Field of TFCs for Destinations to and from Bangladesh

Most of the arguments and study on the level of TFCs applied in Bangladesh have been sourced from local newspaper. One of the leading newspapers, Prothom Alo, published a detailed report in its online version on 10 April 2025 titled “Why airfare so high in Bangladesh?”. In the report, a business owner in the aviation sector noted that the total cost of flying from Dhaka is three to four times higher than flying the same routes from other countries. On the Dhaka–Singapore route, passengers pay more than Tk 10,000 for a single ticket, whereas booking the same flight from Singapore incurs much lower taxes, only about Tk 3000 [14].

Abu Saleh Rizvee, Sales Manager of Oman Air in Bangladesh, stated in a LinkedIn article that “Bangladesh imposes various airport taxes, including embarkation fees, infrastructure development charges, and security charges, which increase the total ticket cost. While India also has airport taxes, they vary by airport and are generally lower due to government subsidies and efficient airport operations.” He supported his claim with a comparison: For a one-way trip to London

Heathrow, Bangladesh charges USD 121.95 in airport taxes, followed by Pakistan at USD 75.60 and India at USD 50.85 [15].

3. Analysis and Findings

3.1. Model and Scope

This paper attempts to analyze whether there is a difference in the way Taxes, Fees and Charges (TFCs) are levied on air travel passengers by the Bangladeshi authorities compared to those imposed by other Asian counterparts. The study further explores the composition of TFCs by disaggregating them into Fees (F) and Charges (c), which are attributable to specific services rendered, in contrast to Taxes (T), which are enforced solely for the purpose of generating government revenue. The study aims to analyze the contribution of taxes in the construction of TFC and to examine whether there are significant deviations through hypothesis testing for the groups 'from DAC' and 'to DAC'. Finally, this research probes whether factors such as distance of air travel have any impact on the TFCs imposed.

3.2. Limitation and Assumption of the Study

Taxes, fees and charges for travel originating from Bangladesh are determined by the National Board of Revenue (NBR), a government authority, and the Civil Aviation Authority of Bangladesh (CAAB) [16]. The national Carrier of Bangladesh, Biman Bangladesh Airlines, shares the Taxes, Fees, and Charges (TFCs) through the Ticket Tax Box Service (TTBS) of IATA [17]. This information is then automatically populated across various ticketing platforms with the support service of intermediary service providers, such as Airline Tariff Publishing Company (ATPCO) [18], or through distribution channels like Global Distribution System (GDS) [17]. For the purpose of this study, it is assumed that all airlines utilize the auto-populated system for incorporating TFCs into their gross tariff construction, without any manual adjustment or intervention. For this reason, sample data, including a detailed breakdown of TFCs, were collected from the ticketing page of an airline, with the assumption that all other carriers in the region of observations follow the same TFC construction structure without any significant variations.

3.3. Data & Analysis

In order to record the divergence, actual TFCs applied to travel from Dhaka, Bangladesh, to 14 Asian destinations have been collected, and an equal number of observations for the same destinations have been gathered for TFCs applied by other Asian authorities for travel to Dhaka. The constituent and detailed breakdown of TFCs, data have been extracted from the pricing notice of a local airlines in Bangladesh, which is provided in **Appendix A** of this paper.

3.4. Sample Selection and Representatives

In selecting routes to be considered as sample, it was reasonable to assume that

the most popular Asian destinations from Bangladesh are those operated by the local carriers, such as Biman Bangladesh Airlines and US-Bangla Airlines. Therefore, the sampling of flight legs was directly based on the booking website of Biman Bangladesh Airlines [19] and US-Bangla Airlines [20]. Once the sample was gathered, it was observed that the routes operated by Bangladeshi carriers are geographically diversified across various Asian regions, including South Asia, East Asia, Southeast Asia, the Middle East. **Table 1** presents the Taxes and Fees & Charges along with their respective contribution to the total TFC for various Asian routes from Dhaka.

Table 1. TFCs and contribution factor for routes from Dhaka (DAC).

ROUTE (Amount in BDT)	TAX	CONTRIBUTION of TAX in TFC	FEES & CHARGES	CONTRIBUTION of FEES and CHARGES in TFC	TAXES, FEES & CHARGES (TFC)
DAC TO CCU	4777	72%	1847	28%	6624
DAC TO MAA	4777	72%	1847	28%	6624
DAC TO CAN	8942	75%	2950	25%	11,892
DAC TO SIN	6942	70%	2950	30%	9892
DAC TO KUL	6942	74%	2950	31%	9392
DAC TO BKK	6942	70%	2950	30%	9892
DAC TO MLE	6942	70%	2950	30%	9892
DAC TO RUH	6942	70%	2950	30%	9892
DAC TO JED	6942	70%	2950	30%	9892
DAC TO DXB	6942	70%	2950	30%	9892
DAC TO AUH	6942	74%	2950	31%	9392
DAC TO SHJ	6942	70%	2950	30%	9892
DAC TO DOH	6942	70%	2950	30%	9892
DAC TO MCT	6942	70%	2950	30%	9892

Note: Source: TFC details from air ticket (see **Appendix A**).

Table 2 presents the Taxes and Fees & Charges along with their respective contribution to the total TFC for various Asian routes to Dhaka.

Table 2. TFCs and contribution factor for routes to Dhaka (DAC).

ROUTE (Amount in BDT)	TAX	CONTRIBUTION of TAX in TFC	FEES & CHAR GES	CONTRIBUTION of FEES and CHARGES in TFC	TAXES, FEES & CHARGES (TFC)
CCU TO DAC	401	9%	4193	91%	4594
MAA TO DAC	401	12%	2860	88%	3261
CAN TO DAC	0	0%	1548	100%	1548

Continued

SIN TO DAC	0	0%	6199	100%	6199
KUL TO DAC	0	0%	2739	100%	2739
BKK TO DAC	0	0%	2948	100%	2948
MLE TO DAC	0	0%	7348	100%	7348
RUH TO DAC	0	0%	4672	100%	4672
JED TO DAC	0	0%	4672	100%	4672
DXB TO DAC	0	0%	4002	100%	4002
AUH TO DAC	0	0%	4169	100%	4169
SHJ TO DAC	0	0%	4336	100%	4336
DOH TO DAC	0	0%	4623	100%	4623
MCT TO DAC	3193	76%	1021	24%	4214

Note: Source: TFC details from air ticket (see **Appendix A**).

Table 3. Basic statistics.

		Direction	Statistic	Std. Error		
		Mean	9496.70	360.615		
		95% Confidence Interval for Mean	Lower Bound	8717.64		
			Upper Bound	10275.77		
		5% Trimmed Mean	9523.20			
		Median	9892.10			
TAXES, FEES & CHARGES in BDT	From DAC	Variance	1820608.67			
		Std. Deviation	1349.299			
		Minimum	6624			
		Maximum	11,892			
		Range	5268			
		Interquartile Range	500			
		Skewness	-1.209	0.597		
		Kurtosis	2.409	1.154		
				Mean	4237.45	380.434
				95% Confidence Interval for Mean	Lower Bound	3415.58
		Upper Bound	5059.33			
		5% Trimmed Mean	4214.06			
		Median	4275.00			
		Variance	2026215.99			

Continued

	Std. Deviation	1423.452	
	Minimum	1548	
	Maximum	7348	
	Range	5800	
	Interquartile Range	1490	
	Skewness	0.373	0.597
	Kurtosis	1.213	1.154

Note: Source: Author.

To compare the TFCs between the “from DAC” and “to DAC” groups, descriptive statistics (Table 3) were computed to examine key differences, including the mean, range and standard deviation. A negative skewness of -1.21 for charges from DAC indicates a high concentration of larger values, with a few very low values stretching the tail to the left. In contrast, the distribution of TFCs for destinations to DAC appears fairly symmetric. However, the middle 50% of the observations are more spread out for the groups travelling to DAC.

Table 4. Mean and standard deviation with standard error.

TAXES, FEES & CHARGES (TFC) in BDT								
Destination	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
From DAC	14	9496.70	1349.299	360.615	8717.64	10275.77	6624	11,892
To DAC	14	4237.45	1423.452	380.434	3415.58	5059.33	1548	7348
Total	28	6867.08	3003.867	567.677	5702.30	8031.86	1548	11,892

Note: Source: Author.

According to Table 4, on average, the TFC imposed by the Bangladeshi authority for departures from Dhaka (DAC) to Asian destinations is BDT 9497, while the corresponding charges applied by other countries for return flights to Dhaka (DAC) average BDT 4237. It is evident from the table that taxes and charges applied by the governments and civil aviation authorities across Asia are not uniform, as the deviation from the mean value exceeds BDT 1000 per passenger for flights to and from DAC. Maximum charges from DAC amount to BDT 11,892, comfortably surpassing the upper bound of the mean interval with standard error of 361. Conversely, the lowest TFC for destinations to DAC is less than half the lower bound of the confidence interval for the mean 4237.

Furthermore, an independent two-sample t-test was conducted to examine whether there is a significant difference between the means of two groups: from

DAC and to DAC.

Table 5. t-test and f-test for equality of means and variance.

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
TAXES, FEES & CHARGES IN BDT	Equal variances assumed	0.095	0.76	10.03	26	0	5259.25	524.19	4181.8	6336.7
	Equal variances not assumed			10.03	25.93	0	5259.25	524.19	4181.6	6336.9

Note: Source: Author.

Using the findings of **Table 5**, the F-value measures the ratio of variance between groups to variance within groups. In this case, it is very small ($F = 0.095$), indicating little difference in group variances. Additionally, since the significance (P-value) is greater than 0.05, the variances for the two groups (from DAC and to DAC) can be considered equal. Therefore, it is safe to proceed with t-test assuming equal variances.

The t-value measures how far apart the sample means are relative to the variability in the data. The difference in the means of the two groups (from DAC and to DAC) is highly significant, resulting in a large ratio when compared to the standard error difference (t-value = 10.033). This indicates that the mean difference is real and not due to random chance.

The following independent samples effect sizes in **Table 6** explain how large or meaningful the difference is between the two means. The mean difference has been standardized using the average standard deviation of from DAC and to DAC, resulting into a point 3.8, which indicates large effect and a substantial difference.

Table 6. Independent samples effect sizes.

	Standardizer	Point Estimate	95% Confidence Interval		
			Lower	Upper	
	Cohen's d	1386.871	3.792	2.514	5.044
Taxes, Fees & Charges in BDT	Hedges' correction	1428.547	3.682	2.441	4.897
	Glass's delta	1423.452	3.695	2.093	5.266

The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control group.

Note: Source: Author.

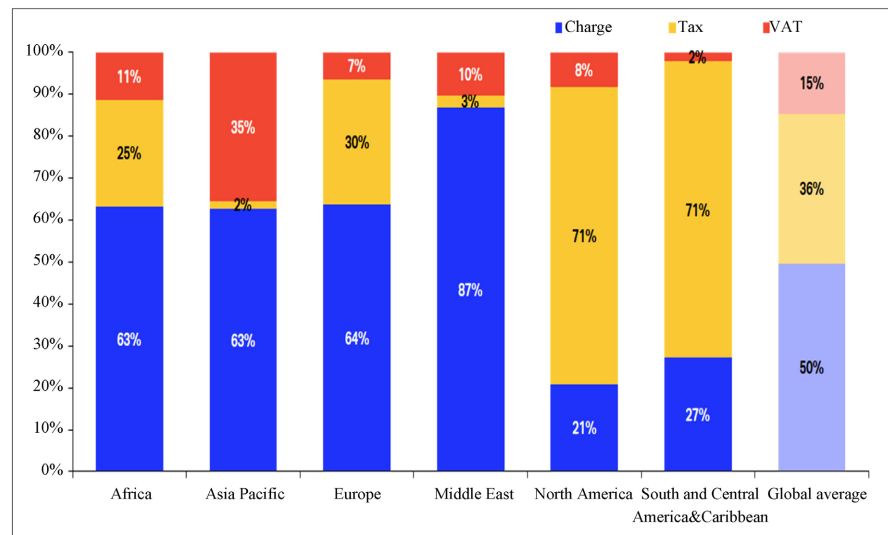
Table 7. Correlation between TFCs and Air travel distance.

		Distance (km)	Taxes, Fees & Charges in BDT
Distance (km)	Pearson Correlation	1	0.174
	Sig. (2-tailed)		0.377
	N	28	28
TAXES, FEES & CHARGES in BDT	Pearson Correlation	0.174	1
	Sig. (2-tailed)	0.377	
	N	28	28

Note: Source: Author.

In the relationship analysis (**Table 7**) between the variables TFCs and air travel distances, an R-value of 0.174 clearly indicates a weak relationship between TFCs and the distances covered between travel points to and from Dhaka. Even if a relationship exists, it is unreliable because Sig. (2-tailed) > 0.05. Therefore, it is reasonable to conclude that no linear relationship exists between the variables distance and TFCs.

Regional composition of ticket taxes and charges. Shows considerable variation, reflecting regional circumstances.



Note: Source: IATA Sustainability and Economics (iata.org).

Figure 1. Breakdown of charges and taxes by fee type (regional breakdown, % of total).

According to IATA’s Sustainability and Economics Report [21], as is shown in **Figure 1**, the industry standard composition for the Asia Pacific and Middle East regions shows that charges account for 63% and 87% of total TFCs, respectively. This study examines how far the two groups (form DAC and to DAC) deviate from the regional average standards.

Hypothesis Test 01	Hypothesis Test 02
Sample size: $n = 14$	Sample size: $n = 14$
Degree of freedom: $n - 1 = 13$	Degree of freedom: $n - 1 = 13$
Significance level: $\alpha = 0.05$	Significance level: $\alpha = 0.05$
Sample mean: $\bar{x} = 71$	Sample mean: $\bar{x} = 7$
Sample Standard deviation: $s = 7.28$	Sample Standard deviation: $s = 73$
Population mean: $\mu = 51$	Population mean: $\mu = 51$
$t_{\text{critical}} = +1.771$ (upper tail)	$t_{\text{critical}} = +1.771=1.771$ (upper tail)
$t_{\text{critical}} = -1.771$ (lower tail)	$t_{\text{critical}} = -1.771$ (lower tail)
$t = (\bar{x} - \mu_0) / (s / \sqrt{n})$	$t = (\bar{x} - \mu_0) / (s / \sqrt{n})$
$t = 10.27$	$t = -2.26$
There is sufficient statistical evidence at the 5% significance level to conclude that the contribution of tax in the construction of TFC for the group traveling "from DAC" is significantly higher than the industry average of 51%.	There is sufficient statistical evidence at the 5% significance level to conclude that the contribution of tax in the construction of TFC for the group traveling "to DAC" is significantly lower than the industry average of 51%.

3.6. Key Findings

On average, taxes, fees and charges (TFCs) for air travel from Bangladesh are more than double those for travel to Bangladesh. In other words, Bangladeshi authorities have imposed significantly higher TFCs on top of the airline's base fare. Study further revealed that the government revenue earning elements such as taxes and VAT(s) on air travel from Bangladesh represents higher percentage (in excess of 70%), whereas such government fees are nominal or absent in other Asian countries. The result of the hypothesis test indicates that the contribution of tax in the construction of TFC for air travel from Bangladesh is significantly higher than the industry average of 51% ($t = 10.27$, $df = 13$, $\alpha = 0.05$). This provides statistical evidence supporting the ongoing concern of relatively high taxes on air travel from Bangladesh. In contrast, for travel to Bangladesh from other countries, the tax contribution is significantly lower than the industry average, as confirmed by Hypothesis Test 2 ($t = -2.26$, $df = 13$, $\alpha = 0.05$), highlighting a notable asymmetry in taxation for inbound and outbound air travel. Fees and charges against services rendered constitute a higher proportion of TFCs in most of the Asian countries. Finally, no relationship was found between the TFCs imposed and the distance of air travel.

4. Discussion and Conclusions

Taxes, fees and charges (TFCs) are added to the price paid by passengers, and therefore, they have an inverse effect on the demand of air transport. On the other hand, government and authorities, such as airport administration, view this as an opportunity to generate revenue. To guide the formulation of the right policy, in-

ternational air transport regulatory bodies such as ICAO and conventions like the Chicago Convention, require that such charges should be levied based on the services provided, for example at the airport, rather than solely as a means of generating government revenue, for example via taxes or VAT. In terms of impact, previous literatures confirmed that the economic impact of TFCs mirrors the restrictive effect of tariffs, therefore, serves as a tool against trade liberalization.

Regarding the guidelines for determining a policy, IATA's recommendation to base such TFCs on transport and incurred costs appears to be disregarded in the TFC structure of Bangladesh. Surprisingly, the inclusion of VAT (E5) in Bangladesh's TFC construction by the national authority is a non-compliance of IATA guideline prohibiting taxes on, within, other taxes. A 15% VAT on the Embarkation Fee (BD), Airport Development Fee (P7) and Passenger Security Fee (P8) constitutes an indirect tax [22] on the revenue generated by the CAAB, which has not been observed in any other cases among the countries in the study.

Bangladesh, a country with significant potential to become a regional air transport hub, must carefully consider the policies governing the application of TFCs, as any substantial charges could affect traffic demand and, ultimately, its aspiration to serve as a regional hub. The country, which aims to fully utilize the capacity of the recently constructed third terminal at Dhaka, must not be completely unaware of its policies on TFCs, especially in comparison with their Asian counterparts and in line with the recommendations of ICAO and IATA.

The findings of this research highlight challenge, rather than opportunity, for Bangladesh's aviation industry, as government-imposed charges are significantly high, hindering the attraction of new airlines and passenger traffic. Moreover, the structure of TFCs, including taxes and VAT, is found to be surprisingly higher compared to that of Asian counterparts.

Recommendation

On 21 May 2019, the Regional Vice President for Asia-Pacific of IATA wrote a letter to the then Minister of Finance on the subject, "Value Added Tax on Air Transport and Related Services" [23]. The letter highlighted the 15% VAT imposed on the Embarkation Fee, Security Fee and Development Fee, applied retrospectively from FY 2009-2010. Through the letter, the IATA representative sought to persuade the authorities to revise the VAT, which remains in effect to date. The findings of this study indicate no significant difference; however, they further underscore the importance of policy support, particularly through lower taxation, to support a price-sensitive industry such as aviation sector in Bangladesh. As an immediate measure, the 15% VAT on BD, P7 and P8 should be removed. In the long run, charges and fees should be adjusted in accordance with traffic volume—this issue could serve as a basis for future studies and research.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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Appendix A

Table A1. Taxes fees and charges by the Bangladesh authority.

ROUTE (TAXES, FEES & CHARGES)	EMBARKATION FEE (BD)	EXCISE DUTY (OW)	TRAVEL TAX (UT)	AIRPORT DEVELOPMENT FEE (P7)	PASSENGER SECURITY FEE (P8)	VAT (E5)
DAC TO CCU	BDT 500	BDT 500	BDT 4000	USD 5	USD 6	15% OF (BD + P7 + P8)
DAC TO MAA	BDT 500	BDT 500	BDT 4000	USD 5	USD 6	15% OF (BD + P7 + P8)
DAC TO CAN	BDT 500	BDT 2500	BDT 6000	USD 10	USD 10	15% OF (BD + P7 + P8)
DAC TO SIN	BDT 500	BDT 2500	BDT 4000	USD 10	USD 10	15% OF (BD + P7 + P8)
DAC TO KUL	BDT 500	BDT 2500	BDT 4000	USD 10	USD 10	15% OF (BD + P7 + P8)
DAC TO BKK	BDT 500	BDT 2500	BDT 4000	USD 10	USD 10	15% OF (BD + P7 + P8)
DAC TO MLE	BDT 500	BDT 2500	BDT 4000	USD 10	USD 10	15% OF (BD + P7 + P8)
DAC TO RUH	BDT 500	BDT 2500	BDT 4000	USD 10	USD 10	15% OF (BD + P7 + P8)
DAC TO JED	BDT 500	BDT 2500	BDT 4000	USD 10	USD 10	15% OF (BD + P7 + P8)
DAC TO DXB	BDT 500	BDT 2500	BDT 4000	USD 10	USD 10	15% OF (BD + P7 + P8)
DAC TO AUH	BDT 500	BDT 2000	BDT 4000	USD 10	USD 10	15% OF (BD + P7 + P8)
DAC TO SHJ	BDT 500	BDT 2500	BDT 4000	USD 10	USD 10	15% OF (BD + P7 + P8)
DAC TO DOH	BDT 500	BDT 2500	BDT 4000	USD 10	USD 10	15% OF (BD + P7 + P8)
DAC TO MCT	BDT 500	BDT 2500	BDT 4000	USD 10	USD 10	15% OF (BD + P7 + P8)

Table A2. Taxes fees and charges by the Bangladesh authority (in Bangladeshi Taka).

ROUTE (TAXES, FEES & CHARGES)	EMBARKATION FEE (BD)	EXCISE DUTY (OW)	TRAVEL TAX (UT)	AIRPORT DEVELOPMENT FEE (P7)	PASSENGER SECURITY FEE (P8)	VAT (E5)	TOTAL
DAC TO CCU	500	500	4000	612	735	277	6624
DAC TO MAA	500	500	4000	612	735	277	6624
DAC TO CAN	500	2500	6000	1225	1225	443	11892
DAC TO SIN	500	2500	4000	1225	1225	443	9892
DAC TO KUL	500	2000	4000	1225	1225	443	9392

Continued

DAC TO BKK	500	2500	4000	1225	1225	443	9892
DAC TO MLE	500	2500	4000	1225	1225	443	9892
DAC TO RUH	500	2500	4000	1225	1225	443	9892
DAC TO JED	500	2500	4000	1225	1225	443	9892
DAC TO DXB	500	2500	4000	1225	1225	443	9892
DAC TO AUH	500	2000	4000	1225	1225	443	9392
DAC TO SHJ	500	2500	4000	1225	1225	443	9892
DAC TO DOH	500	2500	4000	1225	1225	443	9892
DAC TO MCT	500	2500	4000	1225	1225	443	9892

Table A3. Taxes fees and charges of countries in Asia for air travel to Dhaka.

ROUTE (TAXES, FEES & CHARGES)	CURRENCY	AVIATION SECURITY FEE (P2)	GOODS & SERVICE TAX (K3)	USER DEVELOPMENT FEE	-
CCU TO DAC	MULTIPLE	USD 14.16	5% ON ECONOMY FARE	INR 1781	-
CCU TO DAC	BDT	1734	401	2459	-
ROUTE (TAXES, FEES & CHARGES)	CURRENCY	AVIATION SECURITY FEE (P2)	GOODS & SERVICE TAX (K3)	USER DEVELOPMENT FEE (IN)	-
MAA TO DAC	MULTIPLE	USD 14.16	5% ON ECONOMY FARE	INR 815	-
MAA TO DAC	BDT	1734	401	1125	-
ROUTE (TAXES, FEES & CHARGES)	CURRENCY	AIRPORT FEE (CN)	-	-	-
CAN TO DAC	MULTIPLE	CNY 90	-	-	-
CAN TO DAC	BDT	1548	-	-	-
ROUTE (TAXES, FEES & CHARGES)	CURRENCY	AIRPORT DEVELOPMENT FEE (L7)	ADVANCE LEVY (OP)	PASSENGER SERVICE & SECURITY FEE (SG)	-
SIN TO DAC	MULTIPLE	SGD 10.8	SGD 8	SGD 46.4	-
SIN TO DAC	BDT	1027	761	4411	-
ROUTE (TAXES, FEES & CHARGES)	CURRENCY	PASSENGER SERVICE CHARGE (MY)	DEPARTURE LEVY (G1)	REGULATORY SERVICE CHARGE (H8)	-
KUL TO DAC	MULTIPLE	MYR 73	MYR 20	MYR 01	-
KUL TO DAC	BDT	2127	583	29	-
ROUTE (TAXES, FEES & CHARGES)	CURRENCY	ADVANCE PASSENGER PROCESSING USER CHARGE (E7)	INTERNATIONAL ARRIVAN & DEPARTURE FEE (G8)	PASSENGER SERVICE CHARGE (TS)	-

Continued

BKK TO DAC	MULTIPLE	THB 35	THB 15	THB 730	-
BKK TO DAC	BDT	132	57	2759	-
ROUTE (TAXES, FEES & CHARGES)	CURRENCY	DEPARTURE FEE	AIRPORT DEVELOPMENT FEE	-	-
MLE TO DAC	MULTIPLE	USD 30	USD 30	-	-
MLE TO DAC	BDT	3674	3674	-	-
ROUTE (TAXES, FEES & CHARGES)	CURRENCY	SECURITY CHARGE (E3)	AIRPORT BUILDING CHARGE (IO)	GACA SERVICE CHARGE (T2)	-
RUH TO DAC	MULTIPLE	SAR 08	SAR 130	SAR 05	-
RUH TO DAC	BDT	261	4248	163	-
ROUTE (TAXES, FEES & CHARGES)	CURRENCY	SECURITY CHARGE (E3)	AIRPORT BUILDING CHARGE (IO)	GACA SERVICE CHARGE (T2)	-
JED TO DAC	MULTIPLE	SAR 08	SAR 130	SAR 05	-
JED TO DAC	BDT	261	4248	163	-
ROUTE (TAXES, FEES & CHARGES)	CURRENCY	PASSENGER SERVICE CHARGE (AE)	PASSENGER FACILITY CHARGE (F6)	PASSENGER SECURITY & SAFETY FEE (TP)	INT. ADVANCE PASSENGER INFORMATION FEE (ZR)
DXB TO DAC	MULTIPLE	AED 75	AED 35	AED 5	AED 5
DXB TO DAC	BDT	2501	1167	167	167
ROUTE (TAXES, FEES & CHARGES)	CURRENCY	PASSENGER SERVICE CHARGE (AE)	PASSENGER FACILITY CHARGE (F6)	PASSENGER SECURITY & SAFETY FEE (TP)	INT. ADVANCE PASSENGER INFORMATION FEE (ZR)
AUH TO DAC	MULTIPLE	AED 75	AED 40	AED 5	AED 5
AUH TO DAC	BDT	2501	1334	167	167
ROUTE (TAXES, FEES & CHARGES)	CURRENCY	PASSENGER SERVICE CHARGE (AE)	PASSENGER FACILITY CHARGE (F6)	PASSENGER SECURITY & SAFETY FEE (TP)	INT. ADVANCE PASSENGER INFORMATION FEE (ZR)
SHJ TO DAC	MULTIPLE	AED 75	AED 45	AED 5	AED 5
SHJ TO DAC	BDT	2501	1501	167	167
ROUTE (TAXES, FEES & CHARGES)	CURRENCY	PASSENGER SERVICE CHARGE (PZ)	PASSENGER SAFETY & SECURITY FEE (R9)	PASSENGER FACILITY CHARGE (G4)	AIRPORT DEVELOPMENT FEE (QA)
DOH TO DAC	MULTIPLE	USD 2.05	QAR 10	QAR 60	QAR 60
DOH TO DAC	BDT	251	336	2018	2018
ROUTE (TAXES, FEES & CHARGES)	CURRENCY	SECURITY FEE (I2)	INFRASTRUCTURE CHARGE (S6)	AIRPORT TAX (OM)	-
MCT TO DAC	MULTIPLE	OMR 1	OMR 2.2	OMR 10	-
MCT TO DAC	BDT	319	702	3193	-

Appendix B

IATA provided acronyms [24].

1	Dhaka	DAC
2	Kolkata	CCU
3	Chennai	MAA
4	Maldives	MLE
5	Guangzhou	CAN
6	Singapore	SIN
7	Kuala Lumpur	KUL
8	Bangkok	BKK
9	Jeddah	JED
10	Riyadh	RUH
11	Abu Dhabi	AUH
12	Dubai	DXB
13	Sharjah	SHJ
14	Muscat	MCT
15	Doha	DOH

Appendix C

SL NO.	ROUTE	TAXES, FEES & CHARGES IN BDT	DINSTANCE (km)	REGION
1	DAC TO CCU	6624	251	SOUTH ASIA
2	DAC TO MAA	6624	1615	SOUTH ASIA
3	DAC TO CAN	11892	2343	EAST ASIA
4	DAC TO SIN	9892	2900	SOUTH EAST ASIA
5	DAC TO KUL	9392	2650	SOUTH EAST ASIA
6	DAC TO BKK	9892	1550	SOUTH EAST ASIA
7	DAC TO MLE	9892	2850	SOUTH ASIA
8	DAC TO RUH	9892	4405	MIDDLE EAST
9	DAC TO JED	9892	5250	MIDDLE EAST
10	DAC TO DXB	9892	3540	MIDDLE EAST
11	DAC TO AUH	9392	3650	MIDDLE EAST
12	DAC TO SHJ	9892	3520	MIDDLE EAST
13	DAC TO DOH	9892	3925	MIDDLE EAST
14	DAC TO MCT	9892	3260	MIDDLE EAST