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Tourism Price Competitiveness as a Driver of International Tourist Arrivals

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ABSTRACT: The price of a tourist product represents an inevitable determinant of a destination's tourism competitiveness. Prices are an essential measure for making decisions about whether voyages will make or where to travel. The key objective of this study is to examine the impact of price competitivenessoninternationaltourist arrivalsin Sri Lanka.The study used the annual time series data of price competitiveness indices, which were extracted from both various issues of the annual statistical report of Sri Lanka tourism development authority and World bank development indicators for1978-2017.The study objective was analyzed using the Vector Error Correction Model. The results show that the index of tourist accommodation prices and exchange rate impact positively on international tourist arrival in the long run whereas the index of tourist food prices negatively influences the universal tourist arrival in Sri Lanka. The results further reveal that, while the index of tourist accommodation price and exchange rate not accompanying tourist arrival, price competitiveness indices of food and transport have a positive impact on international tourist arrivals in the short -term.There fore, the study suggests that attention should be taken to enhance the tourism price competitiveness of tourist products along with qualitative factors affecting the attractiveness of a tourist destination.In specific, the study recommends the government of Sri Lanka should focus on both ticket taxes and airport charges and fuel price levels to contribute to as beneficial determinants to increase the positive impact of price competitiveness.

KEYWORDS: *International tourist arrival, Price competitiveness index, destination choice decisions*

I.　BACKGROUND OF THE STUDY

The tourism industry has become greater in extent and esteemed by the enormous nations and communities since it has been a substantial source of generating the economic and social benefits universally (Julia and Mccool, 2008).The tourism industry has the viable to world's economies in stimulating economic growth by being benefaction to employment generation, foreign exchange earnings, business development, massive infrastructural development, expansions to rural areas and communities, and an increasing amount of which are associated with this sector. Nonetheless, to obtain those benefits, this prevailing potential must be fostered and regulated prudently (Banda and Cheelo,2012).

Despite, the contribution of the travel and tourism industry to the global economy is substantial, the growth in international tourism tends to continue at rates comparable to other industries, tourism is in anadvanced stage leading to growingrivalry among the destinations in the word (Buhalis 2000; Morga et al 2002).Correspondingly, a larger proportionate of international visitors visit the ten major world tourist destinations such as France, Spain, USA, China, Italy, Mexico, United Kingdom, Turkey, Germany and Thailand, other rest of the destinations share the remaining percentage of tourists. Accordingly, Europe is being as the world' most visited region, accounted for 51 percent in the world, followed by Asia and the Pacific (24%), Americas (16%), Africa (5%), and Middle East (4%) (World Tourism Organization, 2018). This indicates the intensity of competition for the market share in the world tourism industry, hence it is imperative that if a countrycould be a profitable industry in the long term,it must have competed actively with rival destinations tocaptureand retainthe larger market share.

Generally, price competitiveness is a vital element in the overall tourism competitiveness of a nation or a tourist destination. It cannot be denied that prices have been an essential determinant in the choice decision about whether the country is appropriate or not to take a trip among others also popular in the world (Peter and Larry, 2009). In other words, the choice ofthetourism destination depends on prices of tourism amenity comprising

accommodation, food, tours, ticket taxes and airport charges, shopping, and so on,on which tourists incur costs within the selected country.

The measurement of tourism price competitiveness of nations or tourism destinations being part of wide-ranging work on destination competitiveness which incorporates price differentials joined with movements of the exchange rate, productivity levels of miscellaneous components of the tourism industry, and other qualitative factors impacting the attractiveness and ease of a destination. These sets of solid data differ significantly. It is viable to find applicable indicators based on the complete prices that tourists spend in various nations throughout their tourism activities, along with some highly combined and proxy measures (Peter and Larry, 2009). Among them, indicators namely hotel prices, fuel price, ticket taxes, and airport charges, purchasing power parity prices, have been being utilized to measured price competitiveness which is exposed in Travel &Tourism Competitiveness Index (TTCI) (in pillar 10).

In terms of destination,thechoice relies on the relative costs of living between the two destinations. Tourists compare the price incurredin the chosen destination with the costs of living in different competing destinations or the origin country (relative price) (Peter and Larry, 2009). Therefore,thechoice of a tourism destination can be determined by comparing prices of services at the destination with those in their origin country and substitution country as well. Thus, travelers concern a range of competing destinations before choosing any particular one. Some destinations may be complements rather than substitutes and so may gain tourists if the cost of the tour in the other destination is low (Peter and Larry, 2009).

Peter and Larry (2009), emphasize that the difference in prices between countries is considerably higher than that of cities and regions within a country.Further,when compared to small countries where choice is much more limited, the inhabitants of large countries, facilitating a wider variety of tour experiences within their borders, are probably more price-sensitive in their worldwide travel behavior (Little, 1980).Correspondingly, rival destinations nevertheless, are accompanying higher price elasticities of tourism demand (De Mello et al. 2002). Tourist arrivals are relatively quick to respond to price factors (Crouch, 1994).

The effectofdestinations that compete closely with othersinfluencingpositively on the international tourism demand, indicating that an increase in price to one destination or country will elevate the number of visitors to substitute other destinations (Lim, 2006). Thus, despite tourism destinations possess an enormous amount of attractions, attracting international tourists as well as retaining them as much as possible, depending on price elasticities of tourism demand.From this perspective, it is imperative to examine how the prices of tourism services affect the demand for international tourism in a country.

Despite prevailingrecent developmentsof the tourism industryinSri Lanka which has not obtained its potential, compared to the other nations in the region, namely Thailand, Malaysia, and Singapore. Sri Lanka preserves many miscellaneous attractions all over the island, *there is however no balanced or smooth flow of touriststo them*, which distracts the attractions and touristsas well (Central Bank Report of Sri Lanka, 2018). Therefore, to accumulate a huge amount of foreign exchange earnings using the prevalent potential of the tourism industry in Sri Lanka, it could be worthwhile by addressing barriers to its further growth.

With this line,the tourist price index estimated by the Sri Lanka Tourism Development Authority shows that the index has increased by 7,258.0 in 2016 and it was recorded as at 7,121.0 in 2015.Respectively, the price index in terms of accommodation, food, and transport have been increased considerably (CEIC, 2017). Furthermore, recent studies evidenced that promptly rising accommodation costs being one of the restrictions on attaining tourism targets in Sri Lanka. In terms of price estimating the price of hotel accommodation is unreasonable and pricing is expensive for its quality compared with its competitor. To be more precise, even though Sri Lanka has been costlier than many other rivals for four-star and five-star lodging, these are nonetheless commonly not of a standard that is appealing to high-end international tourists (Fernando et al., 2016).

Accordingly, rapidly increasing prices can be constrained on attaining tourism targets in both terms' tourism receipts and tourist arrivals in Sri Lanka. If Sri Lanka is likely to boost international tourists and retain them as much so thatmustcompete actively for it with rivals as tourists in their destination choice decision, consider the price competitiveness at the destination and compare it with other substitute destinations and their origin as well. In this context, it can be enthused byaddressing the impact of price competitiveness in the tourism industry to upsurge international tourists. *Therefore, the present study attempt to investigate the impact of price competitivenesson international tourist arrivals in Sri Lanka.*

II. LITERATUREREVIEW

Economies and businesses should encompass prices of tourist goods and services in competing tourist destinations internationally, as a consequence, those economies and businesses obtain and sustain the advantages of the tourism industry efficiently. Here, it is necessary to know countries and their tourism price competitive capacity to attract an enormous number of tourists (Oyewole, 2004). Touristic demand is recognized to be heavily influenced by the price-competitive capacity of tourist destinations. Because the interrelationship between price competitiveness and the price elasticity of demand can be determined the tourist demand (Assaf and Josiassen, 2011). Empirical evidence (Edwards, 1995; Dwyer et al., 2000; Oyewole, 2004), revealed that international tourists are conscious of price concerning goods and services available in the various tourist destinations, and they consider the cost of tourism basket comprising of tourist goods and services in the decision of destination selection.

Marcus et al. (2018) conducted the study to examine the relationship between tourism price competitiveness and international tourist arrivals in Nigeria. Descriptive and inferential statistical tools were employed to investigate the objective of the study using the data of tourism price competitiveness and international tourist arrivals. The study exposed that tourism price competitiveness had a significant relationship with international tourist arrivals in Nigeria.

To investigate the relationships between determinants of tourism destination competitiveness and tourism performance, a study conducted using the partial least square-structural equation model by Hanafiah and Zulkifly (2019). Their results exposed that the core resources, complementary condition, globalization, and tourism price significantly impact tourism performance.

A study analyses the destination competitiveness sfor tourism attraction and verifies whether more competitive countries can be used as a point of reference for developing those lagging. Results found that these European destinations are not efficiently exploiting their tourism capacity and they must apply policies to foster this economic activity and allow the transformation of competitiveness into larger numbers of visitors (MartiandPuertas, 2017).

Goral (2016) who examined the impact of price competitiveness on tourism demand and tourism receipts, found that price competitiveness impact significantly on both tourism demand and tourism receipts in eight competing destinations in the Mediterranean Sea. Meanwhile, the study also revealed that other factors namely currency rate transactions, qualitative factors that affect attractiveness with price differentiation, and efficiency level of various shareholders in the tourism industry also were the determinants on the destination choice decision.

The analysis of tourism price competitiveness emphasizes that prices are a significant aspect to determine tourism destinations (Forsyth and Dawyer, 2014). The price competitiveness in the Travel and Tourism industry is an imperative component to consider in this study, as its lower costs would increase the attractiveness of some nations for many tourists (The Travel & Tourism Competitiveness Report, 2013).

III. PRICE COMPETITIVENESS IN THE TRAVEL AND TOURISM INDUSTRY

Various price competitiveness indexes are developed to show comparative price analysis of tourist destinations relying on the importance of price competitiveness in tourism. several alternative models and indicators are used to develop these indexes (Forsyth and Dwyer, 2009). In this line, one of the price competitiveness indexes is developed to analyze the price competitiveness in the tourism industry globally, was developed by the World Economic Forum along with the World Travel and Tourism Council (Forsyth and Dawyer, 2014).

In beginning, five sub-indicators were used to create the price competitiveness index, incorporating purchasing power parity, fuel price, extent and effect of taxation, ticket price, and collected taxes and hotel price (The Travel and Tourism Competitiveness Report, 2007). However, after the 2012 extent and effect of taxation were excluded from the indicators of the price competitiveness index. At present, the measurement framework of Tourism Price Competitiveness comprises four types of indicators that can be applied to measure price competitiveness in the tourism industry. In which, *purchasing power parity* (PPP) represents the extent to which goods and services in the selected country are almost expensive than other countries in the world as it measures the difference in general price levels across countries globally. PPP is shown in the ratio of purchasing power parity conversion factor to the official exchange rate. Second, *Airfare ticket taxes and airport charges* can make flight tickets much more expensive as a consequence a comparison of Airfare ticket taxes and airport charges change the choice of a tourist destination. Index of the relative cost of access or ticket taxes and airport charges to international air transport services measures 0 to 100, where 0 indicates the highest cost and 100 denotes the lowest cost. Thirdly, the *fuel price level* is expressed as retail diesel fuel prices in US cents per liter. Fuel price levels compared with those of other countries, taxation in the country which can be passed through travelers.

Finally, the *hotel price index* is a measure of accommodation differences across all countries is showed as an index of hotel price index in which average room rates are calculated for first-class branded hotels for each calendar year in US dollars (The Travel and Tourism Competitiveness Report, 2013).

The above-mentioned indexes can be determined the cost of a tourist basket for each specific destination. Tourists who depend on calculated costs of tourism product basket and outlay of travel and tourism, which may be formed using those indexes indicating the levels of spending required to purchase goods and services in the same tourism basket in different destinations in the world.

The following Table 01 shows the rankings in terms of both Travel & Tourism Competitiveness and Price competitiveness in a global context. According to the Travel and Tourism Competitiveness Reports (2019), Sri Lanka is the only economy to decline in overall Travel & Tourism Competitiveness (from 64th to 77th) in South Asia due to reductions on the following sub-indicators namely business environment, international openness, and natural resources.

However, Sri Lanka is fell hugely in price competitiveness from 20th to 77th due to falls in ticket taxes and airport charges, fuel price level, and hotel price index. Though, purchasing power parity was remained constant (0.3) from 2005 to 2017 though the value of it was 0.5 in 2013. In particular, in terms of price competitiveness, purchasing power parity, and hotel price index have been being competitive advantages to contribute beneficial price competitiveness in Sri Lanka. In contrast, ticket taxes and airport charges competitive disadvantages continuously when attracting international tourist arrivals. Correspondingly, the fuel price level is not as stable as a beneficial factor to contribute to increasing price competitiveness.

Table 01: Travel & Tourism Competitiveness Index and Price competitiveness index

Year	Price Competitiveness index		Travel & Tourism Competitiveness Index	
	Score	Rank	Score	Rank
2007	4.7	53	3.9	79
2009	5.1	26	3.8	78
2011	4.68	60	3.9	81
2013	4.9	34	4	74
2015	4.7	68	3.8	63
2017	5.6	20	3.8	64
2019	5.4	74	3.7	77

Source: Travel and Tourism Competitiveness Reports, (2007-2019)

IV. ECONOMETRIC ANALYSIS

The study is based on annual time series data, which was obtained from both World bank development indicators and annual statisticalreports of the Sri Lanka Tourism Development Authority for the period 1978-2017. The duration of the data has been selected based on the availability of the data comprised.

In this analysis, InternationalTourist Arrivals are destination choice decisions towards the Sri Lankan tourism industry whileTourism Price Indices namely index of tourist accommodation prices, index of tourist food prices, and index of tourist transport prices are being proxy for price competitiveness index in Sri Lanka. Most literature exposes that the most appropriate proxy for tourist cost at the destination is the tourism price index as Tourists experience expenses within the tourism destination that international tourist visits comprising accommodation, entertainment, meal and drinks, tours, and shopping. In their decision of destination choice, tourists consider the cost of living at the destination relative to the cost of living at the origin and substitute destinations (Forsyth and Dawyer, 2011). In Sri Lanka, separate tourist price indices were computed for three key spending items on which tourists spend more money on such as accommodation, food, and transport which covers two-third of the total tourists' outlay during their visits (Sri Lanka Tourism Development Authority,2016).

Another variable namely the exchange rate has also been employed as one of the proxies for the tourism price competitiveness index sincewhen a country's prices rise corresponding to those of competitor nations, its exchange rate tends to decrease and enhancing its destination competitiveness. In contrast, if a nation's exchange rate increases, its industrial competitiveness, including its tourism competitiveness, drop (Crouch, 1995). In some tourist destinations, exchange rate changes were primarily responsible for enhanced tourism price competitiveness over the previous era (Dwyer et al., 2002).

Besides, the study utilized openness to trade which identifies whether how much do countries dependence on international trade. Trade openness is also often called trade-to-GDP-ratio and it is the sum of imports and exports and divides by GDP. For this model specification, world GDP per capita is also employed in this present study.

The following econometric model is being used, by employing selected variables.

$$lnITA_t = \beta_0 + \beta_1 lnTPAC_t + \beta_2 lnTPFO_t + \beta_3 lnTPTR_t + \beta_4 lnER_t + \beta_5 lnTO + \beta_6 lnWGDPPC_t + \varepsilon_t$$

Where ITA is international tourist arrival (a proxy for tourist demand) in the Sri Lankan tourism industry that indicates the dependent variable of this model. Similarly, *TPAC* is the index of tourist accommodation prices, *TPFO* represents the index of tourist food prices, *TPTR* stands for index of tourist transport prices, *ER* is the exchange rate, TO is trade openness index and *WGDPPC* is world GDP per capita. Further, β_0, ε, and *t* are parameter, error term, and time respectively.

As an initial step of the analysis, time series variables were converted into their logarithms to interpreting the elasticity of the variables. Then, to establish the order of integration of the variables the Augmented Dickey-Fuller (ADF) unit root test was employed. The unit-roots test was performed to avoid the spurious model due to trending variables since the use of nonstationary variables in the time series analysis leads to misleading inferences (Muthamia and Muturi, 2015).

The Augmented Dickey-Fuller unit root test is employed using the following augmented Dickey-Fuller regression model.

$$\Delta Y_t = \alpha + \beta y_{t-1} + \delta t + \sum_{j-1}^{k} \zeta_j \Delta y_{t-j} + \varepsilon_t$$

Where the constant term α or time trend δt is omitted and k indicates the number of lags specified in the lags () option. β is the parameter to be estimated and ε represents a stochastic error term.

If all variables were being non-stationary, it follows to find the existence of a co-integrating relationship. Johansen's co-integration multivariate procedure was employed to show whether the variables are cointegrated in the long run (Muthamia and Muturi, 2015). Hence, the study conducted Johansen cointegration test employing annual series of log (*TPAC*), log (*ITA*), log (*TPFO*), (*TPTR*), log (*ER*), log (*TO),* and log (*WGDPPC*). Based on the results of Johansen's co-integration test, the proposed study objective was analyzed by employing the Vector Error Correction Model (VECM).

In this study, if we consider a VAR with *p* lags,

$$Y_t = v + A_1 Y_{t-1} + A_2 Y_{t-2} + \ldots + A_p Y_{t-p} + \varepsilon_t$$

Where Y_t is a $K \times 1$ vector of variables, v is a $K \times 1$ vector of parameters, $A_1 - A_p$ is $K \times K$ metrics of parameters, and ε_t is a $K \times 1$ vector of disturbances. ε_t has a mean 0 and has covariance metric Σ. VAR(p) can be written as a VECM using some algebra and it has rewritten in VECM form as,

$$\Delta Y_t = v + \Pi Y_{t-1} + \sum_{i=1}^{p-1} \Gamma_i \Delta y_{t-i} + \varepsilon_t$$

Where $\Pi = \sum_{j=1}^{j=p} A_j - I_k$ and $\Gamma = \sum_{j=i+1}^{j=p} A_j$.

The v and εt are identical. Further, Johansen VECM framework allows for a constant and a linear trend and assume that there are r cointegrating relations, we can rewrite the VECM as,

$$\Delta Y_t = \alpha \beta y_{t-1} + \sum_{i=1}^{p-1} \Gamma_i \Delta y_{t-i} + v + \delta t + \varepsilon_t$$

Because the above model the differences of the data, the constant implies a linear time trend in the levels, and the time trend δt implies a quadratic time trend in the levels of the data. VECM analysis includes a constant or a linear time trend for the differences without allowing for the higher-order trend that is indicated for the levels of the data.

V.   RESULTS OF VECM

The results of the ADF unit roots test are presented in table 02 showing all variables incorporated in the study arenon-stationary at their level since unit roots test statistics of selected variables are found to be lower negative values and MacKinnon p-value also established to be insignificant as well. However, the results found that variables incorporated in the study are stationary in order I (1) implying that these variables are integrated of order 1 that is indicated by I (1).

Table 02: Unit root analysis results

Variables	Test statistics (at level)	Test statistics (first difference)	Order of Integration	MacKinnon p-value
lnITA	0.453	-4.283	I(1)***	0.0005
lnTPAC	-1.970	-4.849	I(1)***	0.0022
lnTPFO	-2.353	-4.308	I(1)***	0.0004
lnTPTR	-0.129	-5.613	I(1)***	0.0000
lnER	-2.266	-5.268	I(1)***	0.0000
lnTO	-0.858	-5.497	I(1)***	0.0000
InWGDPPC	0.827	-4.711	I(1)***	0.0001
*** indicates one percent significant level*				

Table 03 shows the outcomes of the Johansen cointegrationtest. According to the estimated results, at the first level (Max rank 0) the study strongly rejects the null hypothesis of no cointegrating equations among the variables. While we accept the null hypothesis that there are cointegrating equations among the variables due to trace statistics are higher than 5% critical value.

Table 03: Results oftheJohansen cointegrationtest

Maximum rank	Parms	LL	Eigenvalue	Trace statistic	5% critical value
0	56	411.21999		202.7705	124.24
1	69	444.07175	0.82255	137.0669	94.15
2	80	472.2302	0.77282	80.7500	68.52
3	89	491.99568	0.64665	41.2191*	47.21
4	96	501.60995	0.39711	21.9906	29.68
5	101	508.92855	0.31968	7.3533	15.41
6	104	512.59332	0.17542	0.0238	3.76
7	105	512.60522	0.00063		

Similarly, the max rank (3) and rest of the max ranks results also found that there three long run associations and four, five, six co-integrated equations among the variables, and those variables have been moving together. Therefore, the Johansen tests of cointegration revealed that the selected variables are cointegrated and there is a long-run relationship between the variablesshowing international tourist arrivals would determine the variables of price competitiveness in the long-term. Meanwhile, the variables are found to have a cointegrating relationship, as a consequence the Vector Error Correction method is employed to investigate the dynamic interrelationship among the stationary variable in the order I (1).

Table 03 represents the results of normalized cointegration coefficients to show the relationship of selected variables in the long run.

According to the results, the long-run model for international tourist arrivals can be specified as follows. The model comprises the signs of the coefficients which were reversed as the study utilized Johansen's method.

$lnITA_{t-1}$ = -53.04778 -7.541457$lnTPAC_{t-1}$+9.269102$lnTPFO_{t-1}$ + 0.6386594$lnTPTR_{t-1}$-5.83716$lnER_{t-1}$-5.298797$lnTO_{t-1}$ + 4.830084 $InWGDPPC_{t-1}$ -53.04778

The coefficient values reveal the elasticity values of each variable. Exceptfortheindex of tourist transport pricesand world GDP per capita,other variables have a significant impact on international tourist arrival at a one percent level. Specifically, the results explore that both index of tourist accommodation prices and exchange rate positively impact the international tourist arrival in Sri Lanka whereas the index of tourist food prices negatively impacts the international tourist arrival. Meanwhile, trade openness also found to be a positive impact on tourist arrival. Eventually, the results of Johansen's normalized cointegration coefficients found that there is a long-run relationship between price competitiveness indices and international tourist arrival in the Sri Lankan tourism industry.

Table 04: Results of Johansen normalized cointegration coefficients

Variables	coefficients	Standard Error	t- statistics	p- statistics
lnITA	1.000	-	-	-
lnTPAC	-7.541457***	1.415367	-5.33	0.000
lnTPFO	9.269102***	1.642486	5.64	0.000
lnTPTR	0.6386594	0.4063777	1.57	0.116
lnER	-5.83716***	1.220514	-4.78	0.000
lnTO	-5.298797***	0.7568961	-7.00	0.000
InWGDPPC	4.830084	4.106585	1.18	0.240
CONSTANT	-53.04778			
*** indicates 1% of significant level					

$ECT_{t-1} = 1.000lnITA_{t-1} -7.541457lnTPAC_{t-1} +9.269102lnTPFO_{t-1} +0.6386594lnTPTR_{t-1} -5.83716lnER_{t-1} -5.298797lnTO_{t-1} + 4.830084\ InWGDPPC_{t-1} -53.04778$

The following table (05) shows the results of the Vector Error Correction Model of Johansen's method. According to the outcomes, both index of tourist food prices and index of tourist transport prices positively impact the international tourist arrivals in the short-run. Other price indices namely index of tourist accommodation prices and exchange rate, however, unassociated with tourist arrival in Sri Lanka. Further, world GDP per capita is also found to be a negative impact on international tourist arrival whereas trade openness has no relationship with international tourist arrival in the short – run due to the results found insignificant results in the study.

Table 05: Results of vector error correction model

Variables	α coefficients	Standard Error	t-statistics	p- statistics
lnITA	0.0176465	0.0462536	0.38	0.703
lnTPAC	-0.0419183	0.0263587	-1.59	0.112
lnTPFO	-0.0855742***	0.027226	-3.14	0.002
lnTPTR	-0.063826**	0.0292952	-2.18	0.029
lnER	-0.0125625	0.010511	-1.20	0.232
lnTO	0.0324959	0.0200503	1.62	0.105
InWGDPPC	0.0069474**	0.0032069	2.17	0.030
** and*** indicate 5% and 1% significant levels, respectively					

International tourist arrival as a target variables, the following equation can we written,

$\Delta lnITA_t = 0.0472 +0.2553\Delta lnITA_{t-1} + 0.7563\Delta lnTPAC_{t-1} - 0.294\Delta lnTPFO_{t-1} - 0.0116201\Delta lnTPTR_{t-1} - 0.0592\Delta lnER_{t-1} - 0.6696\Delta lnTO_{t-1} -2.130\Delta InWGDPPC_{t-1} + 0.0176ECT_{t-1}$

The adjustment term (0.0472) is statistically significant at the 5% level, indicating that preceding year's errors or deviation from long -run equilibrium are corrected for within the present year at a convergence speed of 4.7%.

VI.   RESULTS OF CORRELATION ANALYSIS

To investigate the impact of price competitiveness on tourist arrivals in Sri Lanka, the study has also been utilized dynamic time-series data of price competitiveness in the travel and tourism industryobtained from the Travel and Tourism Competitiveness Reports published by the World Economic Forum.

The data of price competitiveness is an indicator of the Travel & Tourism Competitiveness Index (TTCI), were covered over the period 2007 to 2019. The price competitiveness in the travel and tourism industry (in pillar 10) includes variables namely Ticket taxes and airport charges, Hotel price index, Ratio of purchasing power parity, and Fuel price levels are employed and those possess a notable link with destination choice decisions.

Additionally, to show how the casual relationship between tourist arrivals and price competitiveness, the annual series of international tourist arrivals were gathered from Statistical Reports of Sri Lanka Tourism Development Authority. In this study, international tourist arrival is a destination choice decision towards the Sri Lankan tourism industry, and price competitiveness is represented by above mentioned four sub-indicators which were incurred by international tourists in Sri Lanka.

By employing those variables, the study estimated the output of the correlation coefficient than estimating regressions results because it would be viable to be multicollinearity issues since most of the studies drop those types of factors from the econometric models (Witt and Witt, 1995). A further key concern that if the degree of multicollinearity upsurges, the coefficient of the regression model becomes unstable and the standard errors for the coefficient can get inflated.

The result of the correlation coefficient is represented in the following table.

Table 06: Results of the correlation coefficient

Variables	Ticket taxes and airport charges	Hotel price	purchasing power parity	Fuel price levels
Correlation coefficient	0.2235	0.8229	-0.3642	0.5838

Accordingly, the sign of the correlation coefficient denotes the direction of the causal relationship between the index of price competitiveness and tourist arrivals. The results exposed that, hotel price has a strong and positive correlation with tourist arrivals. Likewise, the correlation between tourist arrivals and fuel price levels is found to be a moderate positive linear relationship. A positive coefficient (0.8229) indicates that when the value of hotel prices increases, the number of tourist arrivals also tends to increase. Similarly, fuel price levels lead to an increase in the international tourist visit rate in Sri Lanka. In contrast, there is a negative association between the purchasing power parity and the international tourist participation over these years since the study found a weakly negative correlation (-0.3642). Finally, ticket taxes and airport charges, and tourist arrivals have shown an insignificant relationship.

VII.   CONCLUSION

This study examines the long-run relations and short-run dynamics between the international tourist arrivals and tourist price competitiveness indices to find the impact of tourist price competitiveness on international tourist participation in Sri Lanka, using annual time series data of price competitiveness indices.
The tourist price competitiveness encompassing namely index of tourist accommodation prices, index of tourist food prices, index of tourist transport prices, and exchange rate were employed along with trade openness index and world GDP per capita. Time-series data were analyzed using the following steps such as the Augmented Dickey-Fuller (ADF) unit root test, Johansen's co-integration test, and Vector Error Correction Model (VECM) to obtain the proposed objective.

According to the VECM result, in the long -run, the index of tourist accommodation prices and exchange rates positively influence the international tourist arrival while the index of tourist food prices index negatively impacts the international tourist arrival.Meanwhile, in the short – term, both the index of tourist food prices and the index of tourist transport price positively influence international tourist participation, whereas the index of tourist accommodation prices and exchange rate not accompanying tourist arrival in Sri Lanka.

Though trade openness was not impacting the international tourist participation in the short- run, it positively impacts the worldwide tourist arrival in the long -term. Additionally, world GDP per capita was found to be a negative impact on international tourist arrival and was not associated with tourist arrivals in a long – time.

Therefore, the study found that there is a long-run relationship between price competitiveness indices encompassing an index of tourist accommodation prices and exchange rate and international tourist arrival in the Sri Lankan tourism industry in the long -term. However, the index of tourist accommodation prices and exchange rates did not impact the international tourists' arrival in the short- run. In the meantime, the index of tourist food price and the index of tourist transport price impact positively the international tourist arrivals. Though the study suggests price competitiveness is one of the main determinants of the destination decision in the tourism industry. While a significant and positive correlation of hotel price and fuel price levels can support the result of VECM as the correlation coefficient analysis also revealed that price competitiveness has a positive impact on international tourist arrivals in Sri Lanka.

Hence, this study revealed that tourism price competitiveness has been being a driver of international tourist arrivals in Sri Lanka and exchange rate movements were primarily responsible for improved tourism price competitiveness over the preceding period. It is, therefore, recommended that attention should be given to improving the stability of the increased tourism price competitiveness of tourist products along with qualitative factors affecting the attractiveness of a destination.In particular, the study suggests the government of Sri Lanka should focus on both ticket taxes and airport charges of international tourist and fuel price levels to increase the positive impact of price competitiveness.

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