

**ANALYZING THE SIGNIFICANCE OF TOURISM ON SRI
LANKAN ECONOMY;
AN ECONOMETRIC ANALYSIS**

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ABSTRACT

In countries like Maldives, Malaysia, Singapore and Spain, tourism and related recreation activities play a significant role in the generation of income / foreign exchange and provision of employment opportunities. In fact, in the global context this industry is identified as the single largest economic contributor. Moreover, tourism plays a crucial role in the attainment of macroeconomic stability. Besides, the political stability of a country has a major impact on its tourism industry. According to the preceding view, this paper aims at analysing empirically the significance of tourism in the Sri Lankan economy from 1970 to 2008. The relationship will be analyzed based on a time series approach. The study will endeavour to estimate the relationship between economic performance and tourism revenue, subject to main macroeconomic variables and political stability of the country. With respect to policy implications, the study recommends that the role of tourism could be highly emphasized in the sustainable economic development with a stable political environment.

Keywords: Economic development, Tourism, Macroeconomic stability, Political stability

01. INTRODUCTION

Tourism is one of the major foreign exchange earners and main growth sector for many countries especially the small islands which are rich with required natural and cultural resources. The world tourism market has grown at an average of 3.7 per cent over the past five years and is projected to grow by an average of 4.9 cent over the next five years, with Asia and the Pacific regions recording the fastest growth rate. According to WTTC (World Travel and Tourism Council 2010) Travel & Tourism activity was hit hard by the global slump, Even so, the sector worldwide still provided over 235 million jobs last year.

Sri Lanka entered the international tourism market in the 1960s. Since then, this industry has been growing steadily as a promising sector for the economic development, subject to periodical setbacks especially the civil war prevailed in Sri Lanka, world terrorist attacks and natural disasters. For example, international tourist arrivals to Sri Lanka increased from 18,969 in 1966 to 438,475 in 2008 consequently the receipts from tourism (Sri Lanka Tourist Board 2008). In particular, the contribution of Travel & Tourism to Gross Domestic Product was 7.5% (LKR407.5bn or US\$3,388.1mn) in 2009 in Sri Lankan economy. The contribution of the Travel & Tourism economy to employment was 503,000 jobs in 2009, 6.2% of total employment or 1 in every 16.2 jobs it also is expected to grow up to 579,000 jobs, 6.7% of total employment or 1 in every 14.8 jobs by 2020. Similarly, the contribution for real GDP growth for Travel & Tourism sector was 5.9% and the travel & Tourism investment was at LKR131.9bn, US\$1,096.8mn or 10.1% of total investment in 2009. Out of 186 registered countries of WTTC the Sri Lankan Travel & Tourism economy is ranked number 87 in absolute size worldwide and 110 in relative contribution to national economies.

Tourism remains the fastest growing service industry in the economies of most of developing countries; hence more research has gone into the operations of the sector in order to examine its economic significance and potential. (Amstrong, 1974) It is known that the industry provides an important impetus to growth in other sectors such as agriculture, transportation, retailing and manufacturing and is therefore seen as a key component of economic development. It plays a major role for the generation of foreign exchange which directly facilitates the improvement of foreign reserves of said economies. (Stynes, Daniel J 1999) Similarly, the sector has shown greater improvements in employment generation (direct and indirect), revenue accruing to tourist sites, and increase in number of hotels and similar establishments and other tourism supply establishments.

Therefore, the development of the tourism sector appears to have been as important as the development of other sectors of the economy of Sri Lanka. Although tourism plays a key role in the Sri Lankan economy, a little attention has been paid to this sector in the empirical research. There have been a few attempts in the past to address some of the issues relevant to the economic impact of tourism in Sri Lanka (see, Gamage (1978), King and Gamage (1994), and Ihalanayake (1996)). In addition to these, Garcia (1988), Crick (1989; 1992) and Richter (1989) have examined the social and cultural aspects, particularly the negative impacts.

The tourism sector demands inputs such as food and services from other sectors of the economy and as such plays an important socio-economic role in the Sri Lankan economy. The ability of the tourism industry to generate new employment opportunities, especially among the low-skilled group, makes the industry a critical component in the country's development. Further, its inter-linkage with the agriculture sector makes it an important contributor to rural development. Analyzing its economic contribution over last 30 years and understanding the economic significance of tourism sector is therefore important to development policy. Similarly this paper focuses the political unrest and security concerns prevailed in Sri Lanka during the relevant period relating to the performance of tourism industry.

This paper focuses on the significance of tourism industry in Sri Lankan economy.

The paper consists of five chapters and the first chapter carries an introduction to the study. The second chapter reviews the relevant literature while the chapter three is reserved to describe the model and the methodological choice for the study. Chapter four carries the data analysis part which consists two parts. The first part is a descriptive analysis to discuss the performance of tourism sector and the second part is used to test the empirical model. Chapter five summarizes the entire study while recommendations and policy implications are highlighted.

02. LITERATURE REVIEW

Tourism's contribution to economic development has been well documented in the literature. For many developing countries, which were traditionally dependent upon primary products in export earnings, tourism has become a major source of foreign exchange earnings. This has been vital for such countries given their prevailing economic conditions. Many developing countries have experienced severe deficits, particularly in the current account of the balance of payments during past few decades. In the resolution of these economies issues tourism has played an important role in such economies. (Wanhill, Stephen R 1983)

There have been several recent empirical studies which explored the relationship between tourism and economic growth. Hazari and Sgro (1995) developed a growth model in which they model tourism as an added component to the domestic aggregate demand. Furthermore, they model the foreign supply of capital and the growth in export as dependent on tourism growth.

In particular a country or a place to be an attractive destination it has to be rich in land, water, vegetation and man made creations. Islands like Seychelles, Maldives are rich in Sun, Sea and Sand while countries like Malaysia, Thailand and Kenya are rich in Culture, Nature and Adventure for keeping tourists attract. For example Seychelles island GDP contribution from tourism sector is 73% where the same in Maldives Islands is 60 %.(IMF, 2009).

In the case of Sri Lanka its inherited culture, natural resources as well as the coastal line around the island are gifts for this particular industry to flourish. According to WTTC ranking, (WTTC country report 2009) The South Asian Travel & Tourism economy is ranked number, 10 in absolute size worldwide, 10 in relative contribution to national economies, 1 in long-term (10-year) growth.

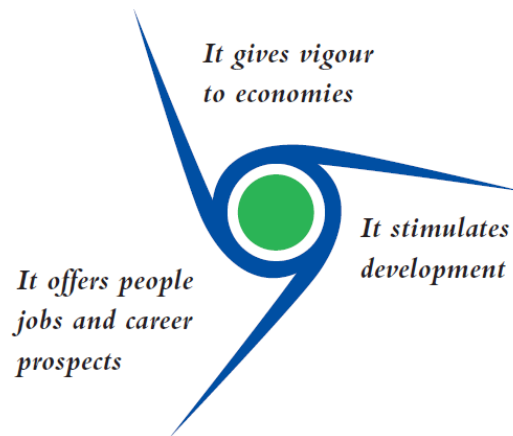


Figure - 01; The role of tourism in the global economy (WTTC, 2010)

WTTC has identified three major roles of tourism sector with respect to the macro economic performance in the global economy, as illustrated in the following figure. According to this the contribution of tourism sector is vital for the macroeconomic performance of a country.

Tourism is a fast growing economic activity in many countries around the world, and plays an important role in the economic and technological development of nations. As Edge points out, tourism serves to stimulate the development of basic infrastructure, contributes to the growth of domestic industries, attracts foreign investment, and facilitates the transfer of technology and information.

Tourism expenditures generate income to the host economy and can stimulate the investment necessary to finance growth in other economic sectors. Some countries seek to accelerate this growth by requiring visitors to bring in a certain amount of foreign currency for each day of their stay. An important indicator of the role of international tourism is its generation of foreign exchange earnings. Tourism is one of the top five export categories for as many as 83% of countries and is a main source of foreign exchange earnings for at least 38% of countries. (Machel McCatty & Prudence Serju, 2006)

Direct contributions are generated by taxes on incomes from tourism employment and tourism businesses, and by direct levies on tourists such as departure taxes. Indirect contributions come from taxes and duties levied on goods and services supplied to tourists.

The rapid expansion of international tourism has led to significant employment creation. Tourism can generate jobs directly through hotels, restaurants, nightclubs, taxis, and souvenir sales, and indirectly through the supply of goods and services needed by tourism-related businesses.

Tourism can induce the local government to make infrastructure improvements such as better water and sewage systems, roads, electricity, telephone and public transport networks. This can improve the quality of life for residents as well as facilitate tourism.

As the environment is a basic component of the tourism industry's assets, tourism revenues are often used to measure the economic value of protected areas. Money is earned from tourism through informal employment (e.g. street vendors, informal guides, rickshaw drivers) The positive side of informal employment is that the money is returned to the local economy, and has a great multiplier effect as it is spent over and over again. According to the estimations of The WTO (World Tourism Organization) tourism generates an indirect contribution equal to 100% of direct tourism expenditures.

Furthermore, Sri Lanka has experienced an increasing burden of foreign debt. A relatively high percentage of GDP and of the budget is allocated for foreign loan settlement. With ongoing civil unrests the situation results in high defense budgets. In view of this volatile economic background, foreign exchange earnings from tourism have been important contributions to economic development. In 1970 the receipts from tourism sector was LKR 21.5 mn and by the end of 2008 it has grown up to LKR 37,094 mn.

Further, they argued that, “if those imports are capital goods or basic inputs for producing goods in any area of the economy, then, it can be said that earnings from tourism are playing a fundamental role in economic development” (p. 878). (Sathiendrakama and Tisdell, 1987) Available evidence suggests that many developing countries are able to raise a significant proportion of government revenue from international tourism. For instance, the World Trade Organization (1998) claimed that these countries (most of them are highly specialized tropical, tourist countries) raise 10 to 25 per cent of government revenue from the tourism sector. In some cases, more than 50 per cent of government revenue has been generated by the tourism sector. (Sathiendrakama and Tisdell, 1987)

Wanhill, Stephen R., (1983) investigated co-integration and causality between tourism and economic growth in Mauritius and found that tourism has contributed to economic growth. Moreover, he claimed that tourism has a significant positive impact on Mauritian economic development. Armstrong (1996) examined the impact of tourism on the long-run economic growth of Greece. He analyzed the causality of GDP, exchange rate and international tourism receipts and concluded that there is a strong Granger causality relationship between international tourism receipts and economic growth, a strong causal relationship between exchange rate and economic growth, and moderate causal relationships between economic growth and international tourism receipts and between exchange rate and international tourism receipts.

Contrarily, the political stability of Sri Lanka was questionable in particular with reference to the international tourist arrivals during last few decades. Specially the civil conflicts started in 1983 has continued till 2009 and it aggravated on certain occasions specially bomb blasts and terrorist attacks at Central Bank of Sri Lanka in 1996, attack on

international airport and so on. Out of 38 years of observation, 18 years were out of this civil conflict while 20 years were under the civil war situation.

03. METHODOLOGY

03.1 Objectives of the Paper

The main objective of this research paper is to identify the significance of tourism sector in the context of Sri Lankan economy. In addition to this main objective to assess the significance of political stability of the country for the performance of tourism sector would also be a major focus to be observed.

03.2 Identification of the Theoretical Model

Different models have been using to analyze the significance of tourism sector for an economy. One is *growth theory*, which models the interactions among factor supplies, productivity growth, saving, and investment in the process of growth. (Jacint Balaguer y Manuel Cantavella-Jordá, 2000) The other is *growth accounting*, which attempts to quantify the contribution of different determinants of output growth. Most papers have been concentrated on the so-called export-led growth hypothesis for both developing and industrialized countries.

$$\log Y_t = \alpha_0 + \alpha_1 \log TOUSA_t + \alpha_2 \log q_t + \alpha_3 \log u_t + \alpha_4 \log t_t + \alpha_5 + 0.12$$

t=1975Q1...1997Q1

1975Q1 stands for the first quarter of 1975; analogously for 1997Q1.

An econometric model has applied using panel data approach by TERESA GARRÍA-NUNO and TEODOSIO PEÑARAZ AMARAL in 2004. Here a dummy variable has been included to capture the effect of the Gulf War during the relevant period.

The log linear model is the following.

$$LTOUR_{it} = \beta_0 + \beta_1 LGNP_{it} + \beta_2 LExit_{it} + \beta_3 LPR_{it} + \beta_4 D_{it} + u_{it}$$

The dependent variable which has been tested is log of the number of nights spent in Spanish hotels by tourists from country *i* during year *t*, in per capita terms; as independent variables Gross National Product, Exchange rate, Price index for tourism services and most importantly dummy variable for the Gulf War that takes the value 1 in 1991 and 0 elsewhere.

03.3 Empirical Model

The literature survey enlightened us towards several models which have been used by the previous researchers to examine the relationship between economic performances and tourism sector. The empirical model for this study has been developed considering those previous models. The following model was developed using an econometric approach to measure the impact of tourism on real gross domestic production in Sri Lanka.

$$RGDP = \beta_0 + \beta_1 RGDP_{t-1} + \beta_2 GEXPEN + \beta_3 INV + \beta_4 TRDV + \beta_5 TOUR + \beta_6 D + u$$

RGDP	- Real Gross Domestic Production of Sri Lanka
RGDP t-1	- Real Gross Domestic Production of Sri Lanka in previous year
GEXPEN	- Government Expenditure
INV	- Gross Domestic Investment as Percentage of GDP
TRADV	- Trade Volume
TOUR	- Tourism Receipts
D	- Dummy Variable

Indisputably, the civil war which prevailed in Sri Lanka from 1983 to 2010 made a significant impact on macroeconomic performance in Sri Lanka. Therefore, it is worth to employ a dummy variable to this model to take the impact of civil war in to account on macroeconomic performance. Further more dummy variable has been defined as follows.

$$D = \begin{cases} = 1 \text{ No War Period} \\ = 0 \text{ War Period} \end{cases}$$

According to the secondary objective of this research the impact of political stability of the country on the performance of tourism industry has to be analyzed. In order to accomplish this second objective, another model was developed by considering other factors such as exchange rate and world Gross Domestic Production as well.

$$TOUR = \beta_0 + \beta_1 ER + \beta_2 WGDP + \beta_3 D + u$$

TOUR	- Receipts from Tourism
ER	- Exchange Rate
WGDP	- World Gross Domestic Production
D	- Dummy Variable

$$D = \begin{cases} = 1 \text{ No War Period} \\ = 0 \text{ War Period} \end{cases}$$

In following section, above empirical model has to be tested by using data from 1970 to 2008 to accomplish the objective those mentioned in previously.

04. DATA ANALYSIS

In order to accomplish the objectives set for this study two analytical approaches would be employed. The first part is a descriptive analysis which will focus the contribution of tourism sector for the macroeconomic performance of Sri Lankan economy. Under the second part we are going to use an econometric analysis using OLS method.

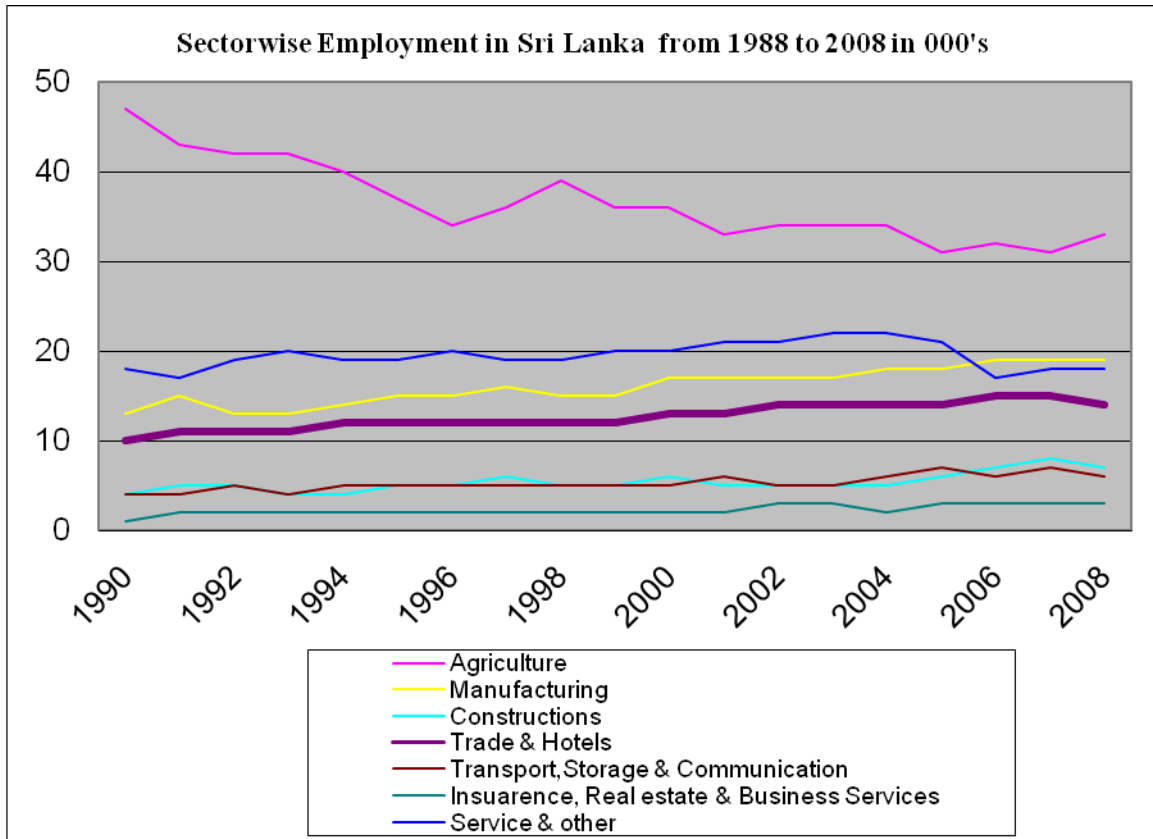


Figure – 02

Source; World Travel and Tourism Council Statistics; 2009

The above graph illustrates the contribution of each sector in the generation of employment opportunities from 1988 to 2008 in Sri Lankan economy. Tourism sector is the 4th largest employment generator and more importantly, it has been growing steadily irrespective of the unhealthy political background.

This emphasizes the significance of tourism and related sectors specially creating employment for unskilled young people who are suffering from employment after their secondary education.



Figure – 03

Source; World travel and Tourism Council Statistics; 2009

The above graph illustrates the employment trend in tourism sector in Sri Lankan economy from 1988 to 2008. The employment generation of this sector is increasing over the years and especially, from 2001 to 2004 (during the ceasefire agreement) there is a significant improvement in employment generation. In December 2004 the Tsunami disaster adversely affected this industry which shows a drastic slowdown in latter part of 2004 to 2006 which gradually start recover after 2006.

Percentage of Government Expenditure for tourism industry in Sri Lanka, South Asia and in the World 2009

As illustrated in the following graph (figure – 04), in comparison to the world situation as well as the South Asian Regional situation the share of government expenditure for travel and tourism sector in Sri Lanka is very high which reflects the governments view of its promising economic performance in the years to come.

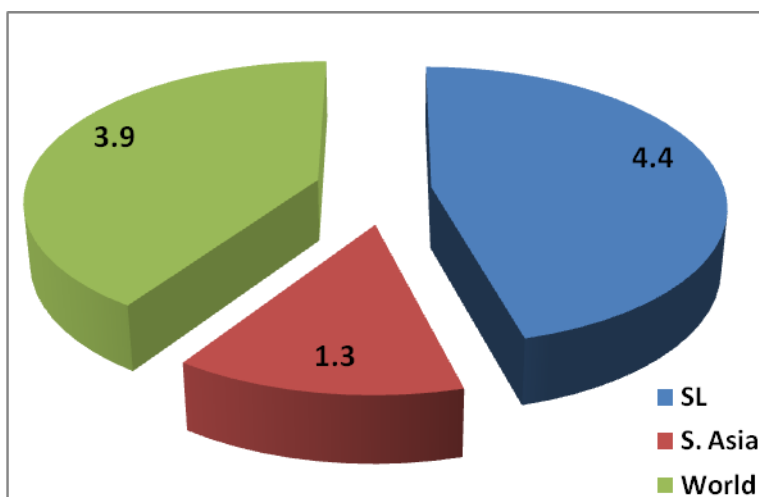


Figure – 04

Source; World travel and tourism Council Economic impact report – 2009

Table 01 - Travel and Tourism Key Economic Measurements in Sri Lanka – 2009

	LKR bn	% of total	Growth
Personal Travel & Tourism	191	5.4	0.7
Business travel	62.4	1.2	-3.6
Government Expenditure	35.7	4.4	3.3
Capital investment	156.4	10.6	0.3
Visitor Exports	87.6	7.1	-7.5
Other Exports	50.3	4.1	6.2
Travel and tourism Demand	583.4	8.2	-0.6
Direct Industry GDP	140.3	2.7	-2.5
Travel & Tourism Economy GDP	418.4	7.9	-0.1
Employment 000's			
Direct Industry Employment	176.7	2.1	-3.9
Travel & Tourism Economy Employment	533.6	6.5	-1.6

Source; World travel and tourism Council Economic impact report – 2009

Table 02 - Travel and Tourism Key Economic Measurements in South Asia – 2009

	US\$ mn	% of total	Growth
Personal Travel & Tourism	44,600	4.8	5.1
Business travel	11,261	0.8	-3.6
Government Expenditure	2,056	1.3	8.8
Capital Investment	37,427	7.7	-0.9
Visitor Exports	13,903	4.4	-4.9
Other Exports	5,902	1.7	4.6
Travel and tourism Demand	116,102	6.2	0.9
Direct Industry GDP	30,608	2.2	0.2
Travel & Tourism Economy GDP	84,220	5.9	0
Employment 000's			
Direct Industry Employment	15,178	2.4	0.4
Travel & Tourism Economy Employment	37,173	5.8	-0.2

Source; World travel and tourism Council Economic impact report - 2009

Table – 03 Travel and Tourism Key Economic Measurements in the World - 2009

	US\$ mn	% of total	Growth
Personal Travel & Tourism	2990470	8.6	-2.9
Business travel	745085	1.3	-7.2
Government Expenditure	404183	3.9	3.3
Capital Investment	1220100	9.4	-5.3
Visitor Exports	1079430	6	-4.5
Other Exports	900731	5	-5.4
Travel and tourism Demand	7339990	9.6	-4
Direct Industry GDP	1870080	3.2	-3.5
Travel & Tourism Economy GDP	5473830	9.4	-3.5
Employment 000's			
Direct Industry Employment	77276	2.7	-1.9
Travel & Tourism Economy Employment	219810	7.6	-2.8

Source; World travel and tourism Council Economic impact report – 2009

Table 01, 02 and 03 illustrate selected key economic measurements in Sri Lanka, in South Asia and in the World respectively. A comparison of highlighted figures is presented graphically. (Only the percentage of total, to avoid the exchange rate differences)

Percentage of Capital investment in travel and tourism sector in Sri Lanka, South Asia and in the World 2009

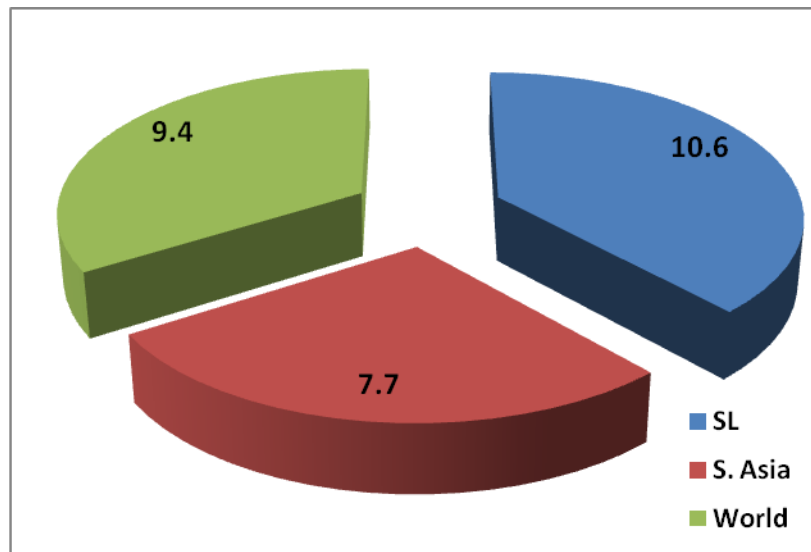


Figure – 05

Source; World travel and tourism Council Economic impact report – 2009

In comparison to the 7.7 of South Asia and 9.4 in the world the capital investment percentage of Sri Lankan economy for travel and tourism sector is 10.6. This also highlights the significance of this sector in Sri Lankan economy.

Percentage of direct industry GDP in travel and tourism sector in Sri Lanka, South Asia and in the World 2009

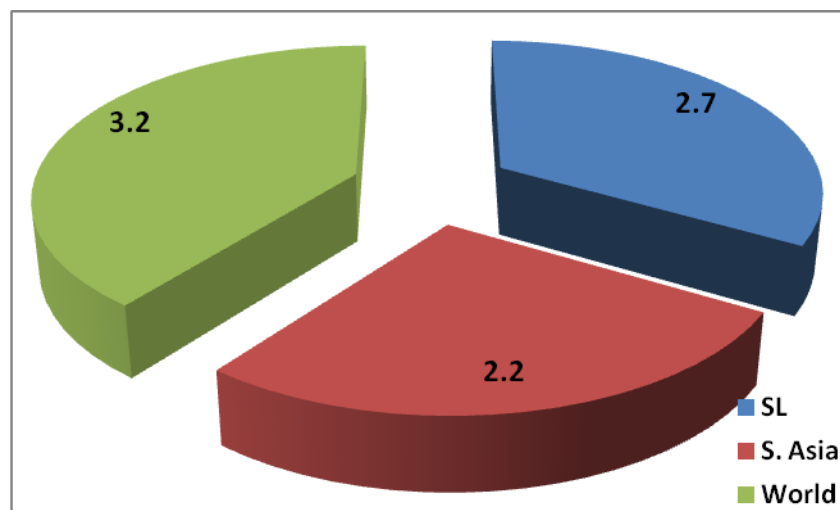


Figure – 06

Source; World travel and tourism Council Economic impact report – 2009

In 2009 the direct contribution to the GDP from travel and tourism sector is 2.7 in Sri Lanka. The World situation is 3.2 for the same and South Asian Region's contribution to its GDP from the said sector is 2.2.

Percentage of Travel & Tourism Employment in total Employment -2009, selected Economies

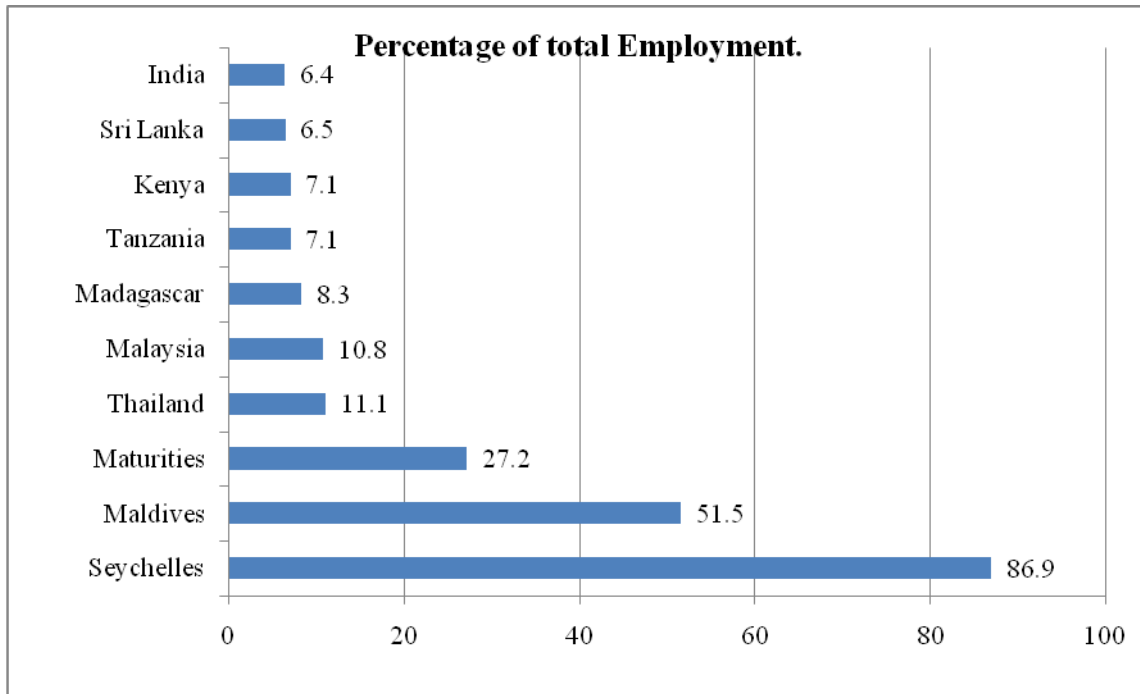


Figure – 07

Source; World travel and tourism Council Economic impact report – 2009

The above figure compares the contribution of employment generation from travel and Tourism sector and Sri Lanka is in the 9th place just 0.1 above India. India being a giant in its resources for tourism product this is significant place irrespective of Sri Lanka's internal issues. However Seychelles, Maldives and Maturities are islands who offer similar product.

Percentage of Travel & Tourism sector contribution to the total GDP-2009, selected Economies

The following graph highlights the contribution to the total GDP from Travel and Tourism sector. Sri Lanka enjoys here too a better place in comparison to India which illustrates the significance of this sector in Sri Lankan economy. Here too Seychelles, Maldives and Maturities are islands are out of the general comparison since their product is totally different from the rest of the countries.

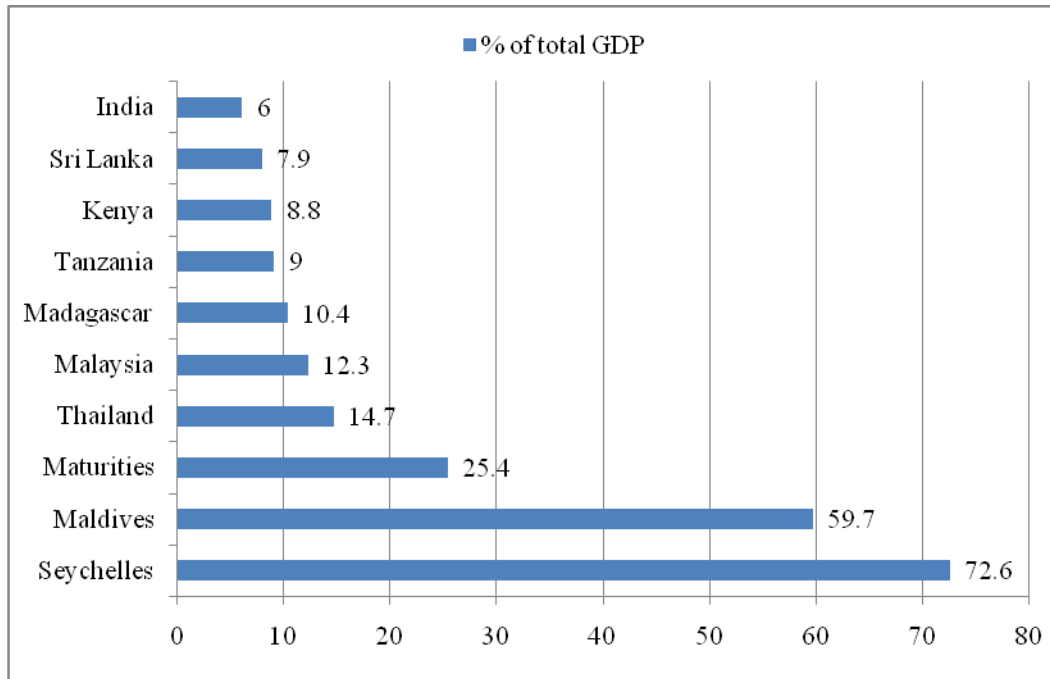


Figure – 08

Source; World travel and tourism Council Economic impact report – 2009

4.2 Econometric Analysis

$$RGDP = 494.73^{**} + 0.874^{***} RGDP_{t-1} - 1.938 GEXPEN + 12.74^* INV$$

$$+ 0.00067^{***} TRDV + 0.0139^* TOUR - 217.484^{***} D$$

* - 10 % Significance Level

** - 5 % Significance Level

*** - 1 % Significance Level

R2 = 0.9988

Prob > F = 0.0000

According to the above estimated results, all the independent variables are statistically significant except the government expenditure (GEXPEN). When we consider about the trade volume and investment, both these variables play a major role in Sri Lankan economy. Especially one unit change in gross domestic investment leads to 12.24 units change in real gross domestic production and this relationship has been statistically significant at 10 % level. This implies that increase in investment share is highly recommended for the steady economic growth. Similarly, trade volume causes to average change in real gross domestic production equivalent to 0.0007. Even if this coefficient is relatively low, there is a 99% confidence about this coefficient according to the

significance level. It is apparent that there was a dramatic increase in GDP after entering to the free trade. As result shows, the receipts from tourism account for 0.014 units' average change in real gross domestic production and it is significant at 10 % level. Especially, tourism receipts bring a foreign assets and it will lead to maintain a macroeconomic stabilization in the economy. In fact this macroeconomic stabilization again encourage the tourism arrivals to the country, therefore there is an interrelationship between both macroeconomic stabilization and receipts from tourism. Under this situation special policy changes is highly recommended to boot the tourism industry.

When we consider about the dummy variable which is used to measure the impact of war on macroeconomic performance, the negative coefficient (-217.48) clearly indicates that the real GDP in non-war period is comparatively low comparison to the war period. According to the results mean real GDP in war period is 494.73 million and the mean real GDP in non war period is 277.246 million. This GDP variation in war and non war period is statistically significant at 1 % level. This result indicates that the Real GDP during war period is high due to the high defense expenditure of the government. The model is overlay significant at 1 % level as the p values are equal to zero. When we turn in to the coefficient of determination, ($R^2 = 0.9988$) all the independent variables jointly explain the 99 % of total variation of real GDP, it means this model is statistically appropriate to measure the relationship between economic performance and factors which affect to the economic performance specially receipts from tourism.

When we move to the second objective of this research we have to check whether there is a war influence in Sri Lankan tourism industry or not. After running an OLS regression following results has been obtained.

$$TOUR = -11421.24^{***} + 395.78^{***} ER + 925.96^* WGDP + 3919.75^{***} D + u$$

- * - 10 % Significance Level
- ** - 5 % Significance Level
- *** - 1 % Significance Level

$$R^2 = 0.9349$$

$$\text{Prob} > F = 0.0000$$

As we know receipts from tourism depend on many factors, but in this study factors such as exchange rate, word GDP has been considered. To measure the civil war influence in tourism sector, dummy variable has been included. According to the results changes in exchange rate causes to change in receipts from tourism averagely by 395.78 million while world GDP causes to approximately 930 million. However coefficient of exchange rate is significant at 1 % level by showing the importance of exchange rate behavior in the tourism industry in Sri Lanka. As the theory implies increase in exchange rate motivate the tourist's arrivals, because then they are able to exchange more rupees for

their dollars. World GDP also a better proxy for world living condition and it is positively related with the Sri Lankan tourism industry.

When we are evaluating the war influence, the coefficient of dummy variable should be taken in to account. According to this coefficient the average receipts from tourism in non war period is higher than averagely by 3919.75 million compared to the war period. This implies that there is a significant war influence on Sri Lanka tourism industry. In fact tourist's arrivals have been limited during the war period, because several international media have also warned Sri Lanka as an unsafe place to visit. Especially, after terrorist attacks on Katunayake International Airport and Central Bank of Sri Lanka, tourism arrivals have dropped down dramatically. The model which has been used to evaluate the above situation is statistically significant at 1 % level and according to the value of R^2 , explanatory variables jointly explained approximately 93 % of total variation of receipts from tourism.

According to both descriptive and econometric approaches of analysis in this study, the significance of tourism sector in Sri Lankan economy has implied to be a major portion for key macro economic measurements. Similarly the adverse effects of war on tourism sector have showed a massive loss for Sri Lankan economy over the last decades.

05. CONCLUSIOS

Given its natural advantages, the tourism sector is viewed as one of the most important engines of growth and development in the Sri Lankan economy and as such, is a key focus in the Government's industrial strategy. Tourism main supporting sectors account for more than 8.0 per cent of GDP. In relation to employment, agriculture transport, storage & communication, construction, and distribution are the primary beneficiaries from a dollar spent within the tourism industry. Further, these sectors account for over 7.0 per cent of the employed labor force.

However, the descriptive analysis points to the continued low and declining impact of the industry on the overall economy in particular in the context of other countries like Thailand, Malaysia and Kenya. However the investment share for tourism sector being high the unstable political situation could be the closest reason for this less performance in the case of comparison.

With the end of war, the expected boom in the industry over the years to come will have a noticeable impact. The second empirical modal shows a strong relationship between the political stability and macroeconomic performance in particular with reference to the tourism sector. It is highly recommended to maintain a stable political situation of the country in order for industries like tourism to flourish.

The paper has, in the main, addressed two of the important elements of an economic significance of the tourism industry. Further work to be undertaken includes the computation and comparison of cyclical movements of tourism sector performance in response to the global economic and political changes. Similarly, the contribution of tourism for the development could be recommended for future research work.

APPENDICES

01. STATA regression output for empirical model – 01

```
reg RGDP RGDpt1 TOUR TRDV GEXPEN INV D
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Source	SS	df	MS			
Model	487971865	6	81328644.2	Number of obs =	39	
Residual	592374.422	32	18511.7007	F(6, 32) =	4393.36	
				Prob > F =	0.0000	
				R-squared =	0.9988	
				Adj R-squared =	0.9986	
Total	488564239	38	12856953.7	Root MSE =	136.06	

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
RGDpt1	.8744435	.0355395	24.60	0.000	.8020519	.946835
TOUR	.0139004	.0076853	1.81	0.080	-.001754	.0295547
TRDV	.0006696	.0001601	4.18	0.000	.0003436	.0009957
GEXPEN	-1.938993	7.129551	-0.27	0.787	-16.46141	12.58343
INV	12.23894	7.203159	1.70	0.099	-2.433413	26.9113
D	-217.4845	68.14114	-3.19	0.003	-356.2835	-78.68557
_cons	494.7364	225.1368	2.20	0.035	36.14773	953.325

02. STATA regression output for empirical model – 02

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reg TOUR ER WGDP D
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Source	SS	df	MS			
Model	6.6477e+09	3	2.2159e+09	Number of obs =	39	
Residual	462969902	35	13227711.5	F(3, 35) =	167.52	
				Prob > F =	0.0000	
				R-squared =	0.9349	
				Adj R-squared =	0.9293	
Total	7.1107e+09	38	187123946	Root MSE =	3637	

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ER	395.7841	17.83059	22.20	0.000	359.5861	431.9821
WGDP	925.9638	457.2007	2.03	0.051	-2.202979	1854.131
D	3919.754	1217.659	3.22	0.003	1447.774	6391.734
_cons	-11421.24	2015.899	-5.67	0.000	-15513.73	-7328.747

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