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Contents

Impact of public debts on inflation in Sri Lanka: A time series analysis – 1977-2017

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Abstract

Price stability is one of the fundamental macroeconomic goals of economies in both developed and developing countries in achieving sustained economic growth. This paper aimed to identify the long-run and short-run relationships between public debt and inflation in Sri Lanka by considering the open-economic policy phase (from 1977 to 2017) employing the time series econometric approach. The results of the study confirmed the positive relationship between public debt and inflation in Sri Lanka, and extending the existing knowledge-public debt is inflationary. It indicates that public debt has not adequately generated the growth benefits to the economy in the long-run and thereby aggregate supply is not increased in the economy. This has caused to establish a positive relationship between public debt and inflation in the economy in the long-run due to the supply deficits. Thus, the study suggests, if public debts are utilized to finance the budget deficit, the budget would be more economically growth-oriented, unless public debt would be inflationary in the long-run and debt sustainability will be a matter of the economy.

Keywords: Aggregate demand, aggregate supply, inflation, public debt, Sri Lanka.

1. Introduction

Price stability is one of the fundamental macroeconomic goals of economies in both developed and developing countries in achieving sustained economic growth. Inflation is mostly an economic policy-driven matter. The impact of the fiscal deficit on inflation is detrimental and profoundly discussed in academic literature (Fischer, Sahay & Vegh, 2002; Catao & Terrones, 2005; Kwon, McFarlane & Robinson, 2009; Mweni, Njuguna & Oketch, 2016; Veiga, Ferreira-Lopes & Sequeira, 2014; Romero & Marín, 2017). In

most developing countries, the fiscal deficit is relatively high and widening due to internal and external factors. This high and widening fiscal deficit in the economy leads creating a macroeconomic imbalance if sources of financing, primarily the public debt, are not suitably managed to achieve long-run sustain growth of the economy (Catao & Terrones, 2005). In majority of developing countries such as Sri Lanka, the fiscal deficit is due to, first, the expanding government expenditures in development-oriented fields. These productive and planned expenditures have a positive impact on economic growth. Second, the fiscal deficit is due to the governments' expenditures on growth destructive areas of the economy, e.g., financing the cost of unsustainable government business enterprises. Such expansionary fiscal deficit negatively influences the economic growth in short-run and long-run.

Public debt is one of the measures used to finance budget deficits. Theoretically, public debt is inflationary (Kwon, et al., 2009; Taghavi, 2000; Fischer, et al., 2002), but there is evidence on its positive impact on long-run economic growth (Nguyen, 2015; Veiga, et al., 2014). The quantity theory of money explains how an increase in money supply raises the price level of the economy via a change in the aggregated demand in the economy. In the long-run, the economy will stabilise since the increased aggregate demand creates an opportunity to increase the aggregate supply in the economy. Fiscal policies (Tax policy) adopted to increase government revenue also increase price levels of the economy.

In recent years, there was a contentious academic discussion on public debt and economic development in Sri Lanka. This is mainly due to the drastic increase of public debt during the last fifteen years. The country's total debts have nearly tripled during the last fifteen years, reaching LKR 10,313 billion in 2017 from LKR 2,222 billion in 2005 (Central Bank of Sri Lanka, 2017). The debt servicing commitment in the year 2019 is about USD 5 billion. Some argued that during the last decade, public debt was mainly utilized to develop infrastructure facilities in the country, which is essential for shifting the economy to the next structural cycle or address the issue of the so-called middle-income trap, and expects to generate growth benefits in the economy in the long-run (Prasanna, 2016). Another group argues that debts were primarily utilized to finance the deficit of the budget, which was heavily comprehended by the growth of destructive expenditure in the economy. The public debts were primarily utilized to finance the fiscal deficit in the economy. The fiscal deficit is vast, first, due to the delay in tax reforms required in addressing the deteriorating status of government revenue as a percentage of GDP. For instance, government revenue as a percentage of GDP declined from 19.6% in 1990 to 11.6% in 2014. Second, it is due to the finance of the cost of unsustainable government business enterprises, politically motivated decisions in the economy, and maintaining a relatively high public sector. Third, it is due to the increased government expenditures on large-scale development projects in the economy. Thus, the study of implications of public debts on the key macroeconomic variables in the economy is of paramount importance as it helps to formulate appropriate policies to make growth stability in the economy.

In this connection, the impact of public debt on inflation in the country is among the key research subjects, because theoretically, public debts are largely inflationary. Inflation erodes the purchasing power of money and thereby declines the value of real money balances of the people, affecting the contraction of the aggregate demand in the economy. Also, high inflation negatively affects macroeconomic stability. Thus, the maintenance of modest inflation in the economy is the key challenge to achieve sustained economic growth. In this background, the overall objective of this paper is to study whether there is any significant impact of public debts on inflation in Sri Lanka.

In this connection, the following specific points will be focused: 1) study the long-run relationship between public debt and inflation, and 2) examine the short-run dynamic relationship between public debt and inflation.

The paper was structured as follows: The first section establishes the theoretical discussion on the research subject followed by the debt issue in Sri Lanka. The second section reviews the results of previous studies in the field, and the third section explains the vital methodological steps of time series econometric analysis. Subsequently, the paper discusses the results and draws the concluding points for policy considerations.

2. Literature review

A vast body of theoretical and empirical literature exists and that attempts to study the nature of the impact of public debt on inflation because price stability is one of the main macroeconomic goals of a government. Public debts are mainly used to finance the budget deficits of the country, and thus, a strong link with economic growth is essential to maintain debt sustainability.

Using an extensive panel data set of 71 countries over 43 years, Kwon et al., (2009) investigated the relationship between the public debt, money supply, and inflation to test the hypothesis 'an increasing public debt typically inflationary in countries with large public debt'. The results of the study confirmed that the effects of public debt on inflation is strong in indebted developing countries and weak in developing countries; it had no significant effect in developed countries. The main concluding point of Kwon et al., (2009)'s study is the risk of experiencing the debt-inflation trap. Highly indebted countries have a significantly high level of debt-inflation and suggest the importance of adopting measures to establish the relationship between fiscal policy and inflation and thereby avoid inflationary effects of public debt on inflation in indebted developing countries.

Catao and Terrones (2005) tested the macroeconomic theory that hypothesises the persistent deficit is inflationary using data of 107 countries from 1960 to 2001 by employing the panel data technique. The study models the deficit – inflation relationship as an intrinsically dynamic and nonlinear in the inflation tax base. The results indicate a strong positive association between deficit and inflation among high-inflation and developing country groups.

Bildirici and Ersin (2007) also investigated the relationship between inflation and domestic debt by using three country groups – Mexico, Turkey, and Brazil, the countries with high inflation experiences, which result in increasing the cost of domestic debt; Belgium, Canada, and Japan with low inflation rate and low borrowings; and Portugal, Greece, and Spain with low inflation and high borrowings. The analytical model employed in the study is the Fully Modified OLS estimation and Vector Error Correction model. The results reveal that the rate of domestic debt/GDP ratio is not mattered, but the cost of borrowings and active fiscal regimes increase the vulnerability of emerging economies to the economic crisis.

Veiga et al., (2014) analysed the implications of public debt on economic growth and inflation by considering time series data of 52 African economies from 1950 to 2012. The findings of the study demonstrate the positive impact of public debt on inflation, indicating high public debt leads to higher economic inflation in the African region. Matin (2015) also provides supportive evidence to the positive impact of public debt on inflation by theoretically analysing the relationship between public debt and inflation.

Bon (2015) assessed the relationship between debt and inflation using the time series data of 60 developing countries in Asia, Latin America, and Africa. The period covered by the study is the 1990 – 2014 and the study employed the variables as real per capita GDP, private investment, labour force, government revenue, infrastructure, and trade openness as control variables. The results of the study confirm the unidirectional relationship between public debt to inflation and a positive and significant impact of debt on inflation. Further, the study confirms the significant and negative effect of inflation on public debt. Taghavi (2000) empirically tested the hypothesis 'public debt has an adverse impact on investment, inflation, and economic growth in the large European economies' by applying hybrid-co-integration and vector autoregressive (VAR) models. The study results indicate the inflationary effect of debt in the long-run.

The significant findings of selected studies of this review provide mixed results. Most studies recognise the inflationary effect of debts while some investigations give specific results, indicating the risk of having the debt-inflation trap by the developing countries where debt to GDP ratio is high. However, academic literature for Sri Lanka in the subject field is rare, even though the country experiences a drastic increase in public debt.

3. Methodology
3.1 Data and econometric model

The study used annual time series data of the period 1977 to 2017. Data on the variables, i.e., GDP deflator, public debt, per capita gross domestic product, and government revenue were obtained from the annual reports of the Central Bank of Sri Lanka and data on Trade Openness from the World Development Indicator (WDI) database. The time period considered for the study is 1977 to 2017, which is the unique period of open economic policy. It is the policy phase which mainly focuses on the economic growth-oriented policies and the period which considerably increases the public debt.

The econometric model was specified as follows to study the long-run relationship and short-run dynamics among the variables:

$$LGDPD_t = \beta_0 + \beta_1 LnPD_t + \beta_2 LnREV_t + \beta_3 LnPCGDP_t + \beta_4 LnTO_t + \varepsilon_t --- (1)$$

Where *LGDPD* represents the GDP deflator, *PD* is the public debt, *REV* is the government revenue, *PCGDP* is per capita gross domestic product, *TO* is trade openness, ε is the stochastic error term, and β is parameters to be estimated. The variables *REV*, *PCGDP* and *TO*, were employed as control variables in the model. All variables are in the logarithm form. The variables were transformed into a form of the natural logarithm as it reduces the problem of Heteroskedasticity because the transformation leads to reduce the scale. The explanatory variables in the econometric model were identified based on the theoretical literature in the field.

3.2 Unit root test

The recent development in time series econometrics has shown that most of the macroeconomic variables appear to be non-stationary. However, their first difference is stationary; if the series is found to be of the order $I = (1)$. It is generally true that any linear combination of these variables will also be in the $I(0)$ order. If the variables are non-stationary, estimating regression using the techniques of OLS can rise to the phenomenon of spurious regression (Granger & Newbold, 1974; Phillips, 1987; Gujarati, 2004). The formal method to test the stationary of a series is the unit root test. In econometrics, several tests check the stationary. Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests are the most popular in academic literature. This study performed the ADF test to test the hypothesis of the presence of unit root. The ADF approach controls the higher-order correlation by adding lag difference terms of the dependent variable to the right-hand side of the regression. As indicated by Gujarati (2003), if the individual variable is y_t, the general form of the ADF test can be written as follows:

$$\Delta y_t = \alpha y_{t-1} + \sum_i^m \beta_i \Delta y_{t-i} + \delta + \gamma t + \varepsilon_t \rightarrow (2)$$

$$\Delta \Delta y_t = \alpha \Delta y_{t-1} + \sum_i^m \beta_i \Delta \Delta y_{t-i} + \delta + \gamma t + \varepsilon_t \rightarrow (3)$$

Where *m* is the number of lags and *t* is the time. The lag lengths (*m*) should be comparatively small to save degrees of freedom, but sufficiently large not to allow for the existence of autocorrelation in ε_t. The ε_t represents a sequence of uncorrelated stationary error terms with zero mean and constant variance. Having determined the appropriate value of significance, the hypothesis $H_0: \alpha = 0$ versus $H_1: \alpha < 0$. Rejection of H_0 means that y_t is $I(0)$ while the acceptance implies that it is integrated of order one. If the ADF statistics is larger than the critical value and the probability value is less than the 0.05, the series is stationary (Greene, 2007).

3.3 Cointegration test

After performing the stationarity test, the next step is to confirm whether there is a long-run equilibrium relationship between the variables incorporated in the model. The long-run relationship means that the variables move together over time so that short-run disturbances from the long-run trend will be corrected. In other words, a lack of cointegration indicates that such variables have no long-run relationship. The standard approach to investigate both the long-run relationship and the short-run dynamic between economic variables is the cointegration analysis and its error correction model representation. In this connection, Maximum-Likelihood cointegration test developed by Johansen, (1988) and Johansen & Juselius, (1990) was employed since it provides a unified framework for the estimation and testing of cointegration relations in the context of VAR error correction model.

Johansen (1988) has proposed two methods to decide the number r of cointegrating vectors which are the lambda – max test and trace test. The lambda-max test is based on the log-likelihood ratio $Ln[L_{max}(r)/L_{max}(r+1)]$ and is conducted sequentially for $r = 0, 1, ...k-1$. The test statistics involved is a maximum generalised Eigenvalue. This test tests the null hypothesis that the cointegration rank is equal to r against the alternative that the cointegration rank is equal to $r+1$. The trace test is based on the log likelihood ratio $Ln[L_{max}(r)/L_{max}(k)]$ and is conducted sequentially for $r = k-1, …………, 1, 0$. The test statistics involved is the trace of a diagonal matrix of generalised eigenvalues. This test tests the null hypothesis that the cointegration rank is equal to r against the alternative that the cointegration rank is k.

3.4 Vector error correction model

If cointegration is proven to the existence of long-run relationship among the variables, then requires the construction of an error correction mechanism to estimate the dynamic relationship. The error correction model expects to specify the speed of adjustment from the short-run equilibrium to the long-run equilibrium position. The error correction model (ECM) can be formulated as follows;

$$LGDPD_t = \sum_{i=1}^{n} \beta_0\, RGDP_{t-i} + \sum_{i=1}^{n} \beta_1\, LnPD_{t-i} + \sum_{i-1}^{n} \beta_2\, LnREV_{t-i} + \sum_{i-1}^{n} \beta_3\, LnPCGDP_{t-i}$$
$$+ \sum_{i-1}^{n} \beta_4\, LnTO_{t-i} + \delta_1 EC1_{t-1} + \varepsilon_{1t} - - - (4)$$

Where, n is the numbers of lags, $\beta_1, \beta_2, \beta_3,$ and β_4 are short-run coefficients to be estimated, $EC1_{t-i}$ represents the error correction term derived from the long-run cointegration relationship, and ε_{1t} the serially uncorrelated error term.

4. Results

4.1 Lag selection and unit root test

The study detects the optimal lag value and the stationary of time series data before the empirical analysis. Table 1 presents the results of the lag length selection criterions. According to the five criterions, the optimal lag value is three. Hence, the lag value 3 was used for further time series analysis.

Table 1

Results of lag length selection criterions

Lag	LogL	LR	FPE	AIC	SC	HQ
0	66.27721	NA	2.74e-08	-3.225116	-3.009644	-3.148453
1	313.1970	415.8650	2.35e-13	-14.90511	-11.22841	-14.44513*
2	342.5875	41.76542*	3.85e-13	-14.67596	-12.76599	-14.29289
3	358.8433	18.82249	2.00e-13*	-15.13618*	-13.61228*	-13.44935

Note: LR = sequential modified LR test statistic (each test at 5% level), FPE = Final prediction error, AIC = Akaike information criterion, SC = Schwarz information criterion, and HQ = Hannan-Quinn information criterion.

Table 2 presents the test results of the ADF test. It shows that all variables become stationary at their first deference form since three equations of ADF —trend, trend and intercept, and none – give significance levels at 5% level *(p < α = 0.05)*. It means ADF test does not reject unit root null hypothesis on the level and reject at 1st difference data. Thus, it was found that series are integrated order one *I(1)*. The graphical illustrations of the variables also show that all variables fluctuate around zero mean at their 1st difference form. Thus, all variables in the model transformed into the 1st difference form before performing the time series analysis as performing analysis using the variables on level lead to the problem of spurious regression.

Table 2

Results of Augmented Dickey-Fuller (ADF) test

Variables	Test Equations								
	Trend			Trend and Intercept			None		
	t-statistics	Critical Value (5%)	P Value	t-statistics	Critical Value (5%)	P Value	t-statistics	Critical Value (5%)	P Value
LNGDP_D	-3.2991	-2.936	0.021	-2.3786	-3.529	0.384	-2.3786	-3.529	0.3844
ΔLNGDP_D	-4.0436	-2.938	0.003	-4.9864	-3.529	0.001	-2.3362	-1.949	0.006
LNPD	-4.3200	-2.936	0.001	-2.6494	-3.526	0.262	1.49836	-1.949	0.964
ΔLNPD	-5.1050	-2.938	0.000	-6.8964	-3.529	0.000	-2.9510	-1.949	0.018
LNREV	-1.7789	-2.936	0.385	-2.2769	-3.529	0.436	7.61662	-1.949	1.000
ΔLNREV	-7.8112	-2.938	0.000	-7.6457	-3.529	0.000	-3.9852	-1.949	0.000
LNPCI	-1.6785	-2.936	0.434	-3.7368	-3.533	0.031	1.87106	-1.949	0.983
ΔLNPCI	-5.0708	-2.938	0.000	-5.3027	-3.529	0.000	-2.0861	-1.949	0.046
LNTO	-0.9358	-2.936	0.766	-1.7776	-3.526	0.696	-0.4960	-1.949	0.495
ΔLNTO	-5.6065	-2.938	0.000	-5.5240	-3.529	0.000	-5.6006	-1.949	0.000

Level Form

LNGDP_D
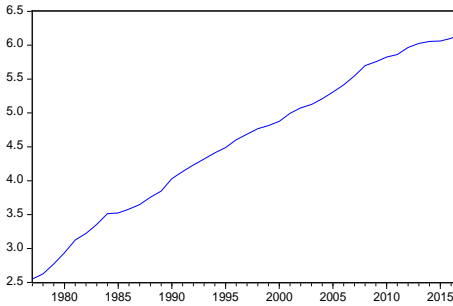
LNPD

LNGR

LNPCI

1st Difference Form

DLNGDP_D
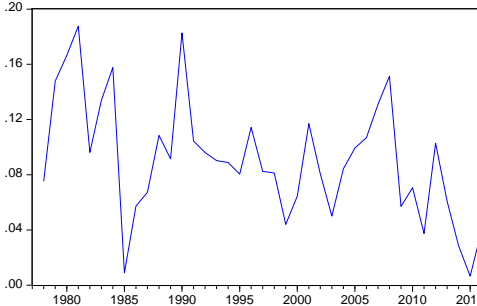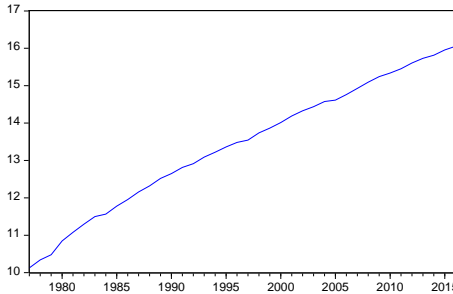
DLNPD
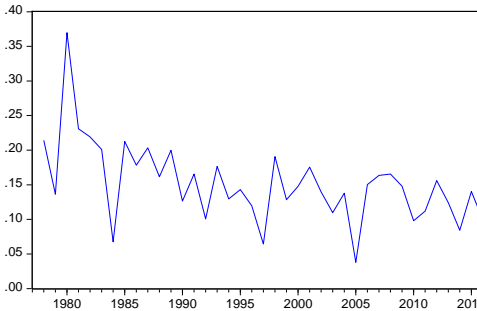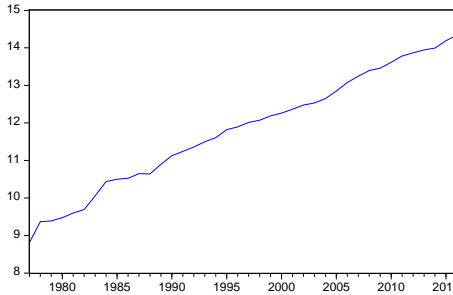
DLNGR
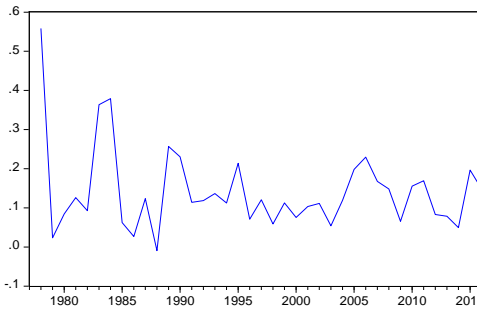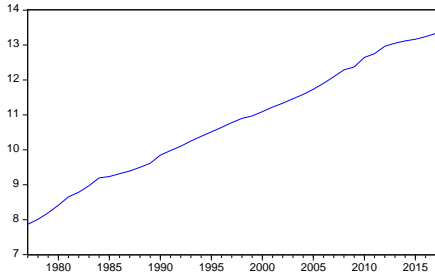
DLNPCI
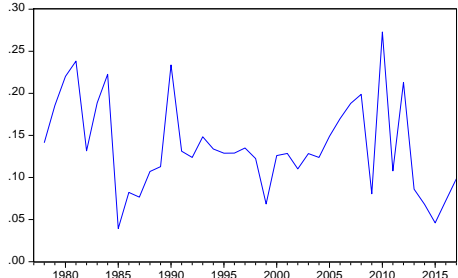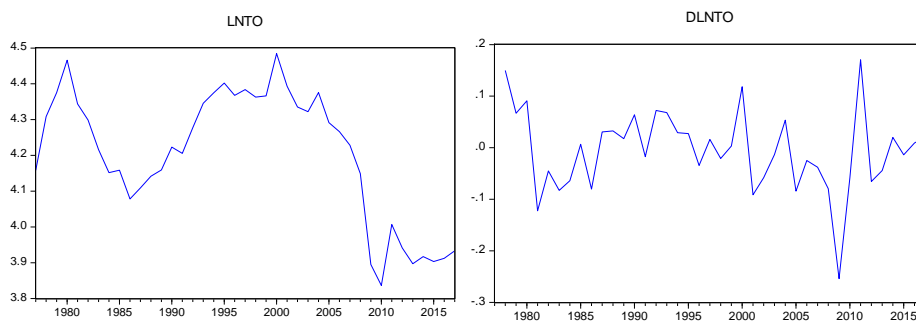
Figure 1 Graphical illustrations of variables employed in the model – at the level and at 1st difference level

4.2 Results of Johansen cointegration test

Both trace test and Maximum-Eigen statistics were used to identify the long-run relationship between the variables GDP deflator, public debt, government revenue, per capita gross domestic product, and trade openness ratio. Table 3 presents the test results. Accordingly, the study rejects the hypothesis that no cointegration exists, but fail to reject the hypothesis of the existence of more than one stationary linear combination. It means the variables used in the study are cointegrated or have a long-run association.

Table 3

Johansen cointegration test results

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.637226	83.04139	69.81889	0.0031
At most 1	0.389597	44.51032	47.85613	0.0997
At most 2	0.379808	25.75216	29.79707	0.1363
At most 3	0.153838	7.598535	15.49471	0.5093
At most 4	0.032381	1.250844	3.841466	0.2634

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.637226	38.53107	33.87687	0.0129
At most 1	0.389597	18.75816	27.58434	0.4334
At most 2	0.379808	18.15362	21.13162	0.1242
At most 3	0.153838	6.347691	14.26460	0.5690
At most 4	0.032381	1.250844	3.841466	0.2634

*Note: * denotes rejection of the hypothesis at the 0.05 level and **MacKinnon-Haug-Michelis (1999) p-values.*

The results of the Johansen cointegration test confirmed the long-run association among the variables. It indicates the close relationship between public debt and inflation in the long-run. The Trace test and Maximum Eigenvalue statistics confirm that there is one cointegrating equation, as presented below (see Appendix 1):

$$LNGDP\_D_t = C_1\big(4.8377 + LNGDP_{D_{-1}} - 0.2897LNPD_{-1} - 0.459LNGR_{-1} + 0.0655LNPCI_{-1} - 0.1824LNTO_{-1}\big) - - - - - - (5)$$

As shown in Appendix 1, the $C1$ is the speed of adjustments towards long-run equilibrium, and it is significant at 1% significant level; the probability value is 0.0078. According to the results, the value of the speed of adjustment is -1.0322. Therefore, the long run equation can be re-arranged as follows.

$$LNGDP\_D_t = -1.0322 \big(4.8377 + LNGDP_{D_{-1}} - 0.2897LNPD_{-1} - 0.459LNGR_{-1} + 0.0655LNPCI_{-1} - 0.1824LNTO_{-1}\big) - - - - - -(6)$$

$$LNGDP\_D_t = -4.9935 - 1.0322LNGDP_{D_{-1}} + 0.299LNPD_{-1} + 0.4738LNGR_{-1} - 0.0676LNPCI_{-1} + 0.1883LNTO_{-1} - - - - - - - (7)$$

Finally, the results confirm the positive impact of public debt on inflation *(GDPDₜ)* in the long-run. It indicates that a 1% increase of public debt leads to a rise of GDP deflator by 0.29% on the average in the long-run. Rest of the variables in the model also show a positive relationship with GDP deflator.

However, any short-run behaviour of the public debt deviating from this long-run equilibrium tends to adjust to the long-run equilibrium position over time. The presence of long-run association among variables leads to run Vector Error Correction Model (VECM) rather than Vector Auto-Regressive Model (VARM). As all the variables are cointegrated, the study used the VECM to assess the short-run impact of the independent variables on the dependent variable- inflation *(GDPDₜ)*. Table 4 presents the results of the VECM.

$$GDPD_t = -0.1204 + 0.8095LNGDP_{D_{t-1}} + 0.1676LNPD_{t-1} - 0.3223LNGR_{t-2} + 0.0714LNPCI_{t-1} - 0.2103LNTO_{t-3} - - - -(7)$$

The results of the VECM show positive effect of public debt on inflation *(GDPDₜ)* and the coefficient is statistically significant over the sampled period. The result indicates that a 1% increase in public debt leads to a rise in the value of GDP deflator by 0.16%. It designates that increased debt level in the economy leads to an increase in the price levels in the economy.

Table 4
Results of the vector error correction model

	Coefficient	Std. Error	t-Statistic	Prob.
Intercept	-0.120497	0.061378	-1.963176	0.0637*
LNGDP_D$_{t-1}$	0.809505	0.374788	2.159900	0.0431*
LNGDP_D$_{t-2}$	0.124409	0.347129	0.358395	0.7238
LNGDP_D$_{t-3}$	-0.131128	0.268895	-0.487655	0.6311
LNPD$_{t-1}$	0.167662	0.150637	1.113019	0.0789**
LNPD$_{t-2}$	0.002444	0.140551	0.017389	0.9863
LNPD$_{t-3}$	0.194906	0.159031	1.225580	0.2346
LNGR$_{t-1}$	-0.084277	0.110485	-0.762792	0.4545
LNGR$_{t-2}$	-0.322388	0.100578	-3.205347	0.0044*
LNGR$_{t-3}$	-0.036169	0.073956	-0.489062	0.6301
LNPCI$_{t-1}$	0.071445	0.230654	0.309749	0.0600**
LNPCI$_{t-2}$	0.438003	0.268904	1.628847	0.1190
LNPCI$_{t-3}$	0.447898	0.262050	1.709210	0.1029
LNTO$_{t-1}$	-0.097076	0.122787	-0.790606	0.4384
LNTO$_{t-2}$	-0.176455	0.121762	-1.449181	0.1628
LNTO$_{t-3}$	-0.210315	0.101710	-2.067795	0.0518*

*Note: *Denotes significant at 0.05 probability level and **denotes significant at 0.1 significant level.*

Table 5 presents the results of the validity tests of the model. It shows that 67.9% of the variability of the dependent variable – GDP deflator – is explained by the independent variables employed in the model. The F-test confirms the overall significance of the model. Since Durbin Watson statistic is close to 2 and Prob. chi-Sq. value is higher than 5%, this model does not suffer from serial correlation. As the Breusch-Pagan-Godfrey test statistics is higher than 5%, this model does not have Heteroskedasticity issue. The normality test confirms that the residuals of this model are normally distributed due to a higher p-value than the 5% level.

Table 5
Results of the validity tests of the model

Test	Statistics	
Goodness of Fit	R-squared	0.679176
	Adjusted R-squared	0.422517
Overall Significance	Prob. (F-statistic)	0.020764
	F-statistic	2.646219
Durbin-Watson stat	2.220755	
Breusch-Godfrey Serial Correlation LM Test	Obs*R-squared	3.860566
	Prob. Chi-Square	0.2769
Heteroskedasticity Test: Breusch-Pagan-Godfrey	Obs*R-squared	19.94912
	Prob. Chi-Square(20)	0.4611
Normality Test	Jarque-Bera Statistics	0.110502
	Probability	0.946248

5. Concluding remarks

This paper aimed to identify the long-run and short-run relationships between public debt and inflation in Sri Lanka by considering the open-economic policy phase (from 1977 to 2017). The study employed a time series econometric approach. The performed ADF test confirmed that all variables are stationary at their 1st difference level. The Johansen cointegration test revealed that there exists a long-run association between variables. The presence of a long-run association between variables leads to run the VECM and results indicated the short-run impact of the public debt on inflation (GDP deflator). The study results confirmed the positive relationship between public debt and inflation in Sri Lanka, and extending the existing knowledge–public debt is inflationary.

The key findings of this study draw several concluding points. The results suggest that the economy should have distinct measures to avoid the inflationary effect of public debt in the long-run. It indicates that public debt has not adequately generated the growth benefits to the economy in the long-run and thereby aggregate supply is not increased in the economy. This has caused to establish a positive relationship between public debt and inflation in the economy in the long-run due to the supply deficits. Further, it specifies the deficit between aggregate demand and aggregate supply, created by financing sources of the fiscal deficit, largely the public debt, in the economy largely filled by imports. Thus, the formulation of clear measures to establish a positive relationship between public debt and aggregate supply in the economy is crucial to reduce the inflationary effects of public debt in the long-run. It further means that Keynesian types of explanatory policies are less effective to induce the aggregate supply in the economy.

It is evident that the fiscal deficit, which is highly financed by the debts in the economy, is fundamentally due to the increased expenditures on unsustainable government business enterprises, politically motivated economic decisions, and the weak link of a debt-led infrastructure development project with production. For instance, in 2015, the government increased the salary about 1.4 million of public servants by LKR 10,000, making LKR 120 billion on the government budget (Ministry of Finance, 2015). This policy obviously resulted in an increase in aggregate demand in the economy and thereby created the supply deficit by providing the economy to the producers to induce their production. However, the policy failed to induce domestic output as expected, as the government did not properly analyse the immediate consumption steps of the middle-class workers, which is the vehicle. Thus, vehicle imports increased rapidly in 2015, making a heavy burden on the trade balance, the balance of payment, and depreciation of the rupee against major trade partner currencies. As Ranathilaka and Arachchi (2019) stated, the government annually spent over LKR 30 billion on fertilizer subsidy programme, but their relationship with productivity improvement in the rice sector is weak. Hence, they have suggested the need for improving the positive responsiveness of fertilizer subsidy on farm productivity. The expenses over loss-making public enterprises are another critical source of widening fiscal deficit in the country.

These typical examples on public expenditures provide clear evidence on the need of having appropriate measures, first, to link the public spending with production purposes

rather than the consumption purposes, second, to upgrade the efficiency and productivity of the economic activities, and third, to introduce appropriate economic reforms to the loss-making public enterprises.

Such measures will contribute to upgrade the aggregate production in the economy in the long-run and thereby minimise the inflationary effect of public debt resulted from expanding the fiscal deficit unless there is a risk in falling the economy into a debt-inflation trap. Particularly, if public debts are utilized to finance the budget deficit, the budget would be more economically growth-oriented, unless public debt would be inflationary in the long-run and debt sustainability will be a matter of the economy.

References

Bildirici, M. & Ersin, O. (2007). Domestic debt, inflation and economic crises: A panel co-integration application to emerging and developed economies. *Applied Econometrics and International Development, 7(1),* 31-47.

Bon, N. (2015). The relationship between public debt and inflation in developing countries: empirical evidence based on difference panel GMM. *Asian Journal of Empirical Research,* 5(9), 128-142.

Catao, L. & Terrones, M. (2005). Fiscal deficits and inflation. *Journal of Monetary Economics ,*52, 529-554.

Central Bank of Sri Lanka, (2017). *Annual Report,* Colombo: Central Bank of Sri Lanka.

Fischer, S., Sahay, R. & Végh, C. (2002). Modern Hyper- and High Inflations. *Journal of Economic Literature,* 40(3), 837-80.

Granger, C. & Newbold, P.(1974). Spurious Regression in Econometrics. *Journal of Econometrics ,* 2, 111-120.

Greene, W. (2007). *Econometric analysis*. New Jersey: Pearson Education.

Gujarati, D. (2004). *Basic Econometrics.* McGraw-Hill Companies.

Johansen, S. (1988). Statistical analysis of cointegration vectors. *Journal of Economic Dynamics and Control, 12(2-3)*, 231-254.

Johansen, S., & Juselius, K. (1990). Maximum Likelihood Estimation and Inference on Cointegration — with Applications to the Demand for Money. Oxford Bulletin of Economics and Statistics 52, 169–210 (1990). (With K. Juselius). *Oxford Bulletin of Economics and Statistics*, *52*, 169-210.

Kwon, G., McFarlane, L. & Robinson, W.(2009). Public Debt, Money Supply, and Inflation: A Cross-Country Study. *IMF Economic Review ,* 56(3), 476-515.

Matin, F. (2015). Debt, inflation and central bank independence. *European Economic Review ,* 7, 129-150.

Ministry of Finance (2015). Budget Speech, Ministry of Finance, Comombo.

Mweni, F., Njuguna, A. & Oketch, T. (2016). The Effect of External Debt on Inflation Rate in Kenya, 1972-2012. *International Journal of Financial Research,* 7(4), 198-207.

Nguyen, V. (2015). Effects of Fiscal Deficit and Money M2 Supply on Inflation: Evidence from Selected Economies of Asia. *Journal of Economics, Finance and Administrative Science,* 20, 49-53.

Phillips, P.(1987). Time Series Regression with a Unit Root. *Econometrica,* 55(2), 277-301.

Prasanna, R. (2016). Is Foreign Debt Sustainability a Matter for Sri Lanka?. *Rajarata Journal of Social Sciences ,* 2(1), 7-9.

Ranathilaka, M. & Arachchi, I. (2019). The effect of fertilizer subsidy on small-scale paddy production in Sri Lanka: A case in Hinguraggoda DS division in Polonnaruwa District. *Sri Lanka Journal of Economic Research ,* 6(2).

Romero, J. & Marín, K. (2017). Inflation and Public Debt. *Monetaria ,*41-94.

Taghavi, M. (2000). Debt, growth and inflation in large European economies: A vector autoregression analysis. *Journal of Evolutionary Economics ,* 10(1-2), 159-173.

Veiga, J. d., Ferreira-Lopes, A. & Sequeira, T. (2014). Public debt, economic growth, and inflation in African economies. *MPRA Paper No. 57377.*

Appendix 1: Vector Error Correction Estimates

Vector Error Correction Estimates
Date: 03/23/19   Time: 23:34
Sample (adjusted): 1981 2017
Included observations: 37 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
LNGDP_D(-1)	1.000000
LNPD(-1)	-0.289663
	(0.03881)
	[-7.46312]
LNGR(-1)	-0.459049
	(0.05364)
	[-8.55718]
LNPCI(-1)	0.065474
	(0.03852)
	[1.69958]
LNTO(-1)	-0.182440
	(0.02281)
	[-7.99771]
C	4.837666

Error Correction:	D(LNGDP_D)	D(LNPD)	D(LNGR)	D(LNPCI)	D(LNTO)
CointEq1	-1.032169	0.582105	0.826527	-1.066660	0.796880
	(0.34930)	(0.49099)	(0.85876)	(0.59138)	(0.73977)
	[-2.95492]	[1.18558]	[0.96247]	[-1.80367]	[1.07720]
D(LNGDP_D(-1))	0.809505	-0.216488	0.708666	0.875744	-2.291904
	(0.37479)	(0.52681)	(0.92141)	(0.63453)	(0.79374)
	[2.15990]	[-0.41094]	[0.76911]	[1.38015]	[-2.88747]
D(LNGDP_D(-2))	0.124409	0.642888	-0.172252	0.328362	0.756410
	(0.34713)	(0.48793)	(0.85341)	(0.58770)	(0.73516)
	[0.35840]	[1.31758]	[-0.20184]	[0.55873]	[1.02890]
D(LNGDP_D(-3))	-0.131128	-0.194010	1.015106	-0.068167	0.870063
	(0.26890)	(0.37796)	(0.66107)	(0.45525)	(0.56948)
	[-0.48766]	[-0.51330]	[1.53554]	[-0.14974]	[1.52783]
D(LNPD(-1))	0.167662	0.094122	-0.017305	0.096492	-0.228475
	(0.15064)	(0.21174)	(0.37034)	(0.25503)	(0.31902)
	[1.11302]	[0.44452]	[-0.04673]	[0.37835]	[-0.71617]
D(LNPD(-2))	0.002444	0.344105	-0.423729	-0.131075	0.399797
	(0.14055)	(0.19756)	(0.34554)	(0.23796)	(0.29766)
	[0.01739]	[1.74177]	[-1.22628]	[-0.55084]	[1.34312]

D(LNPD(-3))	0.194906	-0.134128	0.382691	0.086305	-0.326292
	(0.15903)	(0.22354)	(0.39098)	(0.26924)	(0.33680)
	[1.22558]	[-0.60003]	[0.97881]	[0.32055]	[-0.96879]
D(LNGR(-1))	-0.084277	0.034694	0.285861	-0.081623	0.211922
	(0.11049)	(0.15530)	(0.27163)	(0.18706)	(0.23399)
	[-0.76279]	[0.22340]	[1.05240]	[-0.43636]	[0.90569]
D(LNGR(-2))	-0.322388	0.208678	-0.241654	-0.495342	0.153258
	(0.10058)	(0.14137)	(0.24727)	(0.17028)	(0.21301)
	[-3.20535]	[1.47607]	[-0.97729]	[-2.90895]	[0.71949]
D(LNGR(-3))	-0.036169	0.133243	-0.134280	-0.076661	0.070529
	(0.07396)	(0.10395)	(0.18182)	(0.12521)	(0.15663)
	[-0.48906]	[1.28175]	[-0.73854]	[-0.61226]	[0.45030]
D(LNPCI(-1))	0.071445	-0.021168	-0.766027	0.009996	0.768843
	(0.23065)	(0.32421)	(0.56706)	(0.39050)	(0.48849)
	[0.30975]	[-0.06529]	[-1.35088]	[0.02560]	[1.57393]
D(LNPCI(-2))	0.438003	-0.622809	-0.400262	0.694124	-1.037969
	(0.26890)	(0.37798)	(0.66110)	(0.45526)	(0.56949)
	[1.62885]	[-1.64775]	[-0.60545]	[1.52467]	[-1.82262]
D(LNPCI(-3))	0.447898	-0.171192	-0.214999	0.494939	-1.155932
	(0.26205)	(0.36834)	(0.64425)	(0.44366)	(0.55498)
	[1.70921]	[-0.46476]	[-0.33372]	[1.11559]	[-2.08284]
D(LNTO(-1))	-0.097076	0.388110	0.061255	-0.237997	0.245743
	(0.12279)	(0.17259)	(0.30187)	(0.20788)	(0.26004)
	[-0.79061]	[2.24873]	[0.20292]	[-1.14487]	[0.94501]
D(LNTO(-2))	-0.176455	0.078290	0.232745	-0.282980	0.338613
	(0.12176)	(0.17115)	(0.29935)	(0.20615)	(0.25787)
	[-1.44918]	[0.45743]	[0.77750]	[-1.37272]	[1.31310]
D(LNTO(-3))	-0.210315	-0.036112	-0.044428	-0.304155	0.302470
	(0.10171)	(0.14297)	(0.25005)	(0.17220)	(0.21540)
	[-2.06780]	[-0.25259]	[-0.17767]	[-1.76631]	[1.40419]
C	-0.120497	0.144617	0.203686	-0.067910	0.217557
	(0.06138)	(0.08627)	(0.15090)	(0.10392)	(0.12999)
	[-1.96318]	[1.67624]	[1.34982]	[-0.65351]	[1.67365]
R-squared	0.679176	0.458644	0.497836	0.469516	0.531135
Adj. R-squared	0.422517	0.025559	0.096104	0.045129	0.156043
Sum sq. resids	0.020429	0.040363	0.123477	0.058557	0.091630
S.E. equation	0.031960	0.044924	0.078574	0.054110	0.067687
F-statistic	2.646219	1.059015	1.239225	1.106340	1.416012
Log likelihood	86.28082	73.68317	52.99765	66.79962	58.51622
Akaike AIC	-3.744909	-3.063955	-1.945819	-2.691871	-2.244120
Schwarz SC	-3.004758	-2.323804	-1.205668	-1.951720	-1.503969
Mean dependent	0.087613	0.143313	0.133683	0.133048	-0.014404
S.D. dependent	0.042057	0.045509	0.082646	0.055374	0.073679

Determinant resid covariance (dof adj.)	2.04E-14	
Determinant resid covariance	9.43E-16	
Log likelihood	377.5576	
Akaike information criterion	-15.54365	
Schwarz criterion	-11.62520	

D(LNGDP_D) = C(1)*(LNGDP_D(-1) - 0.289663408917*LNPD(-1) - 0.459048739174*LNGR(-1) + 0.0654739307003*LNPCI(-1) - 0.182439829606*LNTO(-1) + 4.83766564223) + C(2)*D(LNGDP_D(-1)) + C(3)*D(LNGDP_D(-2)) + C(4)*D(LNGDP_D(-3)) + C(5)*D(LNPD(-1)) + C(6)*D(LNPD(-2)) + C(7)*D(LNPD(-3)) + C(8)*D(LNGR(-1)) + C(9)*D(LNGR(-2)) + C(10)*D(LNGR(-3)) + C(11)*D(LNPCI(-1)) + C(12)*D(LNPCI(-2)) + C(13)*D(LNPCI(-3)) + C(14)*D(LNTO(-1)) + C(15)*D(LNTO(-2)) + C(16)*D(LNTO(-3)) + C(17)

Dependent Variable: D(LNGDP_D)

Method: Least Squares

Date: 03/23/19   Time: 23:35

Sample (adjusted): 1981 2017

Included observations: 37 after adjustments

D(LNGDP_D) = C(1)*(LNGDP_D(-1) - 0.289663408917*LNPD(-1) -
0.459048739174*LNGR(-1) + 0.0654739307003*LNPCI(-1) - 0.182439829606*LNTO(-1) + 4.83766564223
) + C(2)*D(LNGDP_D(-1)) + C(3)*D(LNGDP_D(-2)) + C(4)*D(LNGDP_D(-3)) + C(5)*D(LNPD(-1)) +
C(6)*D(LNPD(-2)) + C(7)*D(LNPD(-3)) + C(8)*D(LNGR(-1)) + C(9)*D(LNGR(-2)) + (10)*D(LNGR(-3))
+ C(11)*D(LNPCI(-1)) + C(12) *D(LNPCI(-2)) + C(13)*D(LNPCI(-3)) + C(14)*D(LNTO(-1)) + C(15)
*D(LNTO(-2)) + C(16)*D(LNTO(-3)) + C(17)

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-1.032169	0.349305	-2.954924	0.0078
C(2)	0.809505	0.374788	2.159900	0.0431
C(3)	0.124409	0.347129	0.358395	0.7238
C(4)	-0.131128	0.268895	-0.487655	0.6311
C(5)	0.167662	0.150637	1.113019	0.0789
C(6)	0.002444	0.140551	0.017389	0.9863
C(7)	0.194906	0.159031	1.225580	0.2346
C(8)	-0.084277	0.110485	-0.762792	0.4545
C(9)	-0.322388	0.100578	-3.205347	0.0044
C(10)	-0.036169	0.073956	-0.489062	0.6301
C(11)	0.071445	0.230654	0.309749	0.0600
C(12)	0.438003	0.268904	1.628847	0.1190
C(13)	0.447898	0.262050	1.709210	0.1029
C(14)	-0.097076	0.122787	-0.790606	0.4384
C(15)	-0.176455	0.121762	-1.449181	0.1628
C(16)	-0.210315	0.101710	-2.067795	0.0518
C(17)	-0.120497	0.061378	-1.963176	0.0637

R-squared	0.679176	Mean dependent var	0.087613
Adjusted R-squared	0.422517	S.D. dependent var	0.042057
S.E. of regression	0.031960	Akaike info criterion	-3.744909
Sum squared resid	0.020429	Schwarz criterion	-3.004758
Log likelihood	86.28082	Hannan-Quinn criter.	-3.483971
F-statistic	2.646219	Durbin-Watson stat	2.220755
Prob(F-statistic)	0.020764		

Are investors self-reflective thinkers? The role of self-reflection in their learning behaviour

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Abstract

This paper adds a new perspective to the individual learning behaviour of the retail investors by exploring how their investment experiences result in learning effects to reduce behavioural biases occurred with their investment decision makings. The study was based on a web-based self-administrated questionnaire survey for a sample of 1000 individual investors of the Colombo Stock Exchange. The responses received were 189, which were analysed by applying the Partial Least Squares Structural Equation Modelling technique to test the hypotheses. The results show that the investors learn by self-reflection of their past investment experiences, which, consequently, reduces herd and heuristic biases. In addition, the self-reflection fully mediates the relationships between the experience and these behavioural biases. Accordingly, this study concludes that the self-reflection of past investment experiences is the mechanism of the individual learning process, which enables to realize behavioural biases occurred with the investment decisions.

Keywords: Adaptive market hypothesis, Colombo Stock Exchange, herd bias, heuristic bias, individual learning, investment experience, partial least squares, self-reflection, structural equation modeling.

1. Introduction

The behavioural finance literature extensively discusses different types of behavioural biases that occur in an investor's decision making process (Kumar & Goyal, 2015). It further reveals that investors have a tendency to use simple heuristics when making their decisions due to factors such as uncertainties in market environment, limited accessibility to information, time pressure and their limited cognitive abilities. Since a heuristic is a mental shortcut used to make a decision quickly and frugally by processing only a part of

information relevant to a decision, irrationalities may occur when processing information. Consequently, the investors would experience poor performance of their investments, and the functioning of financial markets could become inefficient (Barber & Odean, 2011; Filbeck et al., 2017). The Adaptive Market Hypothesis (AMH) of Lo (2004, 2005, 2012) postulates that though investors typically behave irrationally when processing information, they are capable of learning the irrational behaviours occurred with their past decisions. In this manner, they would be able to select more appropriate investment strategies, and, thereby, increase their investment performance over time. Therefore, the learning behaviour can be deemed as a key determinant of the investment performance. It would also enhance the efficient functioning of a financial market when the learning attempts result to minimize behavioural biases at the aggregate market level.

The learning behaviour has been studied in artificial market environments by forming agent-based financial models, which assume that investors learn by their own (known as "individual learning") as well as by imitating other investors' behaviours (known as "social learning"). In case of the individual learning, the previous studies usually predict the reinforcement learning which means that investors learn by trial-and-error, which directs them to select better investment strategies for adapting to market environment. However, this reinforcement assumption as the mechanism of the individual learning process has been debated in the literature, as follows. Pastore, Esposito, and Vasilaki (2015) show that the majority of agents in the study sample do not engage in reinforcement learning. The study of Hirshleifer (2015) shows evidence that reveals investors' tendency to merely extrapolate or over-extrapolate their own past experiences without appropriately reflecting on the experiences. Accordingly, the literature argues that reinforcement learning can cause biases in the learning process. On the other hand, if the reinforcement learning holds true, a higher level of investment experience should lead to a lower level of behavioural biases and, thereby, increase investment performance. Conversely, the previous studies reveal mix findings in respect of this prediction. In spite of the evidence supporting this reinforcement learning assumption (for example, Barber & Odean, 2011; Bradbury, Hens & Zeisberger, 2014; List, 2011; Nicolosi, Peng & Zhu, 2009), some contradictory findings appear in the literature, as follows. Chevalier and Ellison (1999) show that investment experience is negatively related to investment performance. Agarwal, Driscoll, Gabaix, and Laibson (2007) find that the relationship between the experience and the performance takes an inverse U shape, which means that the performance is likely to decrease when the experience moves beyond a specific level. Further, Bhandari and Deaves (2006), Bodnaruk and Simonov (2015), Chang (2017), Wulfmeyer (2016) and Xiao (2015) reveal that the experience increases behavioural biases which, in turn, decreases the performance.

Adding a new direction to this debate on the association between investment experience and behavioural biases, the model of investor learning behaviour, proposed by Shantha, Xiaofang, and Gamini (2018) claim that past experience does not itself produce learning to reduce behavioural biases. Rather, it predicts that the learning occurs when the experiences are cognitively evaluated to justify the validity of the perspectives such as beliefs, thoughts and assumptions underlying those past decisions, which is known as

"self-reflection". Thus, this self-reflection of past experiences is expected to play a mediating role on the relationship between the experience and behavioural biases. This study aims to explore whether herd and heuristic biases are reduced through the mediating effect of the self-reflection in the individual learning behaviour of the retail investors of the CSE. The findings reveal that the self-reflection has a full mediating effect on the relationship between the experience and herd and biases. Accordingly, while supporting the model's predictions, the results of the present study will contribute the literature a new perspective on the individual learning behaviour of investors. The investors can use it as a guide to improve their decision making so that their investment performance and market participation will be enhanced in the future. Stock exchanges and investment advisors can use this new direction when designing training programs for investor community.

The reminder of the paper is structured as follows. Section 2 elaborates the conceptual model and hypotheses of the study. The research methodology is discussed in Section 3. Section 4 presents the demography and the investment profile of the respondents, and discusses the results relating to the assessment of the reliability and validity of the model's constructs and the test of hypotheses to infer about the learning behaviour of the investors. Section 5 concludes the paper.

2. Conceptual model and hypotheses

The conceptual model used in this work, as depicted in Figure 1, is based on the model of investor learning behaviour, proposed by Shantha et al., (2018). It provides a comprehensive view of the learning process by integrating cognitive, affective, behavioural and social aspects of learning. The model assumes that an investor learns individually through the self-reflection of his/her own past experiences. It is the cognitive evaluation of the validity of the perspectives such as beliefs, thoughts and assumptions underlying the investor's past investment decisions. In this manner, it facilitates to revise biased perspectives so that future investment decisions would be based on the revised perspectives that are adaptive to market conditions. Accordingly, the self-reflection is the mechanism of the individual learning that reduces herd and heuristic biases, as hypothesized below.

H1: An investor's investment experience (IE) is positively related to the extent of self-reflection (SR) he/she involves when learning.

H2: The level of SR is negatively related to the extent of herd bias (HERD) that occurred when trading stocks.

H3: The level of SR is negatively related to the extent of heuristic bias (HEUR) that occurred when trading stocks.

H4: SR mediates the relationship between IE and HERD.

H5: SR mediates the relationship between IE and HEUR.
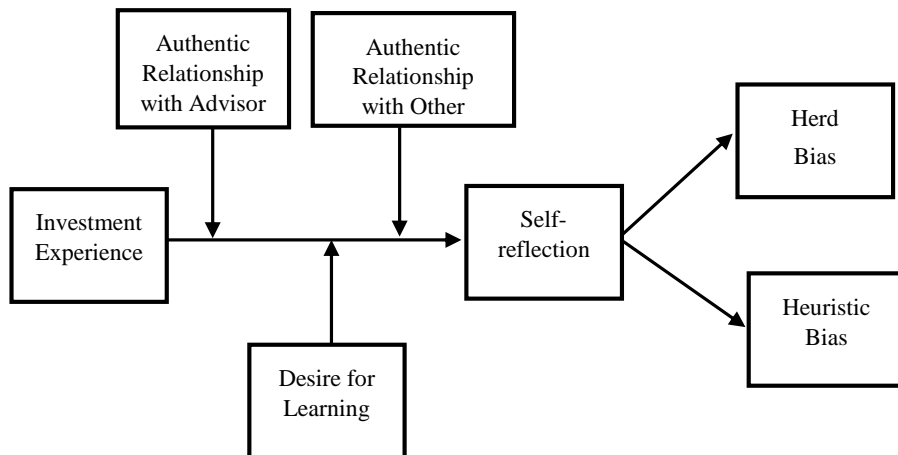
Figure 1 Conceptual framework of investor learning behaviour (adopted from Shantha et al., (2018))

In addition, the model assumes that the extent of the self-reflection is strengthened through the relationships with investment advisor and other investors since such social interactions facilitate to receive appropriate guidance, information and practical knowledge to aware of the biased perspectives occurred during previous trading decisions. As predicted by Shantha et al., (2018), when the relationships are authentic, investors feel a high level of the trustworthiness of the knowledge and information received, hence, the greater is the extent of self-reflection, as given by the hypotheses H6 and H7.

H6: Authentic relationship with the investment advisor (ARAD) positively moderates the positive relationship between IE and SR.

H7: Authentic relationships with other investors (AROT) positively moderate the positive relationship between IE and SR.

The model further predicts that an investor's affects such as interest towards learning, emotions and attention to mistakes strengthen the learning process. Since these affects are integrated with the cognitive functioning of the brain, they affect the efficiency and effectiveness of the self-reflection process. Accordingly, it is expected that an investor's desire for learning has a positive moderating effect in the self-reflection process, as shown by the hypothesis H8.

H8: Desire for learning (DL) positively moderates the positive relationship between IE and SR.

3. Methodology

Data was collected through a web-based questionnaire survey conducted from March to August 2018. The questionnaire was consisted of the question items relating to the demography and investment profile of the respondents and the measurement of the extent

to which they were characterised by each of the model's constructs. A sample of 1000 individual investors of the CSE whose security accounts had been active during previous six months were invited to respond to the questionnaire. However, only 189 valid responses received, which indicates a response rate of 19%. The investors were apparently panic and frustrated due to the uncertain market environment prevailed during the study period, which could be regarded as the main cause of this low response rate. The non-response bias, tested in accordance with the procedure suggested by Dooley and Lindner (2003), was not appeared in the responses received.

Considering the exploratory nature of this study, the data analysis was performed using the Partial Least Squares Structural Equation Modelling technique, powered by SmartPLS 3 software (Becker, Rai, & Rigdon, 2013; Evermann & Tate, 2016; Sarstedt, Ringle, & Hair, 2017). In the analysis process, first, the measurement model was assessed to confirm the measurement quality of the model's constructs, and, after that, the structural model was evaluated for hypothesis testing (Sarstedt et al., 2017). Since the model's constructs were reflectively defined, the indicator reliability, internal consistency reliability, convergent validity and discriminant validity of the constructs were assessed to confirm their measurement quality. The structural model was evaluated for the collinearity issues by analyzing the variance inflation factor (VIF), the predictive capability based on the coefficient of determination (R^2), cross-validated redundancy (Q^2) and effect-size (f^2), and the hypothesis testing by referring to the significance of path coefficients.

4. Results and discussion
4.1 Respondents' demography and investment profile

The analysis of the respondents' demography reveals that male respondents are 71.4 percent of the responses received. In addition, about 40 percent of them are below the age level of 35 years and 44 percent in age group of 35–54 years. Further, about a half of the respondents have a bachelor's degree or a higher education qualification. In terms of the employment, the respondents are spread over private sector (78.3 percent), public sector (4.8 percent), retired (5.8 percent), self-employed (8.5 percent) and unemployed (2.6 percent) categories. Thus, the sample seems to characterize fairly the demographic of the individual investor population in the CSE. The average trading experience of the respondents is 11 years with the standard deviation of 6.18, as reflected by 4.8 percent having 2 years or less experience and 11.1 percent possessing 18 or more years of experience. Concerning about the trading frequency, the majority (59.3 percent) trades occasionally, whereas only a small proportion of the respondents (9.5 percent) trades on daily basis. The respondents who are characterized by low risk appetite (46.6 percent) is higher than those with a high risk appetite (30.6 percent). As a result, a majority of them exhibits a lower propensity for stock investments, as reflected by 20.1 percent holding less than 5 percent and 48.1 percent holding 5–15 percent of wealth in stock. Accordingly, the risk appetite, trading frequency and proportion of stock investment are appearently at a low level for a majority of the respondents during the study period, which could be due to the uncertain trading environment prevailed in the CSE during this period.

4.2 Reliability and validity of measurements

Tables 1 to 3 report the results in respect of the reliability and validity of the model's constructs. Table 1 shows that the indicator items exhibit an acceptable level of their reliability as their loading values are higher than 0.7 level on their respective constructs. The Cronbach's Alpha and the Composite Reliability values of all the constructs are also greater than 0.7, which indicate a high level of the internal consistency reliability.

Table 1

Evaluation of the measurement quality of the model's constructs

Construct	Indicator Item	Indicator Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
ARAD	Arad_1	0.866	0.876	0.891	0.671
	Arad_2	0.777			
	Arad_3	0.810			
	Arad_5	0.821			
AROT	Arot_1	0.681	0.848	0.888	0.614
	Arot_2	0.797			
	Arot_3	0.822			
	Arot_4	0.790			
	Arot_5	0.820			
DL	Dl_1	0.799	0.911	0.928	0.618
	Dl_2	0.819			
	Dl_3	0.806			
	Dl_4	0.827			
	Dl_6	0.748			
	Dl_7	0.733			
	Dl_8	0.763			
	Dl_9	0.788			
HERD	Herd_1	0.889	0.824	0.892	0.734
	Herd_2	0.815			
	Herd_3	0.865			
HEUR	Heur_2	0.774	0.851	0.850	0.535
	Heur_3	0.821			
	Heur_7	0.786			
	Heur_8	0.645			
	Heur_9	0.607			
SR	Sr_1	0.565	0.880	0.883	0.527
	Sr_2	0.533			
	Sr_3	0.819			
	Sr_4	0.838			
	Sr_5	0.650			
	Sr_6	0.815			
	Sr_7	0.790			
IE	Trade_Years	1.000	1.000	1.000	1.000

Note: This table shows the indicator items' loading, the Cronbach's Alpha, the Composite Reliability and the Average Variance Extracted values for evaluating the measurement quality of the model's constructs. An indicator loading value greater than 0.5 shows the indicator reliability (Hulland, 1999). A set of indicators to measure each construct was arrived from the loading relevant test (Wong, 2016). The Cronbach's Alpha and the Composite Reliability values greater than 0.7 indicate the internal consistency reliability of the respective constructs (Gefen, Straub, & Boudreau, 2000; Nunnally & Bernstein, 1994). The Average Variance Extracted value greater than 0.5 represents the convergent validity (Bagozzi & Yi, 1988; Fornell & Larcker, 1981).

In addition, all the constructs demonstrate the Average Variance Extracted values in excess of the cut-off level of 0.5, confirming their convergent validity. The Fornell and Larcker criterion (as shown in Table 2) and the Heterotrait-Monotrait criterion (as shown in Table 3) analyses reveal strong evidence of the constructs' discriminant validity. Further, the Variance Inflation Factor values, as given in Table 4, confirm the absence of multi-collinearity issues in the model as these values are below five.

Table 2

The Fornell-Larcker criterion analysis for evaluating discriminant validity

	ARAD	AROT	DL	HERD	HEUR	SR	IE	Discriminant Validity met?
ARAD	0.819							Yes
AROT	0.428	0.784						Yes
DL	0.421	0.530	0.786					Yes
HERD	-0.116	0.101	-0.190	0.857				Yes
HEUR	0.048	0.232	0.034	0.180	0.731			Yes
SR	0.336	0.311	0.542	-0.313	-0.170	0.726		Yes
IE	0.101	0.166	0.185	-0.012	0.127	0.205	Single item	Yes

Note: This table shows the square root of the average variance extracted value of each construct (as given on the diagonal and printed in bold) and its correlations with other constructs (as shown by non-diagonal elements). The discriminant validity is met when square root of the average variance extracted value of a construct is greater than its correlation coefficients with other constructs (Fornell & Larcker, 1981).

Table 3

The Heterotrait-Monotrait criterion analysis for evaluating discriminant validity

	ARAD	AROT	DL	HERD	HEUR	SR	IE
ARAD	-						
AROT	0.463	-					
DL	0.456	0.589	-				
HERD	0.165	0.186	0.212	-			
HEUR	0.140	0.238	0.108	0.218	-		
SR	0.353	0.324	0.597	0.353	0.220	-	
IE	0.117	0.172	0.193	0.014	0.078	0.226	-

Note: This table reports the Heterotrait-monotrait ratio of correlations between the model's constructs. The discriminant validity is confirmed if these values are less than 0.85 (Henseler, Ringle, & Sarstedt, 2015).

Table 4

The variance inflation factor values for testing the multicollinearity

	ARAD	AROT	DL	SR	IE
SR	1.385	1.530	1.696		1.123
HERD				1.261	
HEUR				1.261	

Note: This table shows the Variance Inflation Factor values of exogenous constructs (given in column wise) with respect to their endogenous constructs (given in raw wise) for the examination of the multicollinearity. The multicollinearity is absent if this value is less than 5 (Cassel, Hackl, & Westlund, 1999; Hair, Ringle, & Sarstedt, 2011).

4.3 Learning behavior of investors

Figure 2 depicts the main results relating to the investors' learning behavior. R^2 values of SR, HERD and HEUR constructs are 37.8 percent, 9.3 percent and 9.5 percent respectively. Q^2 values of SR, HERD and HEUR constructs are 0.177, 0.062 and 0.010 respectively, which indicate an acceptable level of the path model's predictive accuracy and relevance (Sarstedt et al., 2017). Table 5 presents the hypotheses testing results relating to the learning behavior of the investors. As shown in Part A of the table, consistent with H1, the trading experience positively impacts on the extent of self-reflection occured when learning. An increase in one standard deviation of IE construct increases SR construct by 19.3 percent standard deviation ($f^2 = 0.049$, $p < 0.01$).
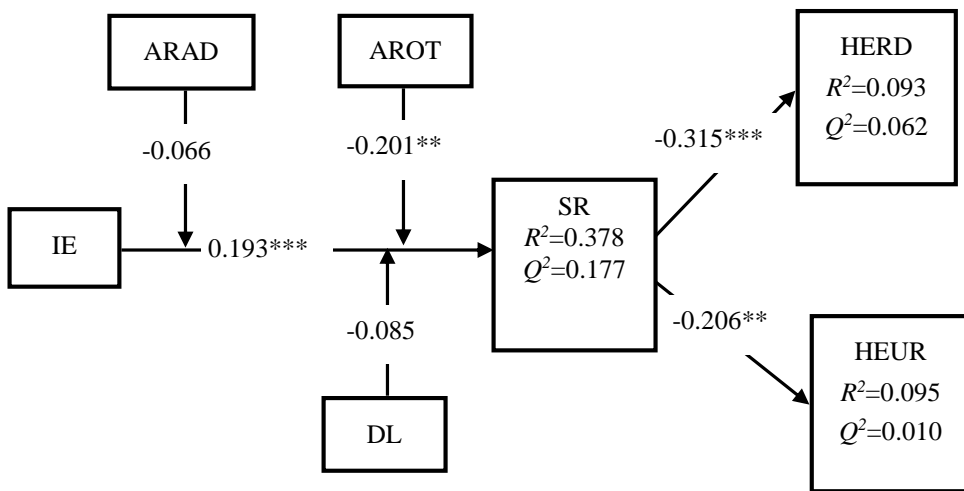
Figure 2 The learning behaviour and its effect on behavioural biases

Note: The significance at 1 percent, 5 percent and 10 percent levels are denoted by ***, ** and * respectively.

In addition, the findings confirm H2 and H3, indicating that an increase in one standard deviation of SR construct reduces HERD and HEUR constructs by 31.5 percent standard deviation ($f^2 = 0.108$, $p < 0.01$) and 20.6 percent standard deviation ($f^2 = 0.040$, $p < 0.05$) respectively. These findings are consistent with those of Shantha (2019) which reveal about the investors' learning tendency to shift away from herd behaviour when trading stocks. Further, supporting H4, SR construct mediates the association between IE and HERD constructs at 5 percent level of significance. The same is evident in respect of HEUR construct at 10 percent level of significance, which supports the hypothesis H5. Nevertheless, the results, as shown in panel C, do not confirm for the direct negative effect of the investment experience on herd and heuristic biases. Thus, consistent with the previous studies discussed in section 1, it appears that the reinforcement learning assumption does not adequately represent the learning behaviour of investors. Accordingly, SR has a full mediating effect on the association between the experience and the behavioral biases (Zhao, Lynch, & Chen, 2010).

Table 5

Estimates of model's path coefficients, significance and effect sizes

Hypothesis	Path	Path coefficient	Standard error	t-value	p-value	Decision	f^2
Part A: Effect of investment experience on self-reflection and behavioral biases							
H1	IE→SR	0.193	0.068	2.687	0.004***	Accept	0.049
H2	SR→HERD	-0.315	0.081	3.860	0.000***	Accept	0.108
H3	SR→HEUR	-0.206	0.125	1.696	0.045**	Accept	0.040
Part B: Mediating effect of self-reflection on the relationship between investment experience and behavioral biases							
H4	IE→SR→HERD	-0.061	0.028	2.056	0.020**	Accept	
H5	IE→SR→HEUR	-0.035	0.023	1.452	0.072*	Accept	
Part C: Direct effect of investment experience on behavioral biases							
	IE→HERD	-0.017	0.117	0.153	0.439		
	IE→HEUR	0.196	0.089	1.786	0.037**		
Part D: Moderating effect of authentic relationship with investment advisor on self-reflection							
H6	ARAD*TE→SR	-0.066	0.088	0.820	0.206	Reject	0.005
	ARAD*TE→SR →HERD	0.021	0.029	0.775	0.219		
	ARAD*TE→SR →HEUR	0.029	0.028	0.978	0.164		
Part E: Moderating effect of authentic relationship with other investors on self-reflection							
H7	AROT*TE→SR	-0.201	0.092	2.158	0.015*	Reject	0.031
	AROT*TE→SR →HERD	0.063	0.033	1.875	0.030*		
	ARAD*TE→SR →HEUR	0.028	0.028	1.072	0.142		
Part F: Moderating effect of desire for learning on self-reflection							
H8	DL*TE→SR	-0.085	0.103	0.841	0.200	Reject	0.006
	DL*TE→SR→ HERD	0.028	0.035	0.779	0.218		
	DL*TE→SR→ HEUR	0.022	0.030	0.694	0.244		

*Note: This table shows the results relating to the test of the model's hypotheses. The significance at 1 percent, 5 percent and 10 percent levels are indicated by ***, ** and * respectively. f2 denotes effect-size of path's exogenous variable on its endogenous variable. As a rule of thumb, f2 values of 0.02, 0.15 and 0.35 represent the cut-off values for small, medium and large effects (Cohen, 1988).*

When concerning on the moderating effects, as assumed by H6, H7 and H8, the findings indicate their absence in the learning process during the study period, which could be ascribed to the market uncertainties prevailed during this period and the dominance of unsophisticated investors in frontier markets like the CSE. The uncertain market conditions would have triggered the investors to be more risk averse, thereby, reduced their stock holding and trading frequency. Consequently, investors might tend to be less motivated for stock trading, resulting to a low level of interaction with their investment advisors. Hence, the moderating effect of ARAD in the self-reflection process is not evident. Further, as a frontier market, unsophisticated investors dominate in the CSE. As

a result, investors' relationships with other investors may not facilitate for obtaining quality information to strengthen their learning process, which can be considered as the most likely reason for the absence of the moderating effect of AROT in the self-reflection process.

5. Conclusion

This study addresses the debate on the relationship between the investment experience and behavioural biases. The key conclusions are as follows.

Contrary to the reinforcement learning assumption used in the previous agent-based studies, the findings of this study confirm that the self-reflection of the past experiences has a full mediating effect on the relationship between the experience and behavioural biases occurred when trading stocks. Accordingly, the past trading experiences do not itself produce learning effects, rather, should be cognitively reflected upon to minimize behavioural biases.

This study attributes the absence of moderating effects from the relationships with investment advisors and other investors, and desire for learning to uncertain market conditions occurred during the study period and dominance of unsophisticated investors in the CSE. Accordingly, it is evident that the nature of market environment has an influence on the extent of learning taken place within an individual investor.

Future work can focus on extending the studies of this kind to other forms of behavioural biases, for example, prospect biases. In addition, similar studies can be conducted in respect of other investor types such as institutional investors and financial analysts, and other market categories such as developed and emerging markets for enhancing the knowledge about the learning behaviour of investors.

References

Agarwal, S., Driscoll, J. C., Gabaix, X., & Laibson, D. (2007). *The age of reason: Financial decisions over the lifecycle*. National Bureau of Economic Research Working Paper no. 13191. Harvard University and MIT.

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the academy of marketing science, 16*(1), 74-94.

Barber, B. M., & Odean, T. (2011). The behavior of individual investors. In G. Constantinides, M. Harris, & R. Stulz (Eds.), *Handbook of the Economics of Finance* (pp. 1533-1570). Amsterdam: Elsevier.

Becker, J. M., Rai, A., & Rigdon, E. (2013). *Predictive validity and formative measurement in structural equation modeling: Embracing practical relevance*. Paper presented at the 34th International Conference on Information Systems, Milan.

Bhandari, G., & Deaves, R. (2006). The demographics of overconfidence. *The Journal of Behavioral Finance, 7*(1), 5-11.

Bodnaruk, A., & Simonov, A. (2015). Do financial experts make better investment decisions? *Journal of financial Intermediation, 24*(4), 514-536.

Bossan, B., Jann, O., & Hammerstein, P. (2015). The evolution of social learning and its economic consequences. *Journal of Economic Behavior & Organization, 112*, 266-288.

Bradbury, M. A., Hens, T., & Zeisberger, S. (2014). Improving investment decisions with simulated experience. *Review of Finance, 19*(3), 1019-1052.

Cassel, C., Hackl, P., & Westlund, A. H. (1999). Robustness of partial least-squares method for estimating latent quality structures. *Journal of Applied Statistics, 26*(4), 435-446.

Chang, C. H. (2017). Exploring stock recommenders' behavior and recommendation receivers' sophistication. *Journal of Economics and Finance, 41*(1), 1-26.

Chevalier, J., & Ellison, G. (1999). Are some mutual fund managers better than others? Cross-sectional patterns in behavior and performance. *The journal of finance, 54*(3), 875-899.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Mahwah: Lawrence Earlbaum Associates.

Dooley, L. M., & Lindner, J. R. (2003). The handling of nonresponse error. *Human Resource Development Quarterly, 14*(1), 99-110.

Evermann, J., & Tate, M. (2016). Assessing the predictive performance of structural equation model estimators. *Journal of Business Research, 69*(10), 4565-4582.

Filbeck, G., Ricciardi, V., Evensky, H. R., Fan, S. Z., Holzhauer, H. M., & Spieler, A. (2017). Behavioral finance: A panel discussion. *Journal of Behavioral and Experimental Finance, 15*, 52-58.

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of marketing research*, 382-388.

Gefen, D., Straub, D. W., & Boudreau, M. (2000). Structural Equation Modeling and Regression: Guidelines for Research Practice. *Communication of Association for Information Systems, 4*, 1-79.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice, 19*(2), 139-152.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science, 43*(1), 115-135.

Hirshleifer, D. (2015). Behavioral finance. *Annual Review of Financial Economics, 7*, 133-159.

Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic management journal, 20*(2), 195-204.

Kumar, S., & Goyal, N. (2015). Behavioural biases in investment decision making–a systematic literature review. *Qualitative Research in financial markets, 7*(1), 88-108.

List, J. A. (2011). Does market experience eliminate market anomalies? The case of exogenous market experience. *American Economic Review, 101*(3), 313-317.

Lo, A. W. (2004). The adaptive markets hypothesis: Market efficiency from an evolutionary perspective. *The Journal of Portfolio Management, 30*(5), 15-29.

Lo, A. W. (2005). Reconciling efficient markets with behavioral finance: the adaptive markets hypothesis. *Journal of Investment Consulting, 7*, 21-44.

Lo, A. W. (2012). Adaptive Markets and the New World Order. *Financial Analysts Journal, 68*(2), 18-29.

Nicolosi, G., Peng, L., & Zhu, N. (2009). Do individual investors learn from their trading experience? *Journal of Financial Markets, 12*(2), 317-336.

Nunnally, J. C., & Bernstein, I. (1994). *Psychometric Theory* (Vol. 3). New York: McGraw-Hill.

Pastore, A., Esposito, U., & Vasilaki, E. (2015). *Modelling stock-market investors as reinforcement learning agents.* Paper presented at the 2015 IEEE International Conference on Evolving and Adaptive Intelligent Systems, Douai, France.

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2017). Partial least squares structural equation modeling *Handbook of market research* (pp. 1-40): Springer.

Shantha, K. V. A. (2018). Shifts in Herd Mentality of Investors in Uncertain Market Conditions: New Evidence in the Context of a Frontier Stock Market. *Journal of Economics and Behavioral Studies, 10*(3), 203-219.

Shantha, K. V. A. (2019). Individual Investors' Learning Behavior and Its Impact on Their Herd Bias: An Integrated Analysis in the Context of Stock Trading. *Sustainability, 11*(5), 1448.

Shantha, K. V. A., Xiaofang, C., & Gamini, L. P. S. (2018). A Conceptual Framework on Individual Investors' Learning Behavior in the Context of Stock Trading: An Integrated Perspective. *Cogent Economics & Finance, 6*(1), 1-22. doi:10.1080/23322039.2018.1544062

Wong, K. K. K. (2016). Mediation analysis, categorical moderation analysis, and higher-order constructs modeling in Partial Least Squares Structural Equation Modeling (PLS-SEM): A B2B Example using SmartPLS. *Marketing Bulletin, 26*.

Wulfmeyer, S. (2016). Irrational Mutual Fund Managers: Explaining Differences in Their Behavior. *Journal of Behavioral Finance, 17*(2), 99-123.

Xiao, W. (2015). Does practice make perfect? Evidence from individual investors' experiences and investment returns. *Journal of Interdisciplinary Mathematics, 18*(6), 811-825.

Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis. *Journal of Consumer Research, 37*(3), 197-206.

Tourism and hospitality undergraduates' internship experience, their satisfaction and impact on future career intention

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Abstract

Tourism and Hospitality Industry generates and offers a wide spectrum of career opportunities both nationally and internationally giving a sensible solution to the unemployment problem especially for the developing countries. Having identified the significance of tourism and hospitality industry as one of the labor intensive industries, many universities and educational institutes in Sri Lanka are focusing on developing competent human resources that cater industry requirements. Recognizing the importance of improving employability skills along with developing knowledge and inculcating positive attitudes of the tourism and hospitality undergraduates, the national universities have integrated student internship experience in to their tourism and hospitality curricula, creating a solid platform for a better career prospects of the undergraduates. Hence, this study attempts to examine the satisfaction level of the tourism undergraduates with the internship experience and its impact on their future career intention. A structured questionnaire was utilized to collect data from tourism and hospitality undergraduates of two state Universities in Sri Lanka, who have minimum two months' internship experience. The population of the study consists of 139 undergraduates, whom had undergone an internship program in two state Universities in their 3rd and 4th year, out of which only 79 has responded. Training program, nature of work, supervisors, facilities, and coworkers are the concerned areas in measuring the satisfaction level. The result reveals that the tourism undergraduates are satisfied with their internship experience. Further, the result indicates that all the tourism undergraduates intend to work in the industry after graduation. The finding also shows that the tourism undergraduates' satisfaction with respect to the nature of the job and the training program significantly impact on their intention to work in the tourism industry in the future.

Keywords: Future career intention, internship experience, satisfaction, tourism undergraduates.

1. Introduction

The accomplishment of tourism and hospitality industry is exceedingly rely on its skillful, enthusiastic and committed work-force (Kusluvan & Kusluvan, 2000). Attracting and retaining such skillful, knowledgeable and competent employees has become a crucial challenge for the industry as a result of socio-economic and political uncertainty, constant changes in global economy and increasing the global mobility of employees (Baum, 2007; Kim, 2014; Teng, 2013). Thus the necessity of increasing the graduate employability has become an attentive requirement that leads the universities to arise its attention towards addressing this issue by embedding skill-development elements into curricula (Wilton, 2012). With this scenario, an internship program plays a vital role by giving a work-integrated learning experience for the students facilitating them for better career prospects (Silva et al., 2016).

An internship is "a short-term period of practical work experience wherein students receive training as well as gaining invaluable job experience in a specific field or potential career of their interest" (Zopiatis & Theocharous, 2013). According to Hergert (2009) an internship plays a vital role in assisting the students to connect their traditional coursework and the actual workplace. Yiu and Law (2012) reveal that the internships are expedient mechanism for students in developing diverse skills. Moreover, it relates to experiential learning by means of enriching students' individual and professional growth (Simons et al., 2012). Numerous studies have revealed the advantages of undergraduates' internship programs. According to Ko (2008) and Nelson (1994) the internship programs facilitate undergraduates to identify their future careers, as well as to settle on a career of their choice. Some undergraduates depend on their internship program in selecting their career path, whereas their experience in the internship program will solidify their intention towards the tourism and hospitality industry (Tse, 2010). In contrast, Fox (2001) specified that a destructive internship experience could lead to turn an undergraduate away from the industry. This argument has been affirmed by Busby (2003) stating that the bad internship experiences may negatively impact the undergraduates' image and may discourage them in their decisions to retaining in the tourism and hospitality industry after graduation.

Having identified the significance of the internship programs, Sri Lankan universities that offer tourism and hospitality degree programs have incorporated a compulsory practical exposure for their undergraduates, facilitating in-class learning. However, it is paramount important to identify whether these internship programs assist the undergraduates in determining their career aspirations. Though there are ample number of researches done determining how student internship experience impacts on their self-improvement and the extent to which internship experience influences undergraduates' future career professionalism, there is a dearth of literature in Sri Lankan context. Thus this study focuses on investigating the tourism and hospitality undergraduates' satisfaction towards the internship experience and its impact on their future career intention.

2. Literature review

An internship can be defined as a kind of experiential learning where students take the opportunity to apply their learned theories from schools in the real world situation, and it provides an opportunity for students to integrate and consolidate thinking and action (Davies, 1990). According to Kusluvan, Kusluvan and Eren (2003) student work experience is also known as industrial placement, industrial experience, cooperative education, student's placements, supervised work experience internship or sandwich courses, which involve a certain period of work experience practical training in the industry. The duration of the placement can be ranged from few weeks to a one year (Barren, 1999).

For many students the first contact point with the industry is through the internship, where students receive first hand realistic experience of working life and the atmosphere. According to McMahon and Quinn (1999, p. 13) student work experience placement is one of the most vital experience on which graduate base their career choices.

Ko, Chun, and Murdy (2007) argue that internship programs enable students to examine their future careers, to understand it and to settle on a career of their choice. Some students are dependent on the internship program and their intention towards the hospitality industry may depend on their experience in the program (Tse, 2010). Lee and Chao (2013) argue that the negative experiences of students from the internship programs are significant determinants of students' decision to seek and accept a job position within the specific business sector.

Barron and Maxwell (1993) investigated the post placement impression of 482 students from seven Scottish higher educational institutions, which offer hospitality courses. The findings reveal that the students have negative image of the industry after the work experience. According to the student work experience, it is stated that the staff were poorly treated in the industry, efforts overweight non-financial rewards, and there were little or no training to the employees.

Callen (1997) conducted a study on experience, operation and value of student work placement by surveying 53 of international hotel management students of Manchester Metropolitan University, who had completed the internship in UK and Europe. The study reveals that majority of the students (85%) had not been provided with detailed training program and the students had no opportunity to exercise responsibility at work. Furthermore, students have indicated that the disillusionment with the working environment and conditions. The impact of student work experience has also examined and the results reveal that even though the students are not willing to quit the industry, they have become less enthusiastic about the industry after the internship.

Barren (1999) carried out a research on students industrial training placement period from the perspective of hospitality management students at the University of Queensland in Australia. The majority of the students were satisfied with their internship. Yet, the students were neither satisfied with the induction program nor the amount of training,

they have received. Students were satisfied with the co-workers, management and the positive atmosphere of the workplace.

Leslie (1999) studied the student opinion with regard internship experience. The data were collected from the students of nine universities in Great Britain, which offer tourism undergraduate programs. The finding indicates that the potential benefits of the internship have not been fully realized and some areas of the student work experience were neglected such as induction, training, opportunities for managerial/ supervisory experience.

According to the study carried out by Kozak (1999) at the vocational school of Anatolia University, Turkey, students liked the profession in the tourism and hospitality industry and satisfied with the promotion opportunities. However, students were discontent with the interpersonal relationship with the host organization, working hours, and the time spared by the supervisors for students and training.

Few empirical studies have been carried out to investigate the impact of tourism and hospitality students' satisfaction with internship programs and its impact on their future career intention. For example, Christou (1999) examined the hospitality management student's evaluation on industrial training placement. The results show that the unsatisfactory working conditions and lack of management training reduced the motivation of respondents to pursue career in the hospitality industry.

Kusluvan, Kusluvan, and Eren (2003) observed that the following internship qualities are related to satisfaction with the internship in tourism and hospitality industry: Training program, nature of work, supervisors, facilities, and coworkers. The study reveals that 69% of the students are not satisfied with students' work experience and majority of the students stated that the students thoughts and feelings relating to working in the tourism industry changed in a negative direction after the training.

Ko (2008) conducted a study to investigate the factors associated with hospitality students' satisfaction with internship programs and the relationships between training, job satisfaction, and confidence about future careers. The results revealed that satisfaction with the internship program plays a positive role as a predictor of participants' job satisfaction and confidence about future careers. Furthermore, the regression analysis showed that training satisfaction played a positive role as a predictor of participants' confidence about future careers.

The study conducted by Kipreos (2016) examined the level of students' satisfaction with the internship program provided by the Department of Sport Management, University of Peloponnese in Greece. The study revealed that 60% of respondents were satisfied with the internship program and more than 65% believe that the experiences gained from the internship will be significant for their future employment.

Building on the findings of the existing literature, scholars concluded that negative internship experiences lead to make the students decide to exit the tourism and hospitality industry and/or pursue another career path. (Chen and Shen, 2012; Ko, 2008; Lu and Adler, 2009; Richardson, 2008).

3. Methodology

Quantitative approach has been employed to this study. The population of this study consists of the tourism and hospitality undergraduates, who have completed the internship program. Therefore, tourism and hospitality undergraduates of two states universities in Sri Lanka have selected for this study, namely Rajarata University of Sri Lanka and Uwa Wellassa University. There were total of 139 undergraduates from both Rajarata University (40 undergraduates in the 3rd year and 49 undergraduates in the 4th Year) and Uwa Wellassa University (50 undergraduates in the 4th year) who had minimum two month's working experience.

In order to examine the satisfaction level of the tourism undergraduates with the internship experience and its impact on their future career intention, a questionnaire was developed. The questionnaire consists of three parts. In the first part, questions related to the demographic profile and general information associated with internship included. In the second part of the questionnaire, questions were included to measure the satisfaction level of the students with regard to the internship program including training program, nature of the job, supervisors, facilities, and coworkers. The dimensions and the items measuring the dimensions have been extracted from the literature (Barron and Maxwell, 1993;Callan, 1997; Christou, 1999; Leslie, 1999; Kusluvan, Kusluvan, and Eren, 2003). Each item was measured using five point Likert scale from extreamly satisfied to extremly dissatisfied. The third part of the questionnaire consists of the questions related to the future career intention of the students, which were developed based on the study conducted by Kusluvan, Kusluvan, and Eren (2003).

In order to confirm the internal consistency of the dimensions used for the study, Cronbach's alpha test has been conducted. Accordingly, the Cronbach's alpha values exceed the 0.70 level, showing that the Likert scale items are following uni-direction (Table 1). Consequently, all the corresponding variables could be operationalized and the reliability of the measurements was achieved as recommended by Nunnally (1978).

The questionnaire was sent to the Industrial Training Coordinators of the universities to be distributed in the classroom and out of 139 questionnaires distributed, 79 responses were returned for the analysis. Gathered data were analyzed by means of both descriptive and inferential statistics.

Table 1
Reliability analysis

Dimensions	Items	Cronbach's alpha
Training Program	Orientation /induction program in the organization On the job training and development Knowledge given about how to do your job properly Quality of the training provided Opportunity to work in different departments	0.861
Nature of the Job	Sufficient amount of hours worked daily Proper Working shifts Opportunity to use your knowledge and skills Availability of equipment for your job Manageable workload per day	0.859
Supervisors	the level of involvement in your job good communication between you & managers fairness passing on vocational knowledge and skills	0.850
Facilities	Dining facilities Meals Accommodation facilities Bathroom / washroom facilities Transportation services provided	0.912
Co- workers	Level of cooperation with you Communication between you and coworkers Friendliness Sharing and passing vocational knowledge	0.850
Future Career intention	After the training my thoughts and feelings changed in a positive direction with regard to working in the industry My desire to work in the industry is increased after the internship training I will definitely work in the industry after the graduation I am happy to have chosen the same industry as a career	0.872

4. Results and discussion

4.1 Profile of respondents

The characteristics of the respondents are shown in the Table 2. The majority of the respondents are female (53.2%) and the percentage of male respondents is 46.8. Most of the undergraduates have undergone their internship in the fields of Travel and Tourism (45.6%), Food and Beverage (26.6%) and Accommodation industry (25.3%). Majority of the respondents have found their placements by themselves.

Table 2
Profile of respondents

	Frequency	Percentage
Gender		
Male	37	46.8
Female	42	53.2
Training organization		
Accommodation	20	25.3
F&B	21	26.6
Transportation industry	1	1.3
Travel and Tourism	36	45.6
Tourism administration	1	1.3
Finding Internship Placement		
Through relatives and friends	22	27.8
Self	41	51.9
Through Industrial coordinator	11	13.9
other	5	6.3

4.2 Student satisfaction with the internship experience

The level of tourism and hospitality undergraduates' satisfaction towards the internship experience is presented in the Table 3. The mean value of all the variables are ranging from 3.6 to 4.0 indicating that the students are satisfied with the internship experience and they are willing to pursue a career in the tourism industry after graduation. Highest standard deviation that is 0.85 belongs to future career intention. Thus relatively responses of future career intention are more deviated. Minimum standard deviation belongs to coworkers that is 0.64 which indicates a less variance. All the co-efficient of skewness are between -1 and +1 therefore, data are approximately normally distributed.

Table 3
Descriptive analysis

Variable	Mean	Std. Deviation	Skewness
Training program	4.0101	.66325	-.574
Nature of the job	3.8582	.71694	-.458
Supervisors	3.9209	.72782	-.602
Facilities	3.6405	.77220	-.025
Coworkers	4.0316	.64843	-.306
Future Career Intention	4.0475	.85492	-.699

The similar results have been reported from the study conducted by Kipreos (2016), that the majority of the respondents (60%) were satisfied with the internship program. The study conducted by Barren (1999) in Australia also found that the majority of the students are satisfied with their internship including co-workers, management and the positive atmosphere of the workplace. However, in the same study, it was found that the students are not satisfied with the training program. There are also studies, which show that the students are dissatisfied with the internship experience (Kusluvan, Kusluvan, and Eren, 2003) According to the studies, the students showed dissatisfaction with the training program (Christou, 1999; Leslie, 1999; Barren, 1999), working conditions or the nature of the job (Christou, 1999; Kusluvan & Kusluvan, 2000; Kozak, 1999), and managers or supervisors (Leslie, 1999; Kozak, 1999). By analysing these study findings, it is clear that the students in defferant countires hold different level of satisfaction with regrad to their internship program. However, it can be determined that in Sri Lankan context students are satisfied with their internship experience.

4.3 Impact of internship experience of students on future career intention

The effect of the student satisfaction with internship experience on their future career intention was analyzed by applying multiple regression model. Result of the model summary, shown in Table 4 reveals that the co-efficient of determination is 0.605 indicating that 60.5% of the future career intention has been explained by the regression model. As the value is more than 60% model is nicely fitted with an adjusted R squared of 57.8%. Multiple correlation is 0.778 this means that internship experience of students is strongly correlated jointly with their future career intention. Hence, the model is appropriate. Durbin-Watson test statistic is between 1.5 and 2.5. Therefore, residuals are independent and model is valid. The Regression ANOVA result is provided by Table 5.

Table 4
Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.778[a]	.605	.578	.55546	2.175

Table 5
ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	34.487	5	6.897	22.355	.000[b]
Residual	22.523	73	.309		
Total	57.009	78			

Table 6

Regression coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.189	.456		-.413	.681		
	Training_program	.409	.162	.317	2.516	.014	.341	2.936
	Nature_of_the_job	.542	.142	.454	3.804	.000	.380	2.634
	Supervisors	-.045	.177	-.039	-.255	.799	.238	4.208
	Facilities	-.017	.096	-.015	-.178	.859	.721	1.387
	Coworkers	.185	.155	.140	1.193	.237	.391	2.560

a. Dependent Variable: Future_Career_Intention

In Regression ANOVA, probability of F test statistics is 0.000, this is highly significance revealing that the model is jointly significant. Therefore, Training program, Nature of the job, Supervisors, Facilities, and Coworkers jointly influence on students future career intention.

Table 6 shows the individual effect of the students' satisfaction with internship experience on their future career intention. Accordingly, P value of the nature of the job is 0.000, which is highly significant with an individual beta value of 0.542. Thus the nature of the job significantly influences on the future career intention of the students positively. Probability and individual beta value of training program are 0.014 and 0.409 respectively. This indicates that the training programs also significantly influence on students' future career intention positively. The probabilities of the rest of the independent variables are more than 0.05. Thus, they are individually insignificant, stating that they do not influence individually yet they influence jointly on future career intention. According to Standardized Coefficients of beta, the highest value is represented by nature of the job which is the most influencing factor, second influencing factor is the training program.

As the Diagnostic tests for regression results, researcher tested several assumptions. These assumptions have been tested as diagnostic tests to decide the validity of regression results. In the model summary, D-W test is in the accepted level and residuals are independent. All the Variance Inflation Factors (VIF) are less than 10 and it indicates that independent factors are not highly or perfectly correlated. Therefore, there is no multicollinearity problem in the regression model. Accordingly, regression model is highly valid.

This study confirm that nature of the job and training program are the most influencing factors predicting students' future career intention. The study conducted by Ko (2008) shows the similar findings indicating that training satisfaction plays a positive role as a predictor of participants' confidence about future careers. Another study conducted by Christou (1999) also confirm the findings of this study indicating that the unsatisfactory

working conditions and lack of management training reduced the motivation of respondents to pursue career in the hospitality industry. Accordingly, it is evidenced that nature of the job and training program are the most influencing factors predicting students' future career intention.

5. Conclusion

Understanding the tourism and hospitality students' intention to join to the industry is imperative to both educators and practitioners. Internships play a vital role in providing work experience to the students besides their academic coursework. A good internship does make an important contribution to developing key management competencies among students which ultimately fulfils their career aspirations. Thus the study focuses on identifying the tourism and hospitality undergraduates' satisfaction on their internship experience and also to investigate the impact of the internship experience on their future career intention. The result indicates that the students are satisfied with their internship experience and they are willing to pursue a career in the tourism and hospitality industry after graduation.

The findings of this study further disclose that the nature of the job is the most influential factor in determining the students' future career intention. The literature reviewed also suggests that the nature of the job and the structure of the internship position may have an influence on the types of management skills a student could develop and to determine their future career aspirations. Hence it is recommended to give a due emphasis on the nature of the job when students select an internship position. Further the results indicate that the training programs also significantly influence on students' future career intention. Thus the industry must focus on to ensure students are receiving positive experiences through a proper training program and gaining positive perceptions of the industry.

References

Barren, P. (1999). The Thoery and Practice of industrial placement: A comparison of Scottish and Australian hospitality Students' experiences. *CHME Hospitality Research Conference, UK* (pp. 23-35). University of Managment Studies for the Service Sector, Univeristy of Surrey.

Barron, P., & Maxwell, G. (1993). Hopitality Management Students' image of the hospitality industry. *International Journal of Contemporary hHospitality Management, 5*(5), 5-8.

Baum, T. (2007). Skills and the hospitality sector in a transition economy: The case of front office employment in Kyrgyzstan. *Asia Pacific Journal of Tourism Research, 12*(2), 89-102.

Busby, G. (2003). Tourism degree internship: A longitudinal study. *Journal of Vocational Education and Training, 55*(3), 319–334.

Callan , R. (1997). Supervised work experience in Europe: a profile of UK undergraduate perceptions. *International Journal of Contemporary Hospitality Management, 9*(1), 35-39.

Christou, E. (1999). Hospitality management education in Greece: An exploratory study. *Tourism Management, 20*, 683-691.

Davies, L. (1990). *Experience-based Learning within the Curriculum. A Synthesis Study.* Sheffield: Council for National Academic Awards.

Fox, T. (2001). A sense of place. *Caterer and Hotelkeeper, 189*(4160), 30-31.

Hergert, M. (2009). Student perceptions of the value of internships in business education. *American Journal of Business Education, 2*(8), 9-13.

Kim, N. (2014). Employee Turnover Intention Among Newcomers in Travel Industry. *International Journal of Tourism Research, 16*(1), 56-64.

Kipreos, G. (2016). Academic Internship and Students' Satisfaction: Evidence from Greece. *Journal of Studies in Education, 6*(3), 22-31.

Ko, D., Chun, B., & Murdy, J. (2007). The effect of internship on hotel employees in Korea. *International Journal of Tourism Sciences, 7*(1), 29-42.

Ko, W. (2008). Training, Satisfaction with Internship Programs, and Confidence about Future Careers among Hospitality Students: A Case Study of Universities in Taiwan. *Journal of Teaching in Travel & Tourism, 7*(4), 1-15.

Kusluvan, S., & Kusluvan, Z. (2000). Perceptions and attitudes of undergraduate tourism students towards working in the tourism industry in Turkey. *Tourism Management, 21*, 251–269.

Kusluvan, S., Kusluvan, Z., & Eren, D. (2003). Undergraduate Tourism Students' satisfaction with Work Experience and Its Impact on their Future Career Intentions. In S. Kusluvan (Ed.), *Managing Employee Attitutes and Behaviors in the Tourism and Hospitality Industry* (pp. 135-155). Nova Science Publishers.

Lee, C., & Chao, C. (2013). Intention to "leave" or "stay" – The role of internship organization in the improvement of hospitality students' industry employment intentions. *Asian Pacific Journal of Tourism Research, 18*(7), 749-765.

Leslie, D. (1999). Quality assurance and student work experience. *Quality Assurance in Education, 7*(4), 209-215.

McMahon, U., & Quinn, U. (1999). Vocational Work Experience in the hospitality industry: Characteristics and Strategies. *Education + Training, 41*(4), 164-174.

Nelson, A. (1994). *Hospitality internships: The effects of job dimensions and sup - Portive relationships on student satisfaction.* Pro Quest Dissertations and Theses Database.

Nunally, J. (1978). *Psychometric* (2 ed.). New York: McGraw Hil Inc.

Silva, P., Lopes, B., Costa, M., Melo, A., & Paiva , D. (2016). The million-dollar question: Can internships boost employment? *Studies in Higher Education*.

Simons, L., Fehr, L., Blank, N., Connell, H., & Geor. (2012). Lessons learned from experiential learning: What do students learn from a practicum/internship? *International Journal of Teaching & Learning in Higher Education, 24*(3), 325-334.

Teng, C. (2013). Developing and evaluating a hospitality skill module for enhancing performance of undergraduate hospitality students. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 13(1), 78-86.

Tse, T. (2010). What do hospitality students find important about internships? *Journal of Teaching in Travel & Tourism, 10*(3), 251-264.

Wilton, N. (2012). The impact of work placements on skills development and career outcomes for business and management graduates. *Studies in Higher Education, 37*(5), 603-620.

Yiu, M., & Law, R. (2012). A review of hospitality internship: Different perspective of students, employers and educators. *Journal of Teaching in Travel and Tourism, 12*, 377–402.

Zopiatis, A., & Theocharous, A. (2013). Revisiting hospitality internship practices: A holistic Investigation. *Journal of Hospitality, Leisure, Sport & Tourism Education, 13*, 33-46.

Operational employees' commitment and its impact on their job satisfaction

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Abstract

The purpose of this study was to examine the commitment of operational employees and its impact on their job satisfaction in Sri Lankan Transport Board in Colombo Region by selecting two depots of Methotamulla and Angoda as well as Colombo regional office as the sample of the study. By employing proportionate stratified sampling method, 217 operational employees, which are 5% of the population, were represented as the respondents of the study to facilitate the data collection through a structured questionnaire. According to the findings of the correlation analysis and simple regression analysis there was a strong positive relationship between job satisfaction and affective commitment, a weak positive relationship between job satisfaction and continuance commitment and a moderate positive relationship between job satisfaction and normative commitment. The results of multiple regression analysis were shown that affective commitment had a significant strong positive impact on job satisfaction and continuance commitment had a significant weak positive impact on job satisfaction. But relating to the multiple regression analysis, normative commitment had not revealed a statistically significant relationship. Furthermore, the value of the R2 indicated that 77% variance of job satisfaction was explained by independent variables of the study.

Keywords: Affective commitment, continuance commitment, job satisfaction, normative commitment.

1. Introduction

Employees are the most essential part of any organization because without contribution of the employees, organization cannot achieve their goals and objectives. Among the different objectives, profit maximization is the main objective of many organizations.

Without satisfying the employees, it is impossible to meet those objectives. Job satisfaction is more focused on the employees' response to the job or to specific characteristics of the job, such as pay, supervision, and working conditions. Gunadasa (2005) stated that 10,000 workers of Sri Lanka's state-owned Regional Transport Companies (RTC) launched a national strike on February 14 for salary increases. The dispute started on February 8, when thousands of employees at the Kalutara, Matugama, Horana, Panadura, Galle and Ambalangoda bus depots walked out. After the two days, nine other RTC launched a one-hour strike and picketing campaign near bus depots around the country. LankaNewspapers.com (9 January 2007) stated that some 39,000 Sri Lanka Transport Board employees launched an island-wide strike for demanding salary arrears and other outstanding allowances. The all island transport employees' union claimed that the authorities had paid little attention to the demands of the employees of Sri Lanka Transport Board. The employees were also demanding that allowances be added to the basic salary and those salaries and advances be paid on time; also employees were demanding re-establishing the Sri Lanka Transport Board in a proper manner. The Daily Mirror (17 March 2011) noted that on March 17 bus services on several routes that operates under Maho Sri Lanka Transport Board depot had been off the road from March 17 because employees at the depot staging a walkout protesting against long delays in monthly payments. In this situation more than 270 employees joined the trade union action (Daily News, 4 April 2013).

According to Mowday, Steers, and Porter, (1979) commitment is considered as one of the attitudes that directly affects the achievements of goal and values of the organization. Zehir, Muceldili, and Zehir (2012) stated that satisfaction and commitment are the most popular concepts in management fields. Both of the concepts are multidimensional and complex constructs and there is no agreement dimensions of concepts. When considering factors that affect employees' job satisfaction, researchers (Jahufer, 2015; Kabaka, Sen, Gocera, Kucuksoylemezb, & Tuncer, 2014; Ismail & Velnampy, 2013; Gull & Zaidi, 2012) did not identify the same factors. Jahufer (2015) identified good salary package, good supervision, work environment and chances to prospect in the future are the factors that affect the employee job satisfaction. However, Kabaka, Sen, Gocera, Kucuksoylemezb, and Tuncer (2014) identified salaries, promotions, and structural properties of a job, management styles and colleagues are the factors that affect the employee job satisfaction. Ismail and Velnampy (2013) stated that factors contributing to employee satisfaction included treating employees with respect, providing regular employee recognition, empowering employees, providing employee perks and company activities, and positive management within a success framework of goals, measurements, and expectations. Gull and Zaidi (2012) identified benefits, promotional opportunities, supervision, coworkers, working condition and the work itself as the factors relating to employee job satisfaction. However, there was no consistency among the researchers about the factors influencing the employee job satisfaction.

1.1 Problem statement

In order to improve the employee productivity, the managers have to identify the factors influencing employee job satisfaction. Although many researchers have identified the different factors influencing job satisfaction, three researchers (Odoch & Nangoli, 2014; Inanc & Ozdilek, 2015; Almansour, 2012) have highlighted the impact of commitment of the employees on job satisfaction. And also, there are no studies done on commitment and job satisfaction in RTB in Sri Lanka. It is found that there has not been any systematic research in transport industry in Sri Lanka in order to explore the impact of employee commitment and job satisfaction. Hence, studying of these constructs is vital for the success of the transport industry in Sri Lanka and fills the gap in the empirical knowledge relating to commitment and job satisfaction of the employees in Sri Lankan transport industry.

1.2 Objective of the study

To examine the impact of operational employee commitment (affective commitment, continuance commitment and normative commitment) on their job satisfaction in Sri Lankan Transport Board in Colombo Region.

2. Literature review

Employees are the backbone of every organization. Without employees, no work can be done efficiently. Therefore, employee satisfaction is very important in any organization irrespective of the size. It plays a significant role in defining organizational success. Employees will be more satisfied if they get what they anticipated. Jayarathna (2014) stated that job satisfaction is one of the most important attitudes of the employees of an organization. When employees are satisfied with their job, they will perform better and therefore organization will gain competitive edge. It is known that people usually spend more time of their life at work since job is one of the most important parts of their life. Therefore, job satisfaction decides the happiness level of the employees. However, it is a challenge to the organizations to satisfy their different types of employees. Therefore, an understanding of the factors affecting job satisfaction is essential in improving employees' performance and productivity (Suki & Suki, 2011). Job satisfaction can be explained as multidimensional psychological responses to one's job. These responses consist with cognitive (evaluative) and affective (emotional) components. The multidimensional responses can be identified as good/bad, positive/negative scales. Those may be quantified using assessment techniques. Those techniques assess evaluations of features or characteristics of the job, emotional responses to events that occur on the job and it depends on how one defines attitudes, behavioral dispositions, intentions, and enacted behaviors (Judge, Hulin, & Dalal, 2009). Job satisfaction is the feelings or state of mind regarding the nature of employee work. Job satisfaction can be influenced by a variety of factors; those factors can be identified as the quality of employee's relationship with supervisor, the quality of the physical environment in which

employee executes work, degree of the fulfillment of worker's work (Nawab & Bhatti, 2011). Job satisfaction is an important indicator of how employees feel about jobs and also it is a predictor of work behaviors, such as organizational citizenship, absenteeism, and turnover. Furthermore, job satisfaction can partially mediate the relationship of personality variables and deviant work behaviors (Ciarnien, Kumpikait, & Vienazindien, 2010). Jahufer (2015) identified job satisfaction as a bi-dimensional concept consisting of intrinsic and extrinsic satisfaction dimensions. Intrinsic sources of satisfaction depend on the individual characteristics of the person. Extrinsic sources of satisfaction are situational and depend on the environment. Both extrinsic and intrinsic job facets should be represented, as equally as possible, in a composite measure of overall job satisfaction. Job satisfaction is difficult to measure and is dependent on a number of factors. Management needs to reduce the level of dissatisfaction and control workplace conflicts through common objectives like career development, training, appropriate rewards and improvements in the quality of working life.

Employee commitment is important because high level of positive employee commitment lead to several favorable organizational outcomes such as motivate workforce, high productivity and high profitability ratio (Ahmad et al,, 2014) and, negative commitment lead to a number of unfavorable organizational outcomes such as high rate of absenteeism, high turnover rate and grievances (Tarigan & Ariani., 2015). Therefore, employee commitment is an essential indicator to each and every organization. Amma, Thaliyan and Muthulakshmi (2014) stated that employee commitment is a desirable condition and it has been extensively discussed in the research literature. Organization recognizes that committed employees play a critical role in achieving sustainable success and competitive advantage. Committed employee is the one who is optimistic, highly focused on work, enthusiastic and willing to go an extra mile to contribute to sustainable organizational success. Shahid and Azhar (2013), Dixit and Bhati (2012), Dost, Ahmed, Shafi, and Shaheen (2011) identified the value of employee commitment. Dost, Ahmed, Shafi, and Shaheen (2011) stated that employee commitment always plays a very important role in improving the organizational performance. Employee commitment can be enhanced through employee involvement in assessment construction and providing employees a chance for better attending the whole process of the organization. Dixit and Bhati (2012) stated that employee commitment is important because high levels of commitment lead to several favorable organizational outcomes and it reflects the level of which employees identify organization goal and objectives and how committed to its goals. Lee and Chen (2013) considered employee commitment and job attitude as one of the most important elements in human resource management, and employee commitment is mostly related to work values, work motivation, and work involvement.

Cohen (2007) suggested timing of commitment and bases of commitment as two dimensions of commitment. The timing of commitment distinguishes between commitment propensity, which develops before entering into the organization and organizational commitment, which develops after entering into the organization. The second dimension, the bases of commitment, makes a distinction between commitment based on instrumental considerations and commitment based on psychological

attachment. Employee commitment is logically inseparable from organization commitment. Components of organizational commitment; affective, continuance and normative, identified by Meyer & Allen (1991) used subsequent researches done by Lee & Chen (2013); Dixit & Bhati (2012); Meyer, Stanley & Parfyonova (2012); Khan, Rehman, & Akram (2012); Bhatti & Qureshi (2007); Collier & Esteban (2007), were used as the dimensions of this study in order to explore the employee commitment.

Affective Commitment - Meyer and Allen (1991) identified affective commitment as employee's emotional attachment to the identification with, and involvement in the current organization. When employees have strong affective commitment then employees are continuing employment with the organization, because employees want to do so. According to Rashid, Sambasivan and Johari (2003), affective commitment describes the extent of emotional attachment of a person to the organization. And also, this attachment could be due to one's role in relation to the organizational goals and values, or to the organization for its own benefits. Lumley, Coetzee, Tladinyane, and Ferreira (2011) explained employees have an affective commitment, where individuals remain with an organization because employee wants to it and employees are familiar with the organization and its values. Inanc and Ozdilek (2015); Odoch and Nangoli (2014); Anis, Rehman, Rehman, Khan, and Humayoun (2011) studied the relationship between employee commitment and job satisfaction. Tarigan and Ariani (2015) found that affective commitment has a positive impact on job satisfaction. Sezgin and Agar (2012) examined a positive and significant relationship between affective commitment and job satisfaction. Bilgin and Demirer (2012) have found that affective commitment has positive effects on employees' job satisfaction. Hence, these research evidence prove that there is a positive relationship between affective commitment and employee job satisfaction. Therefore, it supported to formulate a hypothesis as follows;

H_1: Operational employees' affective commitment positively influences on their job satisfaction.

Continuance Commitment - Lumley, Coetzee, Tladinyane, and Ferreira (2011) noted that employees with continuance commitment remain with a specific organization. Employees can earn money as a result of the time they spent in the organization. But here, employees do not want it. This is different from affective commitment. According to Meyer and Allen (1991), continuance commitment refers as an awareness of the cost associated with leaving the organization. Employees whose primary link with the organization is based on continuance commitment, because employees need to do so. According to Kashefi et al., (2013), continuance commitment was about costs and benefits which are related to remaining in or leaving organization. This continuance commitment suggested a kind of calculation which is referred to as rational commitment and expresses that quitting organization will have excessive costs for employees (Meyer & Allen, 1991). Adekola (2012) found a significant positive linear relationship between job satisfaction and employee commitment. Tarigan and Ariani (2015) found that continuance commitment has positive impact on job satisfaction. Hence these research evidences prove that there

is positive relationship between continuance commitment and employee job satisfaction. Therefore, it supported to formulate a hypothesis as follows.

H_2: Operational employees' continuance commitment positively influences on their job satisfaction.

Normative Commitment - Normative commitment describes a feeling of obligation to continue employment. Employees with the high level of normative commitment feel that ought to remain with the organization (Meyer & Allen, 1991). The normative commitment seen as a result of receipt of benefits, which encourages a feeling that one should reciprocate, and acceptance of the terms of a psychological contract (Dixit & Bhati, 2012). The normative commitment mentions employees' feelings of obligation to remain with the organization. This type of commitment will be influenced by an employee's experiences both prior to cultural socialization and following organizational socialization entry into the organization (Rashid, Sambasivan, & Johari, 2003). Normative commitment refers employees' obligation to remain in organization. Therefore, employees will remain in organization until employees believe that remaining in organization is suitable and accurate based on employees' opinion (Kashefi et al., 2013).

Odoch and Nangoli (2014) found a positive and significant relationship between employee commitment and job satisfaction. Ahmad, Iqbal, Javed, and Hamad (2014) found that a positive relationship exists between commitment and employee job satisfaction. Tarigan and Ariani (2015) found that normative commitment has a positive impact on job satisfaction. Inanc and Ozdilek (2015) stated that normative commitment influences on the job satisfaction in a positive way, although it is not statistically significant. Hence, these research evidence proving that there is a positive relationship between normative commitment and employee job satisfaction. Therefore, it supported to formulate a hypothesis as follows.

H_3: Operational employees' normative commitment positively influences on their job satisfaction.

3. Research methodology

3.1 The research design
The study, which is based on correlational type, is designed to explore the relationship between employee commitment (independent variable) and employee job satisfaction (dependent variable). The variables taken into consideration are not controlled or manipulated in this study. And also, this research was conducted in natural environment and no any influence for respondents. The unit of analysis is individual.

3.2 Population and sample
This study focused the employees who work in Sri Lanka Transport Board in Colombo Region. In Colombo region, there are twelve depots, one drivers teaching college and one

Regional office. All operational employees (4337) attached to the above depots are considered as the population of the study. Out of which, 217 employees were selected using proportionate stratified sampling as the sample. Four categorical employees are representing as operative level employees in transport board. To represent each categorical employee into the sample, 70 drivers, 74 conductors, 38 technical labors and 35 clericals and allied employees were selected.

3.3 Measures

The operational employees' job satisfaction was the dependent variable and their commitment was the independent variable of this study. These variables were measured using interval and ratio scales. The questionnaire was separated into five sections for demographic data, affective commitment, continuance commitment, normative commitment and job satisfaction. Four questions were included to get demographic information, 07, 07, 06 and 07 questions were included to get affective commitment, continuance commitment, normative commitment and job satisfaction data respectively. Five point Likert scale was used to measure each construct.

3.4 Validity and reliability

In order to establish the Content validity of this study, the items used to measure employee affective commitment by Jaros (2007) were adopted and continuance commitment, normative commitment used by Allen & Meyer (1990) were used. At the same time items used to measure employee job satisfaction by Ismail (2012) were also considered. In addition to that the content validity of a construct was ensured through pre-testing of the questionnaires. Each scale was evaluated for its reliability and multicollinearity.

Table 1
Variance Inflation Factor (VIF) value

	VIF
Affective Commitment	1.63
Continuance Commitment	1.60
Normative Commitment	1.55
Job Satisfaction	1.62

Table 2
Results of test re-test analysis

Variables	Test re-test value
Affective Commitment	0.982
Continuance Commitment	0.980
Normative Commitment	0.717
Job Satisfaction	0.947

Table 3
Results of reliability analysis

Variables	No: of Items	Cronbach's Alpha
Affective Commitment	7	0.875
Continuance Commitment	7	0.712
Normative Commitment	6	0.724
Job Satisfaction	7	0.777

It can be concluded that the instruments possess high test re-test reliability and the internal consistency reliability is satisfactory owing to the data represented in table 02 and 03.

3.5 Methods of data analysis

Data were analyzed using univariate, bivariate and multivariate analysis techniques and specially applied correlation coefficient and regression analysis to meet the study objective and hypotheses. SPSS data analyze package of 20th version was used to analyze the data. The results of the univariate, correlation and regression were presented in table 04, 05 and 06 respectively. According to the data given in table 04 affective commitments recorded the highest mean value when compared to the other variables.

Table 4
Results of univariate analysis

Variables	Mean	Standard Deviation	Variance
Affective commitment	3.9931	0.62641	0.392
Continuance commitment	3.7212	0.61182	0.374
Normative commitment	3.9086	0.52243	0.273
Job satisfaction	3.8756	0.53357	0.285

Table 5
Results of correlation analysis

Variables	Job Satisfaction	Affective Commitment	Continuance Commitment	Normative Commitment
Job Satisfaction	-			
Affective Commitment	.857**	-		
Continuance Commitment	.262*	.111	-	
Normative Commitment	.358**	.300**	.136	-

$**p < .01, *p < .05$

Table 6
Results of regression analysis

variable	ß	R^2	P Value	F Value
Affective commitment	0.730	0.735	0.000	16.624
Continuance commitment	0.228	0.069	0.040	4.421
Normative commitment	0.365	0.128	0.004	8.798

The results of the correlation coefficient between employee commitment and job satisfaction of operative level employees in Sri Lankan Transport Board are presented in Table 05. According to the results, the correlation between affective commitment and job satisfaction (r = .857, p<0.01), continuance commitment and job satisfaction (r = 0.262, p<0.05), normative commitment and job satisfaction (r = .358, p<0.01) were significant and positive. According to the analysis affective commitment recorded a strong positive relationship with job satisfaction but continuance and normative commitment reported a weak positive relationship with job satisfaction. The result of the regression analysis is presented in table 06. The relationship between Affective commitment and job satisfaction (β = .73, p < .01), Continuance commitment and job satisfaction (β = .22, p < .05), Normative commitment and job satisfaction (β = .36, p < .01) were significant and positive.

Table 7
Model summery of the multiple regression analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.878[a]	.771	.759	.26203	64.980	.000 [a]

According to the table 07 results, R^2 value can be identified as 0.771. It means model was strongly fitted to the data and 77% variance of job satisfaction was explained by those three independent variables (affective commitment, continuance commitment, normative commitment). Furthermore, F value was 64.980. It revealed that overall model was significant at 0.05, (p = 0.000).

4. Discussion

The major purpose of this study was to examine the employee commitment and its impact on operational employee job satisfaction in the Sri Lanka Transport Board in Colombo Region. When considering correlation analysis affective commitment and job satisfaction recorded a strong positive relationship and simple regression analysis, regression coefficient (β) between affective commitment and job satisfaction were indicated that there was a strong positive relationship. According to the both analysis, the results were supported to the first hypothesis (H_1) of the study. This result was consistent with previous research studies which were conducted by Tarigan & Ariani (2015), Sezgin & Agar

(2012) and Bilgin & Demirer (2012). The correlation between job satisfaction and continuance commitment shows that there was a weak positive relationship between these two variables. The unstandardized coefficients (β) for continuance commitment significantly influence by job satisfaction and it had a significant weak positive impact on job satisfaction. According to the results of correlation analysis and simple regression analysis, second hypothesis (H_2) is supported. This result is consistent with the previous research done by Adekola (2012) and Tarigan & Ariani (2015). The correlation coefficient for job satisfaction and normative commitment was expressed that there was a moderate positive relationship between these two variables. Relevant to the simple regression analysis, unstandardized coefficients (beta) for normative commitment indicated that there is a significant moderate positive impact on the job satisfaction. Therefore, those result supported to third hypothesis (H_3) in the research. This result is consistent with the earlier study done by Tarigan & Ariani (2015).

5. Conclusion

This study investigated the employee commitment and its impact on employee job satisfaction of the operational employees in Sri Lanka Transport Board. A significant strong positive relationship has been found between affective commitment and employee job satisfaction. And also, there is a significant weak positive relationship between the continuance commitment and job satisfaction. It is found that a significant moderate positive relationship between the normative commitment and job satisfaction. According to the findings all the hypotheses in the study were supported. This research also served as a guideline for all the researchers who are interested in studying this area. The findings of this study help to the organization in planning and developing the strategies to enhance the employee commitment. All organizations in the world expected high employee commitment. Therefore, the employers must give the full attention and emphasize the quality of job satisfaction among their employees.

6. Limitation and future research

This study limited to three RTB depots in Colombo district, which might limit generalization to the results to all RTB depots. Another limitation is a limited sample size for each operational employee in RTB. Determining relative importance of the three different commitment factors for each operational employee group was not conducted because sample size for each operational employee group was somewhat too small. Tabacnick and Fidell (2001) suggested a general rule for selecting a sample size based on the number of variables: $N \geq 50 + 8m$, where 'm' is the number of independent variables. Thus, to make a reliable conclusion for the relative importance of commitment factors, the sample size of each operational employee group should be more than 82. Even though the sample size for the four categorical employees was less than required number, the conclusions and implications made from this group of sample could have a low power.

The outcomes of this research suggest a number of possible ways to improve. First, given that the management employees in this study were more significantly affected by commitment factors to job satisfaction. Second, further examination can be undertaken to assess the priority of commitment factors for each operational level group with a larger sample power. A large sample size will also allow testing, the relative importance of the commitment factors by education level, age, and the department.

References

Adekola, B. (2012). The Impact of Organizational Commitment on Job Satisfaction: A Study of Employees at Nigerian Universities. *International Journal of Human Resource Studies,2(2)*, 1-17.

Ahmad, N., Iqbal, N., Javed, K., & Hamad, N. (2014). Impact of Organizational Commitment and Employee Performance on the Employee Satisfaction. *International Journal of Learning, Teaching and Educational Research,1(1)*, 84-92.

Allen, N. J., & Meyer, J. P. (1990). The Measurement and Antecedents of Affective, Continuance and Normative Commitment to the rganization. *Journal of Occupational Psychology*, 1-18.

Amma, K. S., Thaliyan, D., & Muthulakshmi, A. P. (2014). The Mediating Role of Employee Commitment on the Relationship between Perceived Supervisor Support and Role Reversal. *Journal of Engineering and Economic Development,1(1)*, 17-24.

Anis, A., Rehman, K., Rehman, I., Khan, M. A., & Humayoun, A. A. (2011). Impact of Organizational Commitment on Job satisfaction and Employee Retention in Pharmaceutical Industry. *African Journal of Business Management,5(17)*, 7316-7324.

Bhatti, K. K., & Qureshi, T. M. (2007). Impact of Employee Participation on Job Satisfaction, Employee Commitment and Employee Productivity. *International Review of Business Research Papers,3(2)*, 54-68.

Bilgin, N., & Demirer, H. (2012). The examination of the relationship among organizational support, affective commitment and job satisfaction of hotel employees. *Procedia - Social and Behavioral Sciences,51*, 470-473.

Ciarnien, R., Kumpikait, V., & Vienazindien, M. (2010). Expectation and Job Satisfaction: Theoritical and Empirical Approach. *International Scientific Conference*, (pp. 978-984).

Cohen, A. (2007). Commitment before and after: An evaluation and reconceptualization of organizational commitment. *Human Resource Management Review,17*, 336-354.

Collier, J., & Estebann, R. (2007). Corporate social responsibility and employee commitment. *A European Review,16(1)*, 19-33.

Dixit, V., & Bhati, M. (2012). A Study about Employee Commitment and its impact on Sustained Productivity in Indian Auto-Component Industry. *European Journal of Business and Social Sciences,1(6)*, 34 – 51.

Dost, M. K., Ahmed, Z., Shafi, N., & Shaheen, W. A. (2011). Impact of Employee Commitment on Organizationa Performance. *Arabian Journal of Business and Management Review,1(3)*, 87-98.

Gull, S., & Zaidi, A. A. (2012). Impact of Organizational Politics on Employees' Job Satisfaction in the Health Sector of Lahore Pakistan. *Interdisciplinary Journal of Contemporary Research in Business,4(2)*, 156-170.

Gunadasa, S. (2005, February 17). Retrieved from World Socialist Web Site: http://www.wsws.org

Inanc, E. E., & Ozdilek, E. (2015). *Relationship between the organizational commitment and job satisfaction of academic staff in Turkey.* Istanbul: International Organization for Research and Development.

Ismail, M. B., & Velnampy, T. (2013). Determinants of Employee Satisfaction (ES) in Public Health Service Organizations (PHSO) in Eastern Province of Sri Lanka: A Pilot Study. *European Journal of Business and Management,5(21)*, 62-70.

Ismail, N. (2012). Organizational Commitment and Job Satisfaction among Staff of Higher Lerning Education Intitutions in Kelantan. *Master of Human Resource Management thesis*, 1-77

Jahufer, A. (2015). Determinants of Job Satisfaction among Government and Private Bank Employees in Sri Lanka (Case Study: Ampara Region). *International journal of Management and Business Research,5(2)*, 159-168.

Jaros, S. (2007). Meyer and Allen Model of Organizational Commitment: Measurement Issues. *The Icfai Journal of Organizational Behavior,6(4)*, 7-25.

Jayarathna, S. M. (2014). Impact of Reward Management and Decision Making on Job Satisfaction: Case of Sri Lanka. *International Journal of Scientific Engineering and Research,3(3)*, 146-153.

Judge, T. A., Hulin, C. L., & Dalal, R. S. (2009). Job Satisfaction and Job Affect. In S. W. Kozlowski, *The Oxford Handbook of Industrial and Organizational Psychology* (pp. 1-89). New York: Oxford University Press.

Kabaka, K. E., Sen, A., Gocera, K., Kucuksoylemezb, S., & Tuncer, G. (2014). Strategies for employee job satisfaction: A case of service Sector. *Procedia - Social and Behavioral Sciences*, 1167 – 1176.

Kashefi, M. A., Adel, R. M., Abad, H. R., Aliklayeh, M. B., Moghaddam, H. K., & Nadimi, G. (2013). Organizational Commitment and Its Effects on Organizational Performance. *Interdisciplinary Journal of Contemporary Research in Business*, 501-510.

LankaNewspapers.com. (2007, January 9 2007). Retrieved from www.lankanewspapers.com

Lee, C. C., & Chen, C. J. (2013). The Relationship between Employee Commitment and Job Attitude and Its Effect on Service Quality in the Tourism Industry. *American Journal of Industrial and Business Management,3*, 196-208.

Lumley, E. J., Coetzee, M., Tladinyane, R., & Ferreira, N. (2011). Exploring the job satisfaction and organisational commitment of employees in the information technology environment. *Southern African Business Review,15(1)*, 100-118.

Meyer, J. P., & Allen, N. J. (1991). A Three Component Conceptualization of Organizational Commitment. *Human Resource Management Review,1(1)*, 61-89.

Meyer, J. P., Stanley, L. J., & Parfyonova, N. M. (2012). Employee commitment in context: The nature and implication of commitment profiles. *Journal of Vocational Behavior,80*, 1-16.

Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The Measurement of Organizational Commitment. *Journal of Vocational Behavior*, 226.

Nawab, S., & Bhatti, K. K. (2011). Influence of Employee Compensation on Organizational Commitment and Job Satisfaction: A Case Study of Educational Sector of Pakistan. *International Journal of Business and Social Science,2(8)*, 25-32.

Odoch, H., & Nangoli, S. (2014). The Effect of Organizational Commitment on Job Satisfaction in Uganda Colleges of Commerce. *Issues in Business Management and Economics,2(10)*, 165-171.

Rashid, Z. A., Sambasivan, M., & Johari, J. (2003). The influence of corporate culture and organisational commitment on performance. *Journal of Management Development,22(8)*, 708-728.

Sezgin, M., & Agar, C. C. (2012). Impact of Affective Organizational and Occupational Commitment on Job Satisfaction: PR Specialists in Metropolitan Municipalities. *International Journal of Business and Commerce,2(2)*, 21-35.

Shahid, A., & Azhar, S. (2013). Gaining Employee Commitment: Linking to Organizational Effectiveness. *Journal of Management Research*, 250.

Suki, N. M., & Suki, N. M. (2011). Job Satisfaction and Organizational Commitment: The Effect of Gender. *International Journal of Psychology Research,6(5)*, 1-15.

Tabachnick, B. G. & Fidell, L. S. (2001). *Using multivariate statistics* (4th ed.). Boston: Allyn and Bacon.

Tarigan, V., & Ariani, D. W. (2015). Empirical Study Relations Job Satisfaction, Organizational Commitment, and Turnover Intention. *Advances in Management & Applied Economics,5(2)*, 21-42.

The Daily Mirror. (2011, March 17). Retrieved from High Beam Research: www.highbeam.com

Zehir, C., Muceldili, B., & Zehir, S. (2012). The Moderating Effect of Ethical Climate on the Relationship between Job Satisfaction and Organizational Commitment: Evidence from Large Companies in Turkey. *Procedia - Social and Behavioral Sciences, 58*, 734 – 743.

Do the online reviews influence to direct the business toward legal directions

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Abstract

Information and communication technology plays one of the most important roles in the business world changing the way of buying, selling and experiencing a good or service. Along with these changes, many incidents are recorded against illegal business practices although a legal framework exists in the country. It is considered that any incident that breaches the Food Act No.26 of 1980 in Sri Lanka as an illegal action. With the technology enhancement customers give feedbacks online on their consumption experience and such online reviews become very important information that empower customers against illegal business practices. This research investigates the impact of online reviews on legal comply on restaurants located in Colombo, Ella and Galle where most attracted tourist cities in Sri Lanka. This study creates new opportunities to explore the impact of online reviews on legal comply where both local and international researches are limited. For the study purpose, 194 restaurants were selected so that 20 percent of registered restaurants covered from each city. Data collected from restaurant owners using a structured questionnaire in order to measure the legal comply of restaurants, for the purpose of measuring customer feedbacks online reviews for each restaurant in google and trip adviser sites were used. For the study purpose a conceptual framework was set up and online reviews were classified into 5 categories according the online reviews received for the restaurants. According to the regression results of the study, online reviews have impact of 14.4 percent on legal comply with 0.000 significant value. Therefore, the hypothesis; online reviews impact on organizational legal comply is accepted. The results show that due to the new technology customers have a platform to complain or praise business practices that they have experienced and the organizations have to listening to customers and avoid illegal practices if they

still conducted, if they really want to survive in competitive business industry. This study shows the ways of organizations directs by the technology through legal ways though the creators of the technology originally did not intend the application by naturally it is happening. Business organizations should be keenly conscious of their known or unknown malpractice as online reviews emerge as a latest instrument for rating organizations.

Keywords: Legal comply, online reviews.

1. Introduction

Information and Communication Technology (ICT) plays a dominant role among the other technologies in the business world. It overcomes most of the limitations existed in traditional ways of communication and doing information related activities. New technology beefs up efficiency, effectiveness, accuracy and convenience in every activity. As it plays, a dominant role in the sector of commerce and trade, internet and social media fundamentally changed the way of doing businesses. In brief, it changes the way of selling, buying and experiencing a good or a service. In the past radio, television and newspapers were used to advertise or promote businesses. As the time passed search, engines (Google, Yahoo, Bing) and Social networks (Facebook, Twitter, and YouTube) became a way of advertising or promoting. Because of this, many consumers tend to use internet and social media sites to fulfill their needs and wants and as a way of searching information. Social networking websites represent various forms of Consumer Generated Content (CGC) such as blogs, wikis, virtual communities, social networks shared tags and media files hosted on sites such as YouTube and Flicker (Xiang & Gretzel, 2010; Pan, Tanya, & Crotts, 2007). Many of these social networking websites help consumers post and share their comments, opinions and personal experiences, which then serve as information for others.

After consumption, customers give feedbacks online and such online reviews have become increasingly important source of decision making for others. They are fast up to date and available everywhere, and have become the word-of-mouth (WOM) of the digital age, (Kaplan & Haenlein, 2010). According to findings from a joint research conducted by Power-Reviews and E-tailing groups, about 22% of participants recorded they always read customer reviews before making a purchase, 43% of participants recorded they check customer ranking and review most of the time and about 68% read at least four reviews before the purchase is made (Dellarocas, 2003) . When considering the reviews there is no standard way of posting reviews. Therefore, customer can post positive review if he/she satisfied by the product or service. Some reviews such as "oh! this is nice. I am going to buy another one", "I can't believe that I got this" are some positive emotional reviews while some consumers posting negative reviews as "I can buy this very cheaper than from here", "disgusting". Previous studies have identified six types of reviewers as the first time reviewer; who had never left a review before, the serial complainer; who had long and storied history of posting negative reviews and who like to post a review

every product or service they use, the direct communicator; who tell straight to the point, the storyteller; who is likes to posts reviews in more detailed way, the sharpshooter; who post the review in brief and to the point and finally, the faker who post false information regarding his/her customer experience (Law & Murphy, 2011). According to the Food Act No 26 of 1980: selling outdated food products, adding artificial coloring, maintaining unclean food processing areas, using unclean food products, using a source of pollution for caring for animals in places of eating without maintaining personal cleanliness by people working with food are considered as illegal.

These reviews influence for business both positively and negatively, according to the human psychology, negative influences strictly influence to purchasing decision of customers. The focus of this study is to find whether reviews work as feedback mechanism to direct the business along more legal direction.

2.   Related work

Customers tend to give feedback online after consuming goods or services, and these online reviews have currently become very crucial feedback mechanism. They are quick, up to date and everywhere accessible, and have become digital age's WOM. These reviews are considered authentic, trustworthy, useful and also important from the view of potential customers (Li & Hitt, 2008). Another research states that for consumers, online reviews are the most common way to express complaints, express emotions, and comments about satisfaction, access places, services and hotels (Schuckert, Liu, & Law, 2015). According to Kim, Mattila and Baloglu (2011), there are four major factors; convenience, quality, risk reduction and social reassurance motivates customers to seek reviews. It further states that females tend to read reviews for comfort, quality assurance and risk reduction purposes. On the other hand, the use of online user reviews by men depends on their level of expertise when booking online. This research paper indicates that review quantity pressures consumers with low involvement rather than quality of online user reviews while high involvement consumers are pressured by both quantity and quality of online user reviews (Park, Lee, & Han, 2007).

Multimedia sharing (e.g., videos, photographs, podcasting, etc.) provided through websites such as YouTube and Flicker attracts tourism researchers, creating interest in understanding the role of this form of content in social networks in transforming travel experience (Tussyadiah & Fesenmaier, 2009). Users who buy the app can rate it with the number of "stars" and post a review message. Ratings and reviews are publicly available and visible to other users and developers (Pagano & Maalej, 2013).

Online product reviews are a potentially valuable tool for firms that can use them to monitor customer attitudes toward their products in real time and adapt their production ,distribution and marketing strartegies accordingly (Dellarocas, Zhang, & Awad, 2007). Thus, management of online response becomes more essential. Managers who effectively react to posts on electronic platforms can transform an unsatisfied client into a loyal client while adequate reactions to reviews, especially bad reviews, can create and boost future

evaluations (Schuckert et al., 2015). Sparks and Browning (2010) discovered that customers who fail in service tend to spread negative words and can affect the reputation of a brand or firm. Reserches in this direction usually assumed that the main reason for which reviews affect sales is that they provide information about a product or supplier to potenial customer (Ghose & Ipeirotis, 2009). A numerous empirical studies have already examined the impact of the number of reviews on firm success (e.g., Dellarocas et al., 2007; Ghose & Ipeirotis, 2009). Significant progress has been made in understanding how guest reviews influence different results, including hotel revenue (Kim, Lim, & Brymer, 2015) hotel sales and booking volume (Ye, Law, & Gu, 2009), sales of online games (Zhu & Zhang, 2010), box office revanue, (Duan, Gu, & Whinston, 2008) movie sales (Liu, 2006),book sales (Chevalier & Mayzlin, 2006) and price premium (Zhang, Ye, Law, & Li, 2010). This is probably due to the fact that the online review platform plays an importatnt role in attracting more travelers to publish and share good or bad impression (Zhong, Leung, Law, & Wu, 2013). This voluntary customer behaviour not only provide free information to assist other travelers in making decisions, but also encourages hospitality managers to improve the quality of their products and services.

Some empirical studies were conducted in restaurants to show that the quality of food in a restaurant has a positive effect on consumers in order to distribute positive WOM . Furthermore, restaurant staff who generate a good experience can induce a positive e-WOM, motivated by the willingness to help staff and the restaurant, or simply express favorable personal emotions (Schuckert et al., 2015).

People pursue not only shared social norms but also complicated normative systems while shared social norms are depicted in the minds of the agents concerned, big normative systems direct the ideas and actions of individuals without becoming mental tools for persons as a whole. In daily lives, people often face such processes. All the norms of a system cannot be stored in one's memory as they exceed human capacity (at least for the largest normative systems, such as municipal law, containing many thousands, even millions of rules). Moreover, these norms persistently change because of facts (such as the adoption of new regulations, new interpretation decisions, etc.). For example, while each of us has some understanding of some of the laws of our legal system (the ones that correspond to shared moral rules, such as banning murder, or most frequently found, such as certain traffic rules, or governing one's specific activity, such as regulations on computer programmers ' software copyright). The common citizen has a very vague concept of the content of his country's law, particularly in the technical fields of tax law, property planning law, environmental law, etc., (Sartor, 2012).

It is possible to use four aspects to clarify why a individual is involved in antisocial behavior and to define the causes of antisocial behavior. First, an approach to organisational frustration based on the model of frustration-aggression psychology indicates that some environmental frustrators prevent or interfere with the capacity of a person to attain personal objectives. Studies indicate that any amount of variables, such as job data, instruments and facilities, materials and materials, budget support, facilities and aid needed from others, time, conflict of interest and labor overload, can behave as a

fustrator and initiate antisocial work behaviour. A second viewpoint that can assist understand antisocial actions is a social learning model. From this point of view, by direct experience or by observation, people can study aggressive work behavior. The third point of perspective is a model of cognitive evaluation, which assumes that environmental variables (particular job requirements, for instance) strengthen feelings and lead to a hunt for emotion triggers. Since individuals tend not to think that adverse outcomes are self-assessments, they are likely to blame others for the wrong thing and can strike back. The fourth perspective is the point of view of justice, which means that distributive injustice (unfair results), procedural injustice (unfair procedures), failure to communicate (injustice in interpersonal interaction) and auxiliary expertise lead to adverse emotional responses (e.g. anger, frustration) and may trigger a willingness to "even enjoy" by engaging in antisocial behaviour. In addition to the costs associated with the fact that they are subject to antisocial behavior, Organizations and society also have very high expenses. The price of one act of violence in the workplace, according to one estimate, is around $250,000 for violent occurrences in terms of lost work time and legal costs. The cost estimates of severe but non-physical antisocial behavior types range from $17,000 to $24,000 (Giacalone & Greenberg, 1996).

Legitimacy is the right to rule and the right to recognize it (Sternberger, 1968; Beethem, 1991; Coicaud, 2002). In order to create, function and replicate efficiently, social institutions need legitimacy (Easton, 1979). The motivations of people to comply with the law are at the core of the policy of crime-control. People comply with the law because they think it is correct to do so, a normative crime-control model suggests that organizations can ensure adherence and collaboration through the development of legitimacy-generating strategies (Tyler, 2006; Tyler & Huo, 2002). Tyler's policing procedural justice model says that when organizations act on procedural fairness principles, this helps sustain and enhance the capacity of legal authorities to encourage people to regulate themselves (Tyler , 2006). Institutions can thus prevent the costs, dangers and alienation connected with strategies based on internal threat-based laws (Schulhofer, Tyler, & Huq, 2011). Psychologically, legitimacy implies people recognize the right of police to exist, the right to determine authority, and the right to express power, (Tyler, 2006). Legitimacy is not only an obligation to obey (government recognition of power based on the concept that a lawful authority has the right to demand deference) but also a moral alignment. (justification of power based on the view that police share their moral values and are a source of moral authority in the society).

3. Methodology

Conceptual framework (Figure 1) of the study is formulated based on well established literature to illustrate the impact of online user reviews on legal comply.
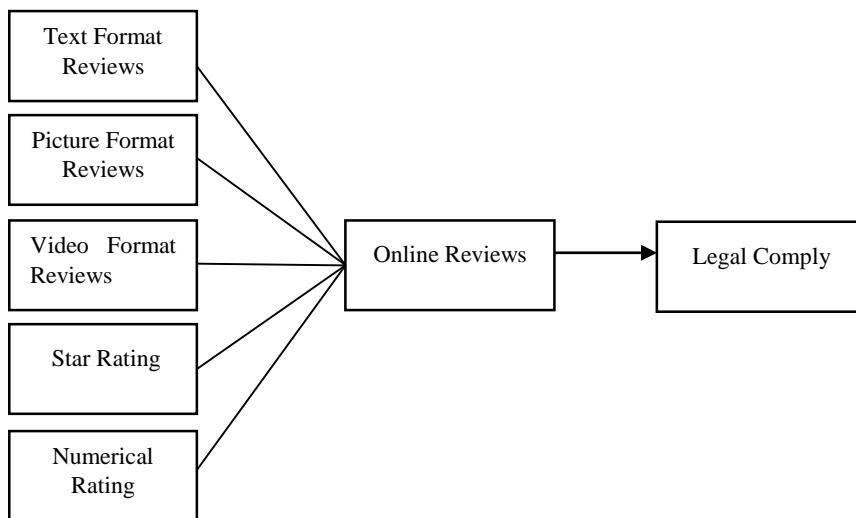
Figure 1 Conceptual framework

According to the above conceptual model (Figure 1), the Online Reviews is the independent variable, which is represented by Text format reviews, Picture format reviews, Video format reviews, Star ratings and Numerical ratings. Legal comply is the dependent variable. Accordingly, the main hypothesis derived to be tested in this study is as: H1- online user reviews impact on organizational legal Comply.

This is an exploratory reseach which used survey stratergy. Secondary sources were heavy used primarily to access past researches on customer reviews on restaurant industry. To collect primary data, researcher selected 20% of respondents by utilizing a table of random numbers by applying to a list of 975 restaurants located in Colombo, Ella and Galle. Among the sample selected 81 respondents of restaurants owners / managers responded for the survey questionnaires sent. Two structured questionnaires were used to collect the data from restaurant managers. The questionnaires were related to comply of legal behaviors among restaurants and awareness level of managers about online reviews in Sri Lanka. Preliminary questions are based on demographic factors; others are based on Likert scale questions with five indicating. Furthermore, researcher classified online user reviews related to each restaurant by using basket analysis. Results of basket analysis were mapped through a questionnaire filled by researcher with five indicating levels from very good to very bad. Statistical program, SPSS, was used to analyze the data collected. Cronbach's Alpha test was used to check the internal validity of the questionnaire. Descriptive analysis of the study was done to understand the basic nature of the variables and results are presented in this paper. Hypothesis of the study was tested by using regression analysis, in addition to that to identify the relationship between research variables correlation analysis was conducted.

4. Results and discussion

A representative sample of 194 restaurants from the cities of Colombo, Ella and Galle were selected so as to cover 20 percent of restaurant population from each city. Researcher could able to collect 81 responses from the above mentioned cities. According to Table 1, Legal comply shows relatively average mean value (M=3.33, SD=0.88). When considering to the skewness, it is .015, it is positively skewed. Online reviews toward Legal comply shows relatively high mean value (M=4.78, SD=0.26) and it negatively skewed.

Table 1
Descriptive statistics for research variables

	Mean	Std. Deviation	Skewness	
				Std. Error
Legal comply	3.3395	.87379	.015	.267
Reviews	4.7797	.25800	-2.230	.267

Table 2
Results of correlation analysis

		Legal comply
Reviews	Pearson correlation	.394**
	Sig .(2-Tailed)	.000

Table 2 shows the results of correlation analysis, which use to identify the relationship between Legal Comply and Online Reviews. According to Table 2, the Pearson correlation value for the relationship between online review and legal comply is 0.394 and it is a moderate positive relationship with significant value for the relationship is 0.000 (P<0.01) hence the relationship among variables is significant at 0.01 level. Therefore, it can be said that significant and moderate positive relationship exists between Legal Comply and the Online Reviews.

Table 3
Results of regression analysis

	B	Std. Error	Beta	t	Sig
(Constant)	-3.033	1.677		-1.809	.074
Review	1.333	.350	.394	3.8.6	.000
Adjusted R square = 0.144			F = 14.489		Sig.= F-0.000

As per the results of Table 3 the adjusted R square value of the model recorded 0.144 with 0.000 significant value, indicating that 14.4% of legal comply of selected restaurants are influenced by the online reviews and remaining 85.6% of legal comply are described by other factors, which are beyond the study. Results indicate that when number of online reviews for restaurants is increased, it brings positive impact toward organizational Legal Comply.

5. Conclusion

As concluding the study, researchers could discover that online user reviews give business organization a motive to take their organization into to a legal path if they are not complying with existing organization related laws. Though researchers could find five types of online reviews techniques used by users in previous literature, in Sri Lanka context, only three types of reviews are in practice those are text, picture, and star ratings. The majority of customers are more likely to place "star ratings". Moreover, Text format reviews can also be described as a sort of popular response type that is commonly used among local restaurants. Managers' awareness level of online user reviews depends mostly on their age and level of education. Because of the outstanding success of organizations that are highly aware of reviews; startups can also be motivated to follow the same approach. In addition, needed steps should be taken to popularize online customer feedback as a company growth instrument and motivation for company owners. This study focused on restaurants in three (3) most visited Sri Lankan cities. Consequently, further study should validate study results by conducting studies centered on a bigger sample beyond restaurants.

References

Beethem, D. (1991). *Max Weber and Legitimacy of Modern State.* Opladen: Westdeutscher Verlag.

Chevalier, J. A., & Mayzlin, D. (2006). The effect of word of mouth on sales :online book reviews. *Joournal of marketing reserch*, 43(3), 345-354.

Coicaud, J. M. (2002). *Legitamacy & Politics* . New York: Cambridge University.

Dellarocas, C. (2003). The digitization of word of mouth: Promise and challenges of online feedback mechanisms . *Manaement Science, 49*(10), 1-38.

Dellarocas, C., Zhang, X., & Awad, N. F. (2007). Exploring the value of online product review in forecasting sales:the case of motion pictures. *Journal of interactive Marketing, 21*(4), 23-45.

Duan, W., Gu, B., & Whinston, A. (2008). Do online reviews matter?-an empirical investigation of panel data. *Decision support system, 45*(4), 1007-1016.

Easton, D. (1979). *A Systems Analysis of Political Life.* University of Chicago Press.

Gardberg, N. A., & Fombrun, C. J. (2002). USA:For Better or Worse -The Most Visible American Corporate Reputation. *Corporate Reputation Review*, 4(4),385-391.

Ghose, A., & Ipeirotis, P. G. (2009). *Estimating the helpfulness and economic impact of product review:mining text and Reviewer characteristics.* IEEE Transactions on knowledge and data engineering.

Giacalone, R., & Greenberg, J. (1996). *Antisocial work Behavior.* Califonia: SAGE publications. Retrieved from Career Research: http://career.iresearchnet.com/career-development/antisocial-work-behaviors/

Kaplan, A. M., & Haenlein, M. (2010). Users of the World unite ! The challenges and Opportunities . *Business Horizons, 53*(1), 59-68.

Kim, E. E., Mattila, A. S., & Baloglu, S. (2011). Effects of Gender and Expertise on Consumers' Motivation to Read Online Hotel Reviews. *Cornell Hospitality Quarterly, 52*(4), 399-406.

Kim, W. G., Lim, H., & Brymer, R. A. (2015). The effectiveness of managing social media on hotel perfomance. *International journal of Tourism management, 44*, 165-171.

Law, R., & Murphy, J. (2011). Helpful reviewers in Trip advisor, an online travel community . *Journal of Travel & Tourism Marketing , 28*(7), 675-688.

Li, X., & Hitt, L. M. (2008). Self-selection and information Role of Online Product Reviews. *Information System Research, 19*(4), 397-521.

Liu, Y. (2006). Word of mouth for movies:its dynamics and impact on box office revanue. *Journal of marketing, 70*(3), 74-89.

Pagano, D., & Maalej, W. (2013). User feedback in the AppStore. Rio de Janeiro, Brasil: IEEE.

Pan, B., Tanya, M., & Crotts, J. C. (2007). Travel Blogs and the Implications for Destination Marketing. *Journal of Travel Research, 46*(1), 35-45.

Park, D.-H., Lee, J., & Han, I. (2007). The effect of on-line consumer reviews on consumer purchaising intention: The Moderating Rate of Involvement. *International Journal of Electronic Commerce, 11*(4), 125-148.

Sartor, G. (2012). Compliance with Normative Systems. *AICOL Workshops* (pp. 1-32). Verlang Berlin Heidelberg: Springer.

Schuckert, M., Liu, X., & Law, R. (2015). Hospitlity and tourism online reviews:recent trends and future directions. *Journal of travel and Tourism marketing, 32*(05), 608-621.

Schulhofer, S., Tyler, T., & Huq, A. (2011). American Policing at a Crossroads: Unsustainable Policies and the Procedural Justice Alternative . *Journal of criminal Law & Criminology , 101*(2).

Sparks, B., & Browning, V. (2010). Complaining in Cyberspace: The Motives and Forms of Hotel Guests' Complaints Online. *Journal of Hospitality Marketing & Management, 19*(7), 797-818.

Tussyadiah, L. P., & Fesenmaier, D. R. (2009). Mediating tourist experiences:Access to places via shared video. *Annals of Tourism Research, 36*(1), 24-40.

Tyler , T. (2006). *Why People Obey the Law.* New Jercy: Princenton University Press.

Tyler, T., & Huo, Y. (2002). *Trust in the Law.* New York: Russel Sage Foundation.

Xiang, Z., & Gretzel, U. (2010). Role of Social media in Online Travel Information Search. *Tourism Management , 31*(2), 179-188.

Ye, Q., Law, R., & Gu, B. (2009). The impact of online user reviews on hotel room sales. *International Journal of hospitality Management, 28*(1), 182-182.

Zhang, Z., Ye, Q., Law, R., & Li, Y. (2010). The impact of e-word-of-mouth on the online popularity of restaurants:A comparison of comsumer reviews and editor reviews. *International journal of Hospitality Management, 29*(4), 694-700.

Zhong, L., Leung, D., Law, R., & Wu, B. (2013). e-Tourism in China:A review of the Chinese-Language literature. *Asia pacific Journal of Tourism Reserch, 18*(5), 464-482.

Zhu, F., & Zhang, X. (2010). Impact of online consumer reviews on sales: The moderating role of product and comsumer characteristics. *Journal of Marketing, 74*(2), 133-148.