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Sri Lanka's external debt: Trend, ownership, and dynamics

Priyanga Dunusinghe

Abstract
In recent years, an influential section of researchers coined Sri Lanka being caught up in a debt trap. A number of studies attempted in countering above proposition. Nevertheless, there remained some related aspects which need further investigation into Sri Lanka's external debt position. This study aims at contributing to this on-going debate by addressing some unanswered areas of research. By employing descriptive and regression analyses, this study analyze the changes into external debt composition, debt ownership, and structural breaks in external debt accumulation during 1978-2019. Data for the study were extracted from few secondary sources published by the national statistical agencies. There are some interesting findings. First, this study found that a sizable share of external debt, at present, consists of commercial borrowing. This is a market deviation which has taken place since 2007. Moreover, external debt ownership has shifted to new sources such as international financial markets and new lenders such as China. The commercial borrowings emanated from new sources have been expensive to the economy. Second, reflecting those changes, our structural break test confirmed that Sri Lanka's external debt growth path witnessed a structural break in year 2007. It implies that external debt obligation grew at a faster rate in post-2007 than that took place during 1978-2006. Graduating from low income economy to a middle income economy and lukewarm approaches adopted by traditional lenders, particularly during the war-time, forced Sri Lanka to seek funds from less restrictive new sources thought such sources were costly. Hence, Sri Lanka's debt burden is mainly due to its increased borrowing at higher costs from sources such as international financial markets and China. Policy makers need to arrest the current situation by exploring avenues to cut down borrowings which are relatively expensive and to make sure the productive use of borrowed financial resources.

Keywords: external debt, debt composition, debt ownership, structural breaks

Introduction
Many countries around the world depend on external finances - in the form of grants and loans – in addressing domestic resources gaps. Traditionally, economists argued that developing countries suffer from two-gaps; namely in bridging the gap The external debt stock of the central government, as a percentage of Gross Domestic Product (GDP), grew from 37 per cent in 2010 to 67 per cent in 2019 (Central Bank, 2019). During the last decade, the growing external debt levels and concerns over repayment capacities received a wider publicity, nationally as well as internationally[1]. In particular, most international media stations carried out media reports studies arguing that Sri Lanka's growing debt burden is due to Chinese loans. In short, it was argued that Sri Lanka has been under Chinese debt trap. In response, some recent research studies suggested that debt burden is due to short-term commercial borrowings from the international financial markets and Sri Lanka's debt obligations to ADB and Japan are higher than that of the China (Weerakoon and Jayasuriya, 2018) [19]. Nevertheless, debate over who is responsible for Sri Lanka's growing debt burden continues to evolve and some studies in recent years have showed that Chinese funded projects are unsustainable and Chinese funds are relatively more expensive than that of some other bi-lateral and multi-lateral agencies (Ferchen and Perera, 2019) [13]. Nevertheless, there are a number of unanswered questions (or research gaps) related to Sri Lanka's external debt. These may include; how has the composition of the debt stock change over the years?

[1] In 2017 The New York Times carried a report under the title of "Sri Lanka, Struggling with Debt, Hands a Major Port to China.
https://www.nytimes.com/2017/12/12/world/asia/sri-lanka-china-port.html?
Similarly, The New York Times carried a report in 2018 under the title of "How China Got Sri Lanka to Cough Up a Port". https://www.nytimes.com/2018/06/25/world/asia/china-sri-lanka-port.html

What has been happening to debt ownership over the years? When did the external debt-stock start accumulating fast (structural break in external debt stock)? And are costs of financing comparable among the lenders? These are some of the questions which require answers in understanding Sri Lanka's present debt burden.

The objective of this study is to analyze the present external debt crisis faced by Sri Lanka. Specifically, this study aims at analyzing the changes into debt composition, debt ownership, and structural breaks, if any, in the accumulation process of external debt stock. Study confines to 1978-2019 period.

This study found that a sizable share of external debt, at present, consists of commercial borrowing. This is a market deviation that Sri Lanka started witnessing since 2007. Moreover, external debt ownership has shifted to new sources such as international financial markets and new lenders such as China. More importantly, Sri Lanka's external debt growth path witnessed a structural break in year 2007. It implies that external debt obligation grew at a faster rate in post-2007 than that took place during 1978-2006. This change was largely accompanied by new sources of external funding, namely from international financial market and China. Amount of debt may have increased due to two factors; namely amount of borrowings and costs of borrowings. Funds from both sources, international financial market and China, were available at a higher costs than that of the traditional bilateral and multilateral lenders. Hence, Sri Lanka's debt burden is mainly due to its increased borrowing at higher costs from sources such as international financial markets and China.

Brief literature survey

In recent years, a number of studies claimed that Sri Lanka has been in a debt crisis (Pathberiya and Wijeweera, 2005; Weerakoon and Jayasuriya, 2018) [16]. In particular, the authors highlighted that debt-to-GDP ratio and debt services remained somewhat higher in Sri Lanka compared to other comparable countries (Ekanayake, 2011; Dayaratna-Banda and Priyadarshanee, 2014; Deyshappriya, 2012; Kumara and Cooray, 2013) [12, 10, 11, 15]. Kumara and Coory (2013) argued that Sri Lanka has passed the sustainable level of debt-to-GDP ratio while the others claimed that Sri Lanka would be able to manage public debt with some hardship to the economy. According to some researchers, Sri Lanka has in a debt trap due to expensive Chinese loans that funded some unsolicited and unproductive development projects (Var and Po, 2017; Sautman and Hairong, 2019) [17]. Hambantota sea port has often been cited as one of the classic case of debt-trap. However, a number of research argued that debt problem is not due to Chinese, as argued by some researchers, rather commercial borrowings from international financial markets turned out to be the major culprit behind present debt situation (Weerakoon and Jayasuriya, 2018) [19]. Moreover, authors argued an increase of commercial borrowings and Sri Lanka shifting towards new sources of lenders. Nevertheless, previous studies failed to examine when the structural break was taken place with respect to the accumulation of foreign debt. In the literature, structural break test is often employed in determining time period on which the path of a series witnessed a shift and connect it with the changes in policy so as to derive much richer conclusion.

A number of studies have looked into public debt dynamics and its changes over the time (Jawadi and Sousa, 2012; Andrie and Minovic, 2018; Guestas and Regis, 2019; Campos and Cysne, 2019) [14]. The main purpose of the analyses was to identify the changes in the dynamics of debt growth and relate such breaks with possible sources. Jawadi and Sousa (2012) [14] examined structural breaks and nonlinearity in US and UK public debt. Using quarterly data, authors found that US public debt series has witnessed eight structural changes during 1970:q1-2009:q2 period while UK public debt stock has witnessed five structural breaks during 1962:q4-2009:q2 period. The authors argued factors such as economic recessions, oil shocks, and financial and political instability could explain such structural breaks. Similarly, Andrie and Minovic (2018) analyzed the dynamics of public debt growth in Serbia for the period of 2004:q4 – 2017:q4 period and their empirical estimates captured the upward shift in public debt growth from the onset of the Great Recession as well as the policy response to curb the rising public debt stock. In the context of China's looming debt crisis, Guestas and Regis (2018) examined the sustainability of China's sovereign debt, paying particular attention to changes in its dynamics. The authors found that there was a clear upward trend in 2014 onward related to the growth of public debt in China and argued that urgent policy attention is required to address this unsustainable path in the debt-to-GDP ratio. Campos and Cysne (2019) [7] analyzed the structural breaks in Brazilian public debt for the period of 1997-2018. The aim of the study was to identify the precise date as of which the debt trajectory become unsustainable. The authors found that until mid-2014, Brazilian public debt growth path showed weak sustainability, however, from May of 2014 onwards, it was witnessed a transition towards an unsustainable regime. This is largely due to the increase in spending at rising rates, without a sufficient offsetting of revenue.

Interestingly, all of the above studies employed Bai and Perron (2003) methodology in identifying the changes in the dynamics of debt. This standard methodology allows to identify the date in which changes in the dynamics of a variable take place as well as allows to capture multiple changes endogenously. Bai and Perron (2003) methodology has widely been used in identifying changes in the dynamics of many macro-economic variables in the literature; for instance, GDP, interest rate, inflation, export, public investment, energy use, and labour productivity.

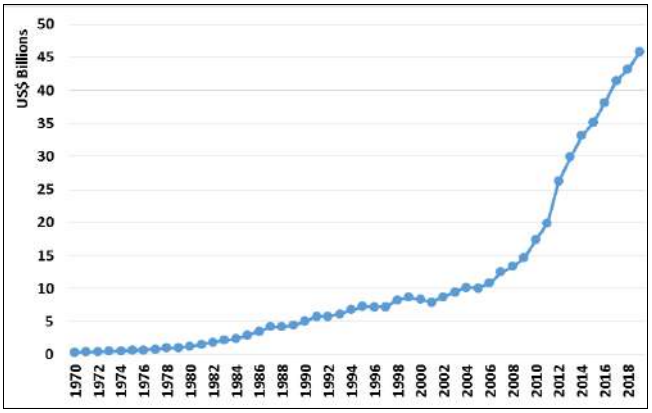
The structural break test may not be able to establish causation with absolute certainty, however, it is possible to either lend significant support to the case for causation or rise significant doubts of a causal relationship. Moreover, structural beak analysis can provide support for, or help to refute, the period in which damages were incurred and its contributors.

Trend, Magnitude, and Ownership of Sri Lanka's External Debt

Trends in External Debt

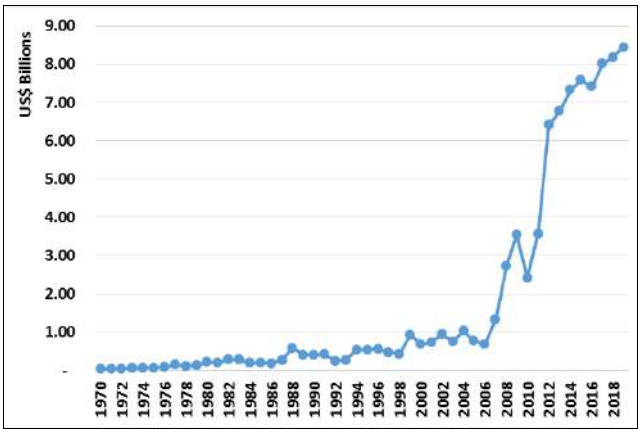
Sri Lanka's long-term external debt stock grew rapidly during the post economic liberalization period starting from 1978 till early 1990s (annual average growth rate was 15 per cent) (see Figure 1). Nevertheless, short-term external debt stock did not witness such a upward movement until 2006 (see Figure 2). An increase of long-term debt in early 1980s was mainly due to the large scale development projects launched with the assistance of both bi-lateral and multi-

lateral lenders. The growth of external slowed down during 1995-2005 period since government started relaying on domestic sources for financing the budget deficit as well as no major development projects were launched. However, both long- and short-term external debt stock started to grow rapidly during the post-war period since Sri Lanka launched a number of development projects largely using foreign funds and accessed to funds from international financial market via issuing International Sovereign bonds (ISBs) (see Figure 1 & 2)[2]. For instance, overall external debt stock grew at an annual average rate 12 per cent during the post 2010 period compared to 8 per cent growth rate during 2000-2009. In particular, the growth of short-term external debt during post-2009 has been significant. This was partly due to limited access to concessionary loans offered by bi-lateral and multi-lateral donors since Sri Lanka graduated from low-income country status to middle-income country status. Moreover, the government limited its domestic borrowings to allow domestic private sector to access to finance at lower interest costs.



Source: Development Indicators: Online database, World Bank

Fig 1: External Debt Stock - Long term: 1970-2019

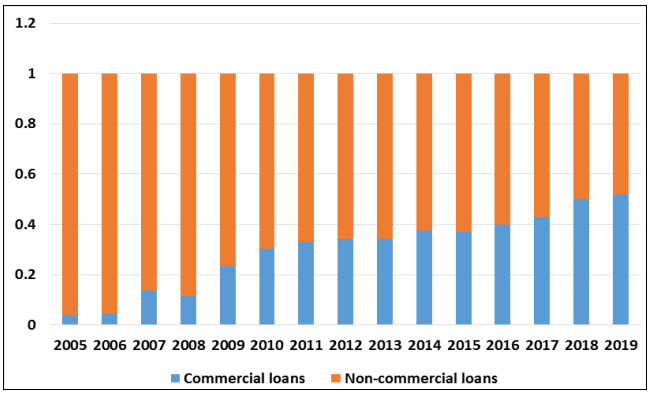


Source: Development Indicators: Online database, World Bank

Fig 2: External Debt Stock - Short Term: 1970-2019

External Debt Composition

Sri Lanka's reliance commercial loans increased from just around 8 per cent in 2007 to over 50 per cent by 2019. The ISBs accounts for the largest share in commercial borrowing. In addition, Sri Lanka borrowed funds from some bi-lateral lender, such as China and India, on commercial terms. The funds borrowed through ISBs largely spent on general budgetary activities while commercial borrowing from bi-lateral lenders channeled into some development projects. For instance, development activities related to stage I of the Hambantota port project was financed through a loan - US $ 307 was obtained from Exim Bank of China - on commercial terms. An increase in commercial borrowing pose two challenges to borrowers. First, commercial borrowings have shorter duration for repayment compared to long-term loans. Second, interest rates attached commercial loans are relatively higher. These two factors increase the debt burden, in particular, if investment funds do not results in earning foreign exchanges in the short-run.



Source: Annual Report of Central Bank of Sri Lanka (various years)

Fig 3: Composition of External Debt (Central Government): 2005-2019

Changing Debt Ownership

Sri Lanka's external debt obligations shifted to new sources during the study period (see Table 1)**.** Within a matter of less than a decade, Sri Lanka's debt obligations to international financial market and China have significantly increased. For instance, Sri Lanka's debt obligation to international financial market, as a % of total outstanding external debt stock, increased from 30 per cent in 2010 to 52 per cent by 2019 whereas China's share in total debt stock increased from 2.8 per cent to 9.6 per cent between the two reference years. Sri Lanka's debt obligation to China rises further (around 16 per cent of total external public debt) when taking into account project loans offered by the Export-Import Bank of China to State Owned Enterprises (IMF, 2019). In contrast, Sri Lanka's debt obligations to her traditional lender, such as ADB, World Bank, and Japan, shrunk over the years starting from early 2000. At present, debt obligation to Japan is 9.7 per cent of the total central government external debt obligation whereas this ratio stood around 30 per cent in early 2000[3]. Similarly, Sri Lanka's debt obligations to both World Bank and ADB declined over the years though debt to such multi-lateral organizations accounted for sizable shares in 1980s and 90s (see Table 1).

In the context of rising Sri Lanka's external debt burden in recent years, it is highly imperative to be cautious when

[2] Sri Lanka started issuing International Sovereign Bonds (ISB) since 2007.

[3] Japan provided official development assistance for a number of major development projects; such as development of the container terminal in the Port of Colombo, Bandaranaike International Airport, Mahaweli Development Project, Upper Kotmale Hydropower Project, Southern Expressway, and recently funding for New Bridge Construction Project over the Kelani River.

comparing debt ownership shares of different lenders. This is due to two important factors; first in addition to debt ownership share in a given year, one should also examine the path of debt accumulation in arriving at conclusion on the sources of the debt burden. Second, it is also important pay attention the duration/speed of the debt accumulation. The logic is that if debt accumulation took place within a shorter period, such accumulation may increase the pressure on repayment obligations. More importantly, rate of returns to foreign funded projects is one of the key factors in improving debtor's repayment capacity and if funds are not productively utilized, burden on repayment may be exacerbated. As documented by some researchers, some of the Chinese funded projects are yet to be productively utilized. For instance, Weerakoon (2018) [19] argued that much of Chinese development loans plugged into infrastructure projects with relatively low financial returns over the long term.

For instance, Japan has been Sri Lanka major bi-lateral donor since early 1980s to 2005 and present debt stock reflects the accumulation over a three decades. However, China became Sri Lanka's major donor and debt accumulation took place within a shorter period. In recent years/months, Sri Lanka sought more financial assistance from China, partly to overcome debt repayment challenges. Apparently Sri Lanka aims at negotiating some debt repayment rescheduling with China. These new development certainly increases Sri Lanka's dependency on China over external funding facilities in coming years.

Table 1: Changing Sri Lanka's External Debt Ownership: 1980-2019

(as a % of total Central Government Debt Stock)								
Source	1980	1990	1995	2000	2005	2010	2015	2019
Multilateral	40.4	40.8	41.8	46.1	55.9	33.3	28.1	23.0
World Bank	22.2	22.3	22.8	23.9	22.4	13.9	11.0	8.5
ADB	16.5	17.0	17.5	30.3	24.1	17.7	15.1	12.5
Bilateral	56.0	56.1	55.2	51.2	45.3	36.5	25.1	17.7
Japan	27.3	29.6	29.3	31.9	29.0	23.7	12.9	9.7
China(a)	0.4	0.2	0.2	0.4	0.4	2.8	8.8	9.6
Financial markets	-	-	-	-	-	30.2	41.4	51.9
Total	100	100	100	100	100	100	100	100

Note: (a) Excluding outstanding project loans under State Owned Enterprises

Source: Annual Report of Central Bank (*various years)*

Econometric Specification and Data

In this section, it is expected to examine whether there is a structural break in growth of external debt stock in Sri Lanka and, if any, to determine the date in which such break has taken place. Identification of break date helps in explaining which policy change may have caused the change in external debt accumulation much more precise manner. As discussed in the literature, researchers have often employed structural break tests to link observed changes in a growth path of macroeconomic variable to associated policy changes. In the context of on-going debate over whose debt is a prime cause of recently witnessed growth of external debt stock, it would be useful to identify since when Sri Lanka embarked into faster external debt accumulation process. In other words, when was the growth path of external debt shifted upward?

Econometric Specification

Bai (1997) and Bai and Perron (1998, 2003a, 2003b) consider a multiple linear regression model with T periods and *m* potential structural breaks, i.e. *m+1* regimes. In particular, for the observations in regime *j*, Bai (1997) and Bai and Perron (1998, 2003a, 2003b) estimate the following least square regression:

$$y_t = X_t^T \beta + Z_t^T \delta_j + \varepsilon_t \qquad (1)$$

for the regimes j=0,1,2,…*m*, and white noise process ε_t. The model (1) is presented in its most general form, since variables corresponding to matrix X do not vary across regimes, while variables corresponding matrix Z are allowed to vary across regimes. For a specific set of *m* breaks, Bai (1997) and Bai and Perron (1998, 2003a, 2003b) minimize the following sum of squared residuals;

$$S(\beta, \delta | \{T\}) = \sum_{j=0}^{m} \left\{ \sum_{t=T_j}^{T_{j+1}-1} y_t - X_t^T \beta - Z_t^T \delta_j \right\}^2 \qquad (2)$$

using Ordinary Least Square (OLS) regression technique to obtain estimates (β, δ). The global *m*-break optimizers are the set of breaks and corresponding coefficient estimates that minimize sum of squared residuals across all possible sets of *m*-break partitions (Bai and Perron 1998, 2003a, 2003b). Following Jawadi and Sousa (2012) [14], who apply described Bai-Perron testing procedure in the cases of US and UK, the mean-shift model with *m* potential structural breaks (T_1, T_2,…T_m) is estimated:

$$\Delta ED_t = \mu_j + \delta_j trend + \varepsilon_t \qquad (3)$$

where ΔED_t is the growth of external debt while μ_j, δ_j and ε_t stand for the intercept coefficients, slop coefficients, and error term respectively. Building on Bai (1997), Bai and Perron (1998) have introduced several structural break tests. One that is employed in this study is the one proposed in Bai and Perron (2003a, 2003b) where the authors proposed the following algorithm for determining the overall number of structural breaks; (1) pre-specify the upper bound for the number of breaks *m* by setting the value of trimming percentage (2) test the null hypothesis of no structural break against the alternative of a pre-specified number of breaks defied in step (1) by using double maximum test of Bai and Perron (1998); and (3) if double maximum tests indicate the presence of at least one structural break, proceed to next structural break, selecting M such breaks.

Data and Data Sources

Data for the study were extracted from annual reports published by Central Bank of Sri Lank and our main variable is the growth of external debt stock while the period of study is 1978-2019 (T=41). External debt, measured in US$, was considered for the analysis to avoid any exchange rate depreciation effect[4]. Our data contain

[4] The external debt stock in rupee terms could change due to two factors; namely due to (1) an increase in borrowings and (2) currency depreciation.

external debt of the Central Government only since data for external debt of State Owned Enterprises are not publically available for the study period.

Estimation and Discussion

The estimated results, the number of breaks and break dates, are reported in Table 2 & 3 below. The estimated results indicate that the change in the growth of external debt dynamics has occurred in year 2007 (see Table 2 & 3). Both Schewarz and LWZ information criteria confirm that there is a single break in growth of external debt stock during 1978-2019[5]. Both criteria reached its minium for a single break, Schewarz and LWZ reporting -4.88 and -4.68 respectively (see Table 2). This result is further confirmed by the F-test statistics reported in Table 3. Hypothesis testing for a 0 vs. 1 structural break is rejected at 5 per cent level of significance (calculated F-value > F-value at 5 per cent significance level). However, the test failed to reject the hypothesis testing 1 vs. 2 breaks, thereby supporting only for a single break. Both tests confirmed that growth of external debt has witnessed a structural break in 2007. In other words, mean value of growth of external debt shifted upward in 2007.

Table 2: Structural Break Test: Growth of External Debt Stock – 1978-2019

(Multiple Structural Break Test – Global Informtion Criteria)					
Breaks	# of Coefs.	Sum of Sq. Residuals	Log-L	Schewarz Criterion*	LWZ Criterion
0	2	0.33	42.30	-4.4674	-4.5766
1	4	0.22	50.31	-4.8781	-4.6800
2	6	0.20	52.64	-4.8109	-4.5099
3	8	0.21	51.12	-4.5603	-4.1531
Schwarz criterion selected breaks			1		
LWZ criterion selected breaks			1		
Estimated break dates					
1. 2007					
2. 2007, 2013					
3. 1988, 1995, 2013					

* Minimum information criterion values displayed with shading

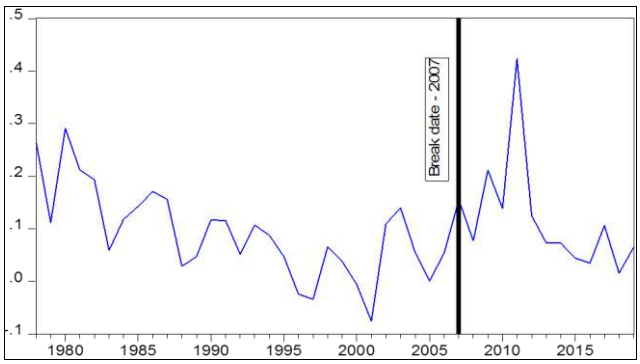
This structural break states that Sri Lanka's foreign borrowings rapidly increased during the post-2007 compared to pre-2007 period. At the same time, it is also possible that Sri Lanka borrowed at a higher costs than she did prior to 2007[6]. Hence, amount of borrowing as well as the costs of borrowings may have contributed to increase Sri Lanka's external debt obligations during the post-2007[7].

Table 3: Structural Break Test: Growth of External Debt Stock – 1978-2019

(Multiple Structural Break Test : L+1 break vs. global L)			
Break test	F-statistic	Scaled F-statistic	Critical value**
0 vs. 1*	18.12	18.12	8.58
1 vs. 2	4.45	4.45	10.13
2 vs. 3	3.61	3.61	11.14
Estimated break dates			
1. 2007			
2. 2007, 2013			
3. 1988, 1995, 2013			

*significant at the 0.05 level

**Bai-Perron (Econometric Journal, 2003) critical values



Source: Annual Report (various years), Central Bank of Sri Lanka

Fig 4: Growth of External Debt: Break Data

The structural break in year 2007 could be due to few factors. First, in 2007, Sri Lanka issues international sovereign bonds for the first time and, as a result, Sri Lanka's debt obligation increased by 54 billion rupees in 2007. In addition, debt obligation to China increased from 5 billion rupees in 2006 to 22 billion rupees in 2007. In subsequent years, Sri Lanka's debt obligations to both these sources jumped remarkably due to an increase in borrowing from both sources[8].

Sri Lanka's debt obligation under the international sovereign bond stood at 4 per cent of total external debt stock in 2007 and it rose to 31 per cent by 2017. Similarly, Sri Lanka's debt obligation to China was 0.5 per cent, as a % of total Sri Lana's external debt obligation, in 2006 and it increased to 1.7 per cent in the following year. By 2019, Sri Lanka's debt obligation to China rose to 9.6 per cent of the total Sri Lanka's total external debt obligation.

As discussed in section 4, Sri Lanka's debt obligations, relative to total debt stock, to major traditional lenders such as ADB, World Bank, and Japan declined during 2007 onwards. For instance, Sri Lanka's debt obligation to Japan accounted for 24.7 per cent of total Sri Lanka's debt obligation and it declined to 9.7 per cent by 2019. Similarly, this figure for ADB declined from 22 per cent in 2007 to 12.5 per cent in 2019. Hence, growth of external debt has mainly been driven by new debt sources than the traditional lenders.

An increase in external debt burden could be due to the fact that the new sources of external funds are relatively

Use of data in US$ terms negate any accumulation of external debt stock due to currency depreciation. Hence, any increase is due to an increase in borrowings.

[5] LWZ selection criteria developed as the advanced form of Schwarz criteria by Liu, Wu and Zidek (1994)

[6] For instance, Sri Lanka borrowed funds from China at a rate of 6.3 per cent (US$ 307 million) for Hambantota port phase 1 when interest rates were falling in the global financial markets following the financial crisis. Costs of funds provided by traditional lenders – ADB, World Bank, and Japan – and some new lenders – for instance India – are relatively lower than funds borrowed from China.

[7] Weerakoon and Jayasuriya (2018) argued "Chinese loans comprise about 10 per cent of Sri Lanka's total foreign debt. Of this debt, over 60 per cent was lent to Sri Lanka on concessional terms that, while not as generous as those from Japan — Sri Lanka's largest bilateral source of loans — were not really excessive (typically at fixed rates of 2 per cent, with other fees of 0.5 per cent and average maturity of 15–20 years). The remaining 40 per cent of non-concessionary loans from China comprise only 20 per cent of Sri Lanka's total debt from such borrowings".

[8] Weerakon (2018) concluded that Chinese loans are clearly not the primary cause of Sri Lanka's debt imbroglio but have contributed to, and, possibly, aggravated the problem.

expensive (Morris *et al.*, 2019)[9]. Recent World Bank study examined and compare costs of loans, in terms of interest costs, grace & maturity periods, and grant component and concluded that international financial market and Chinese funds are relatively expensive than that of the World Bank for many developing countries including Sri Lanka (see Table 4). According the authors, weighted mean interest rate of international financial market and Chinese loans was 4.7 per cent and 3.8 per cent respectively. In contrast, weighted mean interest rate of World Bank's loans was 1.1 per cent (see Table 4). Weighted mean grace period of international financial market loans was 5 years whereas Chinese loans had a weighted grace period of 4 years. In contrast, weighted grace period of the World Bank's loans was 8 years. Portfolio concessanality of Chinese loans was around 12 per cent and this figure for the World Bank's loans was 46 per cent. These facts clearly indicate that new sources of external borrowings have been relatively expensive than the traditional sources.

Table 4: Lending Terms Comparison among donors

Borrowing Country: Sri Lanka			
	China	**World Bank**	**Financial Market**
Portfolio concessionality	11.88%	45.56%	
Total funding (US$ Mn)	$12,680	$4,130	
Average loan size (US $ Mn)	$ 280	$ 90	
Average grant size (US $ Mn)	$ 10	$ 90	
Percent grant funding	1%	12%	
Total number of projects	63	47	
Weighted mean interest rate	3.81%	1.11%	4.69%
Weighted mean maturity (years)	18.8	19.9	9.8
Weighted mean grace period (years)	4.3	8.3	5.4
Weighted mean loan concessionality	10.94%	37.84%	1.61%

Source: Morris *et al*., (2020)

Conclusion

This study aims at contributing to this on-going debate by addressing some unanswered areas of research. By employing descriptive and regression analyses, this study analyze the changes into external debt composition, debt ownership, and structural breaks in external debt accumulation during 1978-2019. Data for the study were extracted from few secondary sources published by the national statistical agencies. There are some interesting findings. First, short-term external debt has rapidly increased during post-2009 period and a sizable share of short-term external debt consists of commercial borrowing. This is a market deviation which has taken place since 2007. Moreover, external debt ownership has shifted to new sources such as international financial markets and new lenders such as China. The commercial borrowings emanated from new sources have been expensive to the economy. Second, reflecting those changes, our structural break test confirmed that Sri Lanka's external debt growth path witnessed a structural break in year 2007. It implies that external debt obligation grew at a faster rate in post-2007 than that took place during 1978-2006. Graduating from low income economy to a middle income economy and lukewarm approaches adopted by traditional lenders, particularly during the war-time, forced Sri Lanka to seek funds from less restrictive new sources thought such sources were costly. Hence, Sri Lanka's debt burden is mainly due to its increased borrowing at higher costs from sources such as international financial markets and China.

[9] This study covers over 150 countries and took into account foreign funded projects within a 15-year period. It looked into terms such as interest costs, grace period etc. See Morris, *et al*., (2020) for more details.

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