TAX POLICY CHANGES, TAX REVENUE, GROSS DOMESTIC PRODUCTION, AND BUDGET DEFICIT: EVIDENCE FROM SRI LANKA

Vickneswaran Anojan¹ and Vickneshwaran Thanuja²

University of Jaffna, Sri Lanka ¹anojanv@univ.jfn.ac.lk, ²vthanuja12739@gmail.com

Abstract: The main objective is to investigate the relationship between Tax Policy Changes (TPCs), Tax Revenue (TR), and Gross Domestic Product (GDP) in Sri Lanka. Moreover, the relationship between TR, GDP, and Budget Deficit (BD) is investigated in this study. This study covers data for the period 2001-2021. Results show no significant relationship between tax policy changes and tax revenue in Sri Lanka. However, tax policy changes are significantly associated with GDP. Importantly, tax revenue is significantly associated with the budget deficit, while GDP also plays a significant role in shaping the budget deficit. This study concludes that no significant relationship between tax policy changes and tax revenue, but tax revenue and gross domestic production are significantly associated with the budget deficit. Therefore, stakeholders, especially policymakers ought to prioritize developing effective and efficient tax policies to positively influence the tax revenue, potentially reducing the budget deficit, and better managing the budget deficit in the future.

Keywords: Budget deficit, Gross domestic production, Tax revenue, Tax policy changes, Sri Lanka

INTRODUCTION

Background of the Study

BD is a major economic problem for a long period in Sri Lanka. As per the central bank provisional data (2021), the BD was LKR 2,057,924.79 million in 2021. Tax collection and administration were officially set out in Sri Lanka in 1931. Many tax policy changes have been made over the years in Sri Lanka. Importantly, Sri Lanka adopted the open economy policy in 1977. Since achieving independence, Sri Lanka has been under the governance of multiple political parties. However, the country has budget deficit over the years. Importantly, the country faced serious economic problems in the last two decades due to many reasons, especially civil war, the tsunami in 2004, and COVID-19 in 2019, 2020, and 2021. Many reasons underpin the economic problems of the country, however, these economic problems should be addressed and managed effectively and efficiently by developing and implementing significant economic policies. Here, tax policies are key economic policies of a country. Therefore, TPCs play a vital role in the national economy.

TPCs are related to a long-term or short-term oriented, however, such changes should be done with the consideration of the needs of а particular economy and compliance with tax principles. Two fundamental objectives are behind the TPCs of a country, such as to increase the TR and increase the gross domestic production. Both objectives may be contra in some years, due to the policymakers' high expectations. It means, that if the policymaker wants to increase the gross domestic production by providing some tax holidays for businesses, then such TPCs reduce the TR. Therefore, effective, efficient, and long-term perspective TPCs are needed to achieve economic growth and sustainability. Sri Lankan's major part of total revenue comes from the TR. As per the central bank provisional data (2021), Sri Lanka had LKR 1,298,019.06 million from TR, and LKR 159,052 million from non-TR in 2021. Therefore, it can be stated that 87.75 percent of the total revenue of Sri Lanka comes from TR. TR is divided into two major parts such as direct tax revenue and indirect tax revenue. According to the TR history of Sri Lanka, it can be seen that a very low percentage of contributions from direct tax revenue to TR in Sri Lanka. Sri Lankan direct and indirect tax revenue was LKR 302,115 million, and LKR 995,904 million respectively in 2021. As per the above amount, direct tax revenue is just above 30 percent of the total TR. Many developed and developing countries receive a considerable amount of TR from direct TR. However, it is a major problem in Sri Lanka. Gross domestic product is one of the key economic indicators of the country. It depends on the many policies including tax policies. Therefore, tax policymakers ought to consider the impact of such tax policy changes on gross domestic production. According to the central bank reports, Sri Lanka had 15.75 billion and 88.91 billion USD gross domestic production in 2001 and 2021 respectively.

The BD is calculated by the deduction of the total expenditure of the country from the total revenue of the country. Total expenditure is mainly divided into recurrent and capital expenditure. As per the central bank provisional data (2021), Sri Lankan total revenue and expenditure were LKR 1,457,071 million and LKR 3,521,735 million respectively in 2021. There are only two possible ways to improve the BD, such as increasing the total revenue of the country and reducing or controlling or maintaining the total expenditure of the country. Sri Lankan total revenue and total expenditure were LKR 67,964 million and LKR 99,814 respectively in 2001.

TPCs, TR, GDP, and BD are key economic variables of the national economy.

Many previous studies have focused on this research area (Keshab, Dung, & Chan, 2019; Jothiratne, 2021; Ibrar, Jawad, Arshad, & Shabir, 2021; Oroba and Nusrat, 2015) however very few studies are related to tax policy changes. Sri Lanka faced economic crises in 2022. Therefore, this study is timely research to show the actual relationship among key economic variables of the country. Especially, this study period covers more recent years and the last 21 years. As per the literature review and awareness of this area of research, this is the first study that examines the relationship among TPCs, TR, GDP, and BD during this study period. The study findings show originality because no research investigates the relationship among the above key economic variables.

This study examines the relationship among key economic variables; therefore, the study's findings significantly contribute to national economic policy reforms, especially policy reforms. Also, this study tax contributes significantly to the macroeconomic and taxation literature. These findings help to effective and efficient budget national preparation and implementation, which leads to the strategic management of budget deficit or overcoming budget deficit. the Many developing countries face budget deficits. Therefore, the study's findings can be generalized and used in similar economies. Moreover, this study significantly contributes to the sustainability of the country through effective and efficient economic policy reform in Sri Lanka.

Statement of the Problem

Sri Lanka has budget deficit for a long period. Moreover, the budget deficit has increased over the last few decades in Sri Lanka. The government made many tax policy changes to overcome and reduce the budget deficit for a long period. Even though the budget deficit continues, it has increased. Sri Lanka is unable to avoid the budget deficit for a long period, it continues every year (Central Bank, Summary of Government Fiscal Operations from 1990 to 2021). It is a major economic problem, that the government must finance the BD through foreign loans (Central Bank, Summary of Government Fiscal Operations from 1990 to 2021). This financing strategy causes an economic crisis. Especially, the Sri Lankan BD has been at a very high level in the last two decades when compared to before 2000.

Sri Lanka must reduce the BD. The TR is a major source of the total revenue of the country. Therefore, governments have made many TPCs with the consideration of the local and international experts' directions. However, the BD continues as a major economic problem, and the problem is increasing every year. There are a lot of TPCs in Sri Lanka during 2001 – 2021, also it can be seen that the BD of Sri Lanka has increased over the period 2001 to 2021. Therefore, the statement of the problem is whether TPCs have a significant impact on tax revenue, gross domestic production, and budget deficit or not in Sri Lanka.

Objectives of the Study

The primary objective is to examine the impact of tax policy changes on tax revenue, and gross domestic production in Sri Lanka. The following are the secondary objectives of the study:

- 1. to investigate the impact of tax revenue on the budget deficit of Sri Lanka.
- 2. to examine the impact of the gross domestic production on the budget deficit of Sri Lanka.

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

There are very rare empirical studies on TPCs, TR, GDP, and BD. The following studies are related to this study.

Keshab, Dung, and Chan (2019) investigated the effect of direct and indirect tax

changes in Vietnam. This study examined two tax reforms, the first one was a value-added tax rate increment to 12% from 10%, and the second was a reduction of the corporate income tax rate from 20% to 17%. According to the results of the study, researchers recommended that the government ought to consider the 12%, and 17% value-added tax rates and corporate income tax rates respectively to reduce the tax burden in Vietnam.

Thanabalasingam and Jothiratne (2021) examined the relationship among government debt, fiscal deficit, and tax policy changes in Sri Lanka. The key purpose of the study is to identify the possibility of reducing the BD and maintaining government debt at a manageable amount without sacrificing the economic growth of the country. They revealed that direct TR, indirect TR, real GDP, and consumer price index had a negative relationship with the government debt of Sri Lanka. In addition to that, government expenditure, BD, lending interest rate, and the exchange rate had significant and positive effects on public debt in Sri Lanka. Researchers suggested there is a possibility for fiscal consolidation in the way of policy reforms tax and government expenditure adjustments in Sri Lanka. Tax reforms on direct taxes were recommended to contribute significantly to the reduction of public debt.

Ibrar, Jawad, Arshad, and Shabir (2021) examined the short and long-period impact of fiscal adjustments' size and composition on economic growth in Pakistan. Results of the study clearly revealed that expenditure-based adjustments contribute to the economic growth of the country on the other hand adjustments regarding tax lead to reducing the economic growth of the country in a long-term perspective in Pakistan. Finally, this study strongly highlighted that expenditure-based adjustments should be needed to boost the economic growth of the country.

Kofi, David, Frank, and Isaac (2022) assessed the effect of tax policy changes on the

mobilization of tax revenue in Ghana. This study involved time-series data analysis covering 1980 to 2018. Researchers performed the least squares technique to respond to the research questions of the study. The findings of the study revealed that tax reforms had a significant and positive effect on the generation of tax revenue in Ghana. Also, they found that real GDP, government debt, and education were significant reasons to increase the tax revenue of the country in the long-term perspective.

H1: There is a significant impact of tax policy changes on the tax revenue of Sri Lanka.

Mahmoud and Binh (2016) studied tax policy challenges in Egypt. The primary purpose of the research was to examine the effect of tax policy challenges in the revolution of Egypt in 2011. Researchers proposed that tax administration should be modernized to reduce tax avoidance.

Kadir and Rıdvan (2016) evaluated the effect of tax policy on the macroeconomic variables in Turkey. They used the Bayesian vector autoregression (BVAR) technique to find the effect of fiscal policy on the macroeconomic variables. Researchers found that government income and expenses had a limited impact on the GDP and other tested macroeconomic variables such as inflation, share market index, external debt, and interest rate in this study.

Nguyen, Luisanna, and Raffaele (2016) revealed the impact of macroeconomic variables on income and consumption through tax changes. Researchers found that income tax had a significant impact on GDP, consumption, and investments. Reduction in consumption tax did not affect significantly on GDP and investment, however, it had a considerable impact on consumption.

Mykola (2017) assessed the impact of the role of fiscal policy on economic development and social stability in emerging markets. This study highlighted that fiscal policy had a positive impact on the economic development of emerging economies.

Desislava (2017) evaluated the effect of tax structure on economic growth in the European Union countries. The study period covered from 1996 to 2013. Descriptive and inferential analyses were performed in this study. Analyses of the study confirmed that taxes on consumption and personal taxes had a significant impact on economic growth.

Naoyuki, Farhad, and Tetsuro (2018) investigated the effect of fiscal policy on budget stability and economic recovery in Japan and Greece. They found that the expenses and income of the government must be simultaneously adjusted while the decline in expenses of the government has to exceed the increase in TR for fiscal sustainability in Japan. When compared to Greece, Japan's debt to the gross domestic product was higher than Greece, because of its bond market stability of Greece.

H2: There is a significant impact of tax policy changes on the gross domestic production of Sri Lanka.

Ravinder and Ghirmai (2011) assessed the effect of tax policy on the economic activities of the country. Domestic and foreign debt financing was considered an economic activity in this study. Researchers highlighted that administrative and implementation weakness tax policies are a major problem in most countries, and also it leads to the fiscal deficit in most developing countries, especially in Africa. They suggested that an increase in revenue, expenditure reduction, and or a continuation of both may lead to avoiding the above worst economic position of countries. highlighted The study that income redistribution can be done through the taxation of wealth and property income.

William and Andrew (2014) investigated the impact of income tax policy changes on economic development. The main aim of the research is to identify the impact of changes in individual income tax on economic growth. They stated that reducing the tax rate encourages work, savings, and investment of individuals, and also leads to an increase in the BD of the country. They found that all tax changes did not impact the same level of economic development.

Maria and Alexander (2014) assessed the impact of discretionary tax policy on economic growth in some countries belonging to the European Union. The main objective of the research was to show revenue, fiscal measures, and budgetary measures. They found that fiscal consideration had an impact on economic growth, and some specific budget categories were not found as significant. The findings of the study highlighted that expenditure-based adjustments had small negative effects. Reduction in expenditure, investments by the government, and consumption contributed to the reduction in economic development. An increase in indirect taxes had a significant and negative effect on the economic development of the country.

Oroba and Nusrat (2015) investigated the impact of TR on BD in Iraq. Oil revenue contributed 94 to 97 percent to the total revenue of Iraq, other revenue contributed only 3 to 6 percent of total income. Researchers found that the tax system in Iraq helps with the introduction of new vessels within the tax structure and the imposition of new taxes.

H3: There is a significant impact of tax revenue on the budget deficit of Sri Lanka.

Deepak, Umakant, and Santosh (2022) attempted to reveal the effect of fiscal space on health services in India. Goods and service tax reform, health-related tax collections, tobacco products higher excise duty, subsidies of cooking gas to poor people, direct beneficiaries from health services, and tax administration reform were considered under measures of fiscal space. Analysis of the study confirmed that fiscal policy reforms are used to generate public revenue as a part of a political commitment of the central government. Daniel and Oliver (2005) evaluated fiscal policy and economic development in Kenya. The main purpose of the research was to identify the association between measures of fiscal policy and economic development. They revealed that productive expenditure had a significant negative impact on the economic growth of Kenya. Further, there was no significant impact of taxes on the economic development of the country. Government investment contributed to the economic growth of the country in the long-term perspective.

H4: There is a significant impact of gross domestic production on the budget deficit of Sri Lanka.

RESEARCH METHOD

Conceptual Model

The following conceptual mode shows the relationship between tested variables in this study.



Where:

TPCs : Tax Policy Changes

TR : Tax Revenue

GDP : Gross Domestic Production

BD : Budget Deficit

The following four regression models were formulated and tested in this study:

$TR = \beta 0 + \beta 1TPCs + \epsilon i$	(1)
GDP = $\beta 0 + \beta 1$ TPCs + ϵi	(1)
BD = $\beta 0 + \beta 1TR + \epsilon i$	(1)
$BD = \beta 0 + \beta 1GDP + \epsilon i \dots$	(1)

Concept	Variables	Indicator	Measurement
Public Policy	Tax policy	Changes in	If any TPCs
Changes	changes	the existing	lead to an
		rates.	increase in
		Introduction	direct/
		of new taxes.	indirect tax
		Abolishment	revenue, then
		of taxes.	scoring 1 to 5.
		Changes in	If any TPCs
		the existing	lead to a
		tax acts.	decrease in
			direct/
			indirect tax
			revenue, then
			scoring -1 to -
			5.
Public	Tax	Total annual	Accumulate
Revenue	revenue	tax revenue	annual direct
		of Sri Lanka.	and indirect
			tax collection.
Domestic	Gross	Total annual	Accumulate
Production	domestic	gross	annual GDP
	production.	domestic	from all major
		production	sectors.
		of Sri Lanka.	
Public	Budget	The annual	Difference
Budget	deficit	budget	between
		deficit of Sri	budgeted
		Lanka.	revenue and
			budgeted
			expenditures.

OPERATIONALIZATION OF VARIABLES Table 1: Operationalization

SAMPLE

The Central Bank of Sri Lanka, the World Bank, the International Monetary Board, and other local and international financial institutions have stated that Sri Lanka faces an economic crisis in the latter part of 2020. Sri Lanka had a very high amount of BD in the last two decades, and also it had a negative economic growth rate in the last two decades (2001 and 2021). Therefore, the researcher considered the last two decades for this study.

DATA COLLECTION

Data for the study was collected from secondary sources. Especially, TPCs were collected from the official website of the Department of Inland Revenue, Sri Lanka from 2001 to 2021. The Central Bank of Sri Lanka is the supreme level of the institution to publish the national output of Sri Lanka. TR, GDP, and the BD of Sri Lanka were collected from the Central Bank, Summary of Government Fiscal Operations from 1990 to 2021. TR includes direct and indirect revenue of the country. Total GDP covers the major three sectors of GDP in Sri Lanka. BD is calculated by deducting the total expenditure of the country from the total revenue and grants of the country. Total expenditure includes total recurrent expenditure and total capital and net lending of the country. TR, non-tax revenue, and grants are included in the total revenue of the country.

RESEARCH APPROACH

The researcher developed a quantitative method to quantify TPCs in this study. As per the central bank report of Sri Lanka, it can be seen that indirect TR contributes more than 75% of total TR and direct tax contributes below 25% of total TR.

The researcher developed a model to quantify the tax policy changes in this study for the very first time. The researcher allocated scores in the following manner if there are any TPCs to increase indirect TR, each such change is considered as 4 out of 5. If there are any TPCs to increase direct TR, each such change is considered as 1 out of 5. If there is any new tax act, which includes too many positive changes then 5 scores for that year. The maximum positive score for a year is restricted to 5 out of 5.

On the other hand, if there are any tax policy changes, that impact negatively indirect TR, each such change will be considered as -4 out of -5. If there are any tax policy changes, that impact negatively on direct TR, each such change will be considered as -1 out of -5. If there is any new income tax act, that includes adverse TPCs and impacts negatively on direct and indirect TR, -5 score for that year. The maximum negative score for a year is restricted to -5 out of -5 TPCs were scored as follows in this study:

Type of Tax Policy Changes	Score
Introduction of new direct tax	1
Introduction of new indirect tax	4
Increase rate of direct tax	1
Increase rate of indirect tax	4
Reduce threshold/tax-free allowance	1
of direct tax	
Reduce the threshold for registration	4
of indirect tax	
Numerous changes/ New Acts	5
(favorable TPCs to increase TR)	
Abolition of direct tax	-1
Abolition of indirect tax	-4
Reduce the rate of direct tax	-1
Reduce the rate of indirect tax	-4
Increase threshold/tax-free allowance	-1
of direct tax	
Increase the threshold for registration	-4
of direct tax	
Numerous changes/ New Acts (adverse TPCs to increase TR)	-5

Table 2: Tax Policy Changes Scoring

The total amount of TR of Sri Lanka in the last two decades (2001-2021) was considered in millions of Sri Lankan rupees. The GDP of Sri Lanka in the last two decades was considered in US dollars billion. Further, the BD of Sri Lanka in the last two decades was considered in millions of Sri Lankan rupees.

DATA ANALYSIS

Descriptive and inferential statistics were performed in this study by using the SPSS version - 20. Regression, correlation, and t-tests were used to answer research questions, achieve objectives, and test the hypotheses of the study.

RESULTS AND DISCUSSION Detailed Description of the Data

TPCs were collected from the official website of the Department of Inland Revenue, Sri Lanka from 2001 to 2021. TR, GDP, and the BD of Sri Lanka were collected from the central bank reports and publications from 2001 to 2021. The above two institutions are highly reputed government regulatory bodies in Sri Lanka. Therefore, the researcher can ensure that data from the above two institutions are highly reliable.

Descriptive Analysis	
Table 3: Descri	ptive Statistics

	Min	Max	Mean	Std. Deviation
TR	205,840	1,734,925	876,504.71	521,130.990
GDP	16	89	55.99	27.814
BD	133,251	2,057,925	580,236.67	500,292.612

According to Table 3, Sri Lanka had 1,734,925 million annual TR, which was the highest amount during the period from 2001 to 2021. Sri Lanka had an average annual TR of LKR 876,504.71 million in the above period. The maximum annual gross domestic product of Sri Lanka was 89 billion USD in a year between 2001 and 2021. The mean value of the gross domestic product of Sri Lanka was 55.99 billion USD in the above period. The highest BD of Sri Lanka was LKR 2,057,925 million during the period 2001-2021. The average BD of Sri Lanka was nearly 60% of the TR of the country between 2001 and 2021. According to the above figures, Sri Lanka had tax revenue more than the BD of the country in the above period, however, there was a very small difference. It is not a good economic condition for any country, developing countries. especially for It indicates that Sri Lanka must consider some effective and efficient tax policies to raise tax revenue double to avoid a BD in the future.

Regression Analysis

The researcher performed a collinearity test to confirm the independence of the variables tested in this study. According to this test, the Variance Inflation Factor (VIF) value is 1 between TPCs and TR, TPCs and GDP, TR and BD, and GDP and BD. It indicates that tested variables do not correlate with predictors in this study.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.347ª	.121	.074	501364.809		
a. Predictors: (Constant), TPCs						

Table 4: Model Summary

According to the adjusted R square value of the above table, it can be stated that TPCs affect less than 1% of the 1% change in TR of the country. It highlights that TPCs in Sri Lanka had only below 1 percent effect on the tax revenue of the country during the last twenty years. It is a piece of empirical evidence that the TPCs in the country did not contribute significantly to the tax revenue of the country. Therefore, it should be accepted ineffective TPCs that and their implementation over the period from 2001 to 2021. Therefore, it can be emphasized that Sri Lanka needs effective and efficient TPCs in the future for the sustainability of the country

Table 5: Coefficients

Model		Unstand Coeffi	lardized cients	Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
1	(Constant)	868106.511	109530.290		7.926	.000
1 TPCs		-44090.565	27301.439	347	-1.615	.123
a. Depen	dent Variable: T	R				

According to Table 5, TPCs have no significant impact on the TR of Sri Lanka between 2001 and 2021 (the significant value is 0.123/ 12.3%). Therefore, H1 is rejected in this study. Therefore, Sri Lanka has to consider other sources of income to finance its BD of Sri Lanka. Especially, it has a very low level of contribution from non-tax revenue, therefore Sri Lanka may consider other sources to improve its total revenue of the country. Also, they have to pay much consideration to TPCs that occurred over the period and compare its TPCs with other similar countries to find the weakness of TPCs in Sri Lanka and find some effective and efficient TPCs from the similar countries for some positive and significant effects on tax revenue of the country in the future. Oscar and Antonio (2015) found all the simulated policies led to a decrease in the levels of output in Spain.

Table 6: Model Summary

Model	R	R	Adjusted	Std. Error of		
		Square	R Square	the Estimate		
2	.524ª	.274	.236	24.311		
a. Predictors: (Constant), TPCs						

The above model is related to TPCs and gross domestic product. According to the adjusted R square (0.236) of the above table, it can be stated that TPCs affect less than 25% of the gross domestic product of the country. Therefore, Sri Lanka has to find other above 75% impact factors on gross domestic product. Also, Sri Lanka has to verify the impact of TPCs on the GDP of other similar countries to find any significant TPCs to motivate the gross domestic product of Sri Lanka. Also, the country has to consider effective and efficient economic policies to improve the gross domestic product of the country for this purpose they ought to consider some healthy economic policies of other developed and developing countries.

Table 7: Coefficients

Mo	lodel Unstandardized		Standardized	t	Sig.		
		Coefficients		Coefficients			
		В	Std. Error	Beta			
2	(Constant)	55.317	5.311		10.415	.000	
	TPCs	-3.547	1.324	524	-2.679	.015	
a. 1	a. Dependent Variable: GDP						

According to Table 7, TPCs have a significant impact on the GDP of Sri Lanka between 2001 and 2021 (the significant value is 0.015/1.5%). Therefore, H2 is accepted in this study. This study highlights that TPCs can significantly impact the GDP of Sri Lanka. Therefore, the policymakers should consider some needed tax policies to enhance and increase the GDP of Sri Lanka, when increasing the GDP of any country there are many possibilities to have a positive and

significant impact on other major economic variables. In particular, it will lead to employment opportunities, per capita income, and tax revenue. Then, the country can answer some economic issues of the country through some effective and efficient TPCs.

Table 8: Model Summary

Model	R	R	Adjusted	Std. Error of			
		Square	R Square	the Estimate			
3	.681ª	.464	.435	375912.049			
a. Predictors: (Constant), TR							

The above model is related to TR and BD. According to the adjusted R square (43.5%) of the above table, it can be stated that TR affects around 43.5% of the BD of the country. This finding highlights that Sri Lanka can control or reduce its TR. Therefore, Sri Lanka has to find strategies and policies to raise the TR of the country. TR consists of two major revenues: direct and indirect tax revenue. Indirect tax revenue contributes significantly to the total TR of the country rather than direct tax revenue. Direct tax revenue contributes only below 25% of the total TR of the country. However, OECD countries' average direct tax contribution was above 37% of the total TR in 2021. Therefore, policymakers ought to consider some more effective and efficient TPCs to increase the direct tax revenue of Sri Lanka.

Table 9: Coefficients

	Unstandardized		Standardized	t	Sig.		
		Coefficients		Coefficients			
		Model	Model Std. Error Beta				
3	(Constant)	7273.388	163451.776		.044	.965	
	TR	.654	.161	.681	4.053	.001	
a. 1	a. Dependent Variable: BD						

According to Table 9, TR has a significant impact on the tax BD of Sri Lanka between 2001 and 2021 (significant value is 0.001). Therefore, H3 is accepted in this study.

Model	R	R	Adjusted	Std. Error of			
		Square	R Square	the Estimate			
4	.741ª	.549	.526	344557.210			
a. Predictors: (Constant), GDP							

The above model is related to GDP and the BD. According to the adjusted R square (52.6%) of the above table, it can be stated that GDP affects about 53% of the BD of the country. It shows that GDP has a great effect on the BD of Sri Lanka. Therefore, Sri Lanka has to identify some relevant economic policies and economic reform to increase GDP which may lead to control or reduce the BD in the future. Also, a significant increase in the GDP may contribute to identifying some local financing sources for the fiancé BD of the country.

Table 11: Coefficients

Model		Unstandardized		Standardize	t	Sig.
		Coefficients		d		
				Coefficients		
		В	Std. Error	Beta		
4	(Constant)	-166257.613	172362.478		965	.347
	GDP	13332.069	2769.991	.741	4.813	.000
a. Dependent Variable: BD						

According to Table 10, the gross domestic product has a significant impact on the BD of Sri Lanka between 2001 and 2021 (significant value is <.001). Therefore, H4 is accepted in this study. Sri Lanka has to consider some other similar countries' successful economic policies for their adequate GDP, such identification and assessment may help for the sustainable economic policies to increase the GDP of the country, such vital activity will lead to favorable changes in the BD of the country in Solomon the future. (2022) suggested formulating expenditure and tax policies to ensure unproductive expenditures are reduced while at the same time boosting public investment.

Table 10: Model Summary

Taxation is the major economic activity of every country. A big part of public revenue collected through taxes. Taxes is are calculated, collected, and administrated as per the tax policies of the country. Accounting professionals play a vital role in this process, they are involved with the implementation of tax policies, calculation, and reporting of taxes. Tax collection includes direct and indirect taxes from the entities and general public of the country. Here, a large amount of direct tax is paid by the entities, and indirect taxes are paid by the consumer of the particular product or service. Therefore, accounting professionals have to compute taxes of the entities and they have to do tax planning for the betterment of companies' financial performance. Tax planning may vitally impact regular tax policy changes. Therefore, accounting professionals may face some difficulties in tax planning.

CONCLUSION, IMPLICATION, LIMITATIONS, AND FUTURE RESEARCH DIRECTION Conclusion

The BD is one of the major economic problems in Sri Lanka. TR is the major source of the total revenue of Sri Lanka. However, Sri Lankan TR is not enough to meet its recurrent expenditure. Therefore, Sri Lanka has to increase its TR through appropriate tax policies and tax reforms. We can see TPCs almost every year from 2001-2021 in Sri Lanka. However, certainty is one of the principles of taxation, clearly highlighting that tax policies should be applied for a long period rather than amended every year. Sri Lanka has made a lot of significant changes in tax policies since 2001, especially since many taxes have been abolished, indirect tax and direct tax thresholds have been increased, and indirect tax rates and direct tax rates have been reduced. Therefore, the TR of the country achieved negative results and also led to a high level of BD in Sri Lanka. Results of the study very clearly show that TPCs did not impact significantly on TR in Sri Lanka. Further, TPCs have a significant impact on the BD of Sri Lanka. Based on the findings, TPCs were unable to impact on TR from the period 2001-2021. Finally, it can be concluded that Sri Lanka has to give more consideration to the effective and efficient TPCs rather than regular changes in tax policies, which can favorably impact on TR of Sri Lanka. Such changes in tax policies may lead to the control or reduction of the BD of Sri Lanka in the future.

Implication of the Study

There are a lot of tax policy changes in Sri Lanka every year, therefore the findings of the study can be used by the policymakers for better reform in taxation and healthy tax policy changes for the sustainability of the country in the future.

Limitations of the Study

It is very hard to avoid limitations for many researchers. The following can be considered limitations of the study:

- 1. This study only considers the period from 2001 to 2021.
- 2. The effectiveness and efficiency of tax policy implementation were not assessed in this study.
- 3. Researchers only consider tax policy changes as the major independent variable in this study.
- 4. Tax evasion-related issues were not discussed in this study.
- 5. The authors leave the above limitation for future research.

Future Research Direction

Future research can consider this kind of topic with a comparative study with other emerging and neighboring economies to identify some economic solutions for improvement. Also, future research may consider the effectiveness and efficiency of tax policy implementation and tax evasionrelated issues in Sri Lanka. Tax policy changes may affect the accounting profession, therefore future research may deal with tax policy changes and the accounting profession.

REFERENCES

- Aloysius, A.A. (1998), "Cameroon's fiscal policy and economic growth", African Economic Research Consortium, Research Paper 85.
- Central Bank of Sri Lanka. (2021), "Central Bank Report – 2021", Central Bank of Sri Lanka, Colombo Sri Lanka.
- Central Bank of Sri Lanka. (2021), "Summary of Government Fiscal Operations from 1991 to 2021", Central Bank of Sri Lanka, Colombo Sri Lanka.
- Daniel, A. and Oliver, M. (2005), "Fiscal Policy and Economic Growth in Kenya". CREDIT Research Paper. Vol. 05 No. 6, pp. 01-36.
- Gale, William G., and Andrew A. Samwick. (2014), "Effects of Income Tax Changes on Economic Growth." SSRN Electronic Journal.
- Hussain, I., Hussain, J., Ali, A., & Ahmad, S. (2021). "A Dynamic Analysis of the Impact of Fiscal Adjustment on Economic Growth: Evidence from Pakistan". SAGE Open, Vol. 11 No. 2.
- Keshab, B. Dung, T.K.N. and Chan, V.N. (2019), "Impacts of Direct and Indirect Tax Reforms in Vietnam: A CGE Analysis", Economies, Vol. 7 No. 50, pp. 1-36.
- Mahmoud, M.A. and Binh, T. (2016), "Tax policy challenges in an era of political transition: The case of Egypt". eJournal of Tax Research, Vol. 14 No. 3, pp. 683-706.
- Maria, G.A. and Alexander, K. (2014), "The Growth Impact of Discretionary Fiscal Policy Measures", European Central Bank, Working Paper Series No 1697.
- Mykola, P. (2017), "Empirical study of the fiscal policy impact on economic

growth". Problems and Perspectives in Management, Vol. 15 No. 3, pp. 316-322.

- Naoyuki, Y. Farhad, T. and Tetsuro, M. (2018), "Fiscal Policy Conditions for Government Budget Stability and Economic Recovery: Comparative Analysis of Japan and Greece", ADBI Working Paper Series, ADBI Working Paper 851.
- Nguyen, A. Luisanna, O. and Raffaele, R. (2016), "The Macroeconomic Effects of Income and Consumption Tax Changes", Center for Growth & Business Cycle Research, Discussion Paper Series Number 227.
- Oroba, M.A. and Nusrat, S.S. (2015), "The Role of Tax Revenue in Addressing the Budget Deficit in Iraq", European Journal of Accounting Auditing and Finance Research, Vol. 3 No. 5, pp. 55-63.
- Oscar, B., and Antonio, G. (2015). "Alternative Strategies to Reduce Public Deficits: Taxes vs. Spending", Journal of Applied Economics, Vol. 18 No. 1, 45-70, DOI: 10.1016/S1514-0326(15)30003-9.
- Pasichnyi, M. (2017), "Empirical Study of the Fiscal Policy Impact on Economic Growth." Problems and Perspectives in Management, Vol. 15 No. 3, pp. 316-322.
- Princen, S. and Mourre, G. (2013), "The role of tax policy in times of fiscal consolidation (No. 502), Brussels: Directorate General Economic and Financial Affairs", European Commission.
- Roșoiu, I. (2018), "The effects of fiscal policy on economic growth in Romania", Proceedings of the 6th International Virtual Conference on Advanced Scientific Results.
- Solomon, T. (2022). "Does fiscal policy stimulate economic growth in Ethiopia? ARDL approach", Cogent Economics & Finance, Vol. 10 No. 1, 2104779, DOI: 10.1080/23322039.2022.2104779.
- Tendengu, S., Forget, M., and Asrat, T. (2022). "Fiscal Policy and Economic Growth in South Africa". Economies 10: 204. https://doi.org/ 10.3390/economies10090204.
- Van Bon, N. (2015), "The relationship between public debt and inflation in

Vickneswaran Anojan and Vickneshwaran Thanuja, Tax Policy Changes, Tax Revenue, Gross Domestic Production, and Budget Deficit: Evidence from Sri Lanka

developing countries: Empirical evidence based on difference panel GMM", Asian Journal of Empirical Research, Vol. 5 No. 9, pp. 128-142.

Vinayagathasan, T. and Jothiratne, G, S. (2021), "Public Debt, Budget Deficit and Tax Policy Reforms for Fiscal Consolidation in Sri Lanka: Rationale and Feasibility". Sri Lanka Journal of Social Sciences, Vol. 44 No. 1, pp. 96-109.