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DOES TRADE LIBERALIZATION AFFECT TAX REVENUES AND GOVERNMENT SPENDING IN DEVELOPING NATIONS? A PANEL DATA ANALYSIS

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ABSTRACT

Purpose: *Developing nations are facing the twin deficit phenomena. The fiscal deficit creates many challenges for these countries. These countries aim to enhance their tax base and government size. In this milieu, this study examines the nexus among trade liberalization, tax revenues and government spending for developing countries from 1996 to 2019.*

Design/Methodology/Approach: *The study has applied the fixed-effect method after applying the Hausman test.*

Findings: *The findings exhibit a positive impact of trade liberalization on tax revenues and government expenditures.*

Implications/Originality/Value: *It is suggested that the policymakers must devise trade openness policies to raise tax revenues and government expenditures in these countries.*

Key Words: *Trade Liberalization, Composition of GDP, Fiscal Stance, Developing Countries*

JEL Code*: Q27, H2, H76, O57*

1. Introduction

Trade liberalization refers free movement of goods between countries. There are no or fewer restrictions on tariffs, and quotas under free trade and the foreign exchange market is also free of government or central bank's control. World Trade Organization (WTO) is supporting trade liberalization in the world. WTO is a forum for governments to negotiate trade agreements. It is a place to settle trade disputes. It operates a system of trade rules (Hoekman and Olarreaga, 2006). Trade liberalization has regularly been the core of a strategy of economic development. Trade liberalization has marvellous benefits which stimulate many countries towards trade openness (Agbeyegbe et al., 2006 & Pupongsak 2010). After 1985, numerous developing economies decline tariffs and vanished import quotas to open international import competition. For developing nations, trade liberalization has two clear effects: the dramatic rise in trade volume and variations in trade's nature (Krugman 2012). According to the Trade and Development Report (2019), World trade in the year 2016 was 1.3% and there was some recovery in 2017 when trade was 4.5 % but in 2018, the volume of trade again started falling and the ratio was 2.8% and also went on declining in 2019 to 2.6% so WTO has predicted more fall down in trade ratio.

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Fiscal policy is a conscious policy of the government to achieve economic objectives through Govt. revenues, expenditures and debt (Sloman & Garratt, 2010). The association between trade liberalization and tax revenue is a very important issue having practical significance. Trade liberalization has been assumed to be related to revenue of tax by its impact on revenue from trade taxes. There is an argument that due to trade liberalization, there is a substantial fall in revenues of trade tax due to a fall in tariffs specifically within developing economies. A fiscal disadvantage is grave if a country has a high dependence on revenue from trade taxes. In this case, there is a suggestion from economists that one way to reduce loss of revenues from trade tax is that there should be the improvement of indirect taxes (tax on services and goods) at the domestic level. There is the consensus of economists that the negative effect of trade openness may be compensated in this way (Nezhad et al., 2016).

There are extensive ways for possible revenue collections by trade liberalization based on initial situations, reform bundles, effects of variations in tariff rate, alterations in the exchange rate (Greenaway and Milner, 1993). In previous many decades, there were a lot of aspiring efforts made by many countries to make trade free of restrictions because these countries acknowledged that trade reforms are crucial for economic progress, poverty reduction, highly efficient resource allocation, increased productivity, and greater economic advancement (Nezhad et al., 2016).

While adopting the free trade policy, developing countries must design appropriate policy for generating revenues of trade or to discover other substitutes for revenues of trade so that investment in the public sector within physical and also social framework should not be damaged. In the globalization era, the performance of the public sector has attained great significance because of foreign competitiveness between trading economies (Ahmad and Ali, 2019). Trade openness has enhanced the role of government specifically in developing countries for comparative benefits. Government spending for the progress of infrastructure has contributed to risk-reducing character within those countries that have abided by large external risk in the shape of foreign competitiveness (Rodrik. 1998).

So, discussion on trade liberalization, tax revenues and government expenditures exhibit that trade liberalization has a mixed impact on tax revenues and government spending in developing economies. Positive impacts of trade liberalization have more revenues and expenditures that further enhance economic activity while negative impacts of trade liberalization lead to fewer revenues, fewer expenditures and hence lower economic activity.

The rest of the paper is structured as: Section 2 is relevant to the review of studies on trade liberalization and tax revenues and trade liberalization and government expenditure. Model, data and methodology are discussed in section 3. Results and discussions are provided in section 4. Section 5 represents the conclusion and policy implications.

2. Review of Literature: Studies on Trade Liberalization, Tax Revenues and Government Expenditure

From in trade liberalization and tax revenue perspective, Khattry and Rao (2002) explored that openness of trade reduced tax revenues in developing economies.

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Agbeyegbe et al. (2006) found that trade liberalization was not strongly connected to aggregate tax revenues and its factors. Whereas appreciation in the currency and CPI showed some connection to reduce tax revenue and determinants of revenues. Longoni (2009) estimated that there was a larger trade-off between openness at a high degree and revenue collections from exports taxation and imports taxation. Nezhad et al. (2016) elaborated the positive linkage of openness of trade and tax revenues. Moller (2016) pointed out trade liberalization implications of tax revenue and found a significant positive effect. Sokolovska (2016) investigated the inverse relationship between trade openness and revenues. Gnangnon and Brun (2018) evaluated the impacts of multilateral trade liberalization on resource revenues. There was a negative significant influence of multilateral liberalized trade policy on tax revenues in non-poor countries and found positive impacts in poor countries. Suvannaphakdy and Toyoda (2019) evaluated the effect of trade openness on tax revenue and found that more tariff and tax reforms had fewer tax revenues.

In the scenario of trade liberalization and government expenditures, Kueh et al. (2009) pointed out a significant and long-run positive association between trade openness and government expenditures in all selected countries. Aregbeyen and Ibrahim (2014) investigated that government size was statistically affected by trade openness in the long run and the compensation hypothesis was held in Nigeria. Amin and Murshed (2016) evaluated the causal association between trade openness and government size in Bangladesh and found a unidirectional causality from trade openness to government size. Turan and Karakas (2016) examined the effects of trade openness and income on government size in Turkey and South Korea and pointed out the negative effect of trade openness on the government size of Turkey but it was positive in the case of Korea. Hedberg et al. (2017) inferred that economic liberalization had led to rising social spending. Farhad and Jetter (2019) investigated a positive association between free trade and government size. Ahmad and Ali (2019) indicated a negative relationship between trade liberalization, budget deficit, and expenditure structure in Pakistan. Mendonca and Oliveira (2019) provided a new assessment regarding trade openness and government spending and found no impact of financial globalization on govt. size. Maluleke (2020) investigated a unidirectional causality among government size, trade openness and economic growth.

In conclusion, the studies on trade liberalization and government revenues and trade liberalization and government expenditure exhibit mixed findings for various countries individually or a group of countries.

3. Model, Data and Methodology

The model specifications on the nexus of trade liberalization, government revenue and government expenditure have been given:

Model 1: Trade Liberalization and Tax Revenues Model

$$TAX = f(GDPPCG, AVA, SVA, IVA, TRADE, ODA, ED, ER, WGI) \quad \textbf{(1)}$$

The econometric form of the trade liberalization and tax revenue model is:

$$TAX_{it} = \lambda_o GDPPCG_{it} + \lambda_1 AVA_{it} + \lambda_2 SVA_{it} + \lambda_3 IVA_{it} + \lambda_4 TRADE_{it} + \lambda_5 ODA_{it} + \lambda_6 ED_{it} + \lambda_7 ER_{it} + \lambda_8 WGI_{it} + \varepsilon_{it}$$

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(2)

Model 2: Trade Liberalization and Government Expenditures Model

$$GE = f(GDPPCG, AVA, SVA, IVA, TRADE, TAX, INF, ODA, ED, URBAN, WGI)$$

(3)

We may write trade liberalization and government expenditure model in econometric form as:

$$GE_{it} = \phi_o GDPPCG_{it} + \phi_1 AVA_{it} + \phi_2 SVA_{it} + \phi_3 IVA_{it} + \phi_4 TRADE_{it} + \phi_5 TAX_{it} + \phi_6 INF_{it} + \phi_7 ODA_{it} + \phi_8 ED_{it} + \phi_9 URBAN_{it} + \phi_{10} WGI_{it} + \varepsilon_{it}$$

(4)

Table 1 demonstrates details of variables used in models.

Table 1: Description of Variables

Notation	Description of Variables	Units
TRADE	Trade (Proxy used for trade liberalization)	(% of GDP)
TAX	Tax Revenues	% of GDP
GE	Government Expenditure	% of GDP
GDPPCG	GDP per capita growth	Annual %
AVA	Agriculture, forestry, and fishing, value-added	% of GDP
SVA	Services, value-added	% of GDP
IVA	Industry (including construction), value added	annual % growth
ODA	Net Official Development Assistance received	% of GNI
ED	External Debt stocks	% of GNI
ER	Official Exchange Rate	LCU per US$, period average
INF	Inflation, GDP deflator	Annual %
URBAN	Urban population	% of total Population
WGI	World Governance Index	_Index

Data on all variables have been collected from World Development Indicators except WGI which is taken from the World Governance Index from the period of 1996 to 2019. For the estimation of models, the fixed-effect method has been employed.

4. Results and Discussions

4.1 Determination of Fixed Effect Vs Random Effect Model

Hausman (1978) provided the test for the determination of fixed or random effect. In Table 2, we have applied the Hausman test to examine the consistency of fixed effects or random effects in the models of trade liberalization and tax revenues.

Table 2: Hausman Test for Trade Liberalization and Tax Revenue Models

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Correlated Random Effect Test for LIC	4.21	9	0.0231

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Correlated Random Effect Test for LMIC	28.5671	9	0.0523
Correlated Random Effect Test for UMIC	38.9112	9	0.0061
Correlated Random Effect Test for ALL	19.5678	9	0.001

The models of trade liberalization and tax revenues confirm fixed effect suitability for panel data analysis in all cases of LIC, LMIC, UMIC and all developing countries. Table 3 indicates the results of the Hausman test for trade liberalization and government expenditure models.

Table 3: Hausman Test for Trade Liberalization and Government Expenditure Models

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Correlated Random Effect Test for LIC	16.0685	12	0.0030
Correlated Random Effect Test for LMIC	10.1042	12	0.0001
Correlated Random Effect Test for UMIC	12.7654	12	0.0023
Correlated Random Effect Test for ALL	13.0369	12	0.0429

In trade liberalization and government expenditure models, the fixed effects criterion is suitable for analysis of LIC, LMIC, UMIC and all countries.

4.2 Fixed Effect based Results of Trade Liberalization and Tax Revenue Models

This section illustrates the results of fixed effects estimates of trade liberalization and tax revenues for low income, low middle income, upper middle income and all developing countries. Table 4 demonstrates the results.

To measure the level of economic development, we have used the variable of GDP per capita growth. A higher level of income exhibits higher economic development which results in the high potential of taxpayers as they have more capacity for tax payment and the government has also a broader tax base. As a country develops, she has more degree of monetization along with tax reforms and better tax administration which lead to accelerating the tax to GDP ratio. So, developed countries have a broader and diversified tax base in comparison with developing countries (Agbeyegbe et al., 2006). Musgrave (1984) has also reinforced the positive link between the level of economic development and tax. In his tax base and tax handle theory, he points out that as the level of economic development increases in the form of GDP per capita growth, government size or public sector size also increases which resultantly enhance the tax base and capacity of the country[1].

Table 4: Fixed Effect Estimates of Trade Liberalization and Tax Revenue Model

Dependent Variable: TAX				
Variables	**Low Income Countries**	**Lower Middle-Income Countries**	**Upper Middle-Income Countries**	**All Developing Countries**

[1] In terms tax elasticity of GDP, the economists believe that value must be more than one (Elastic) as it indicates that as level of economic development increases, tax revenues grow more than GDP per capita growth and converse is true.

C	5.9056 (0.5616)	40.1929 (0.0000)	16.5964 (0.0002)	8.1878 (0.0000)
GDPPCG	0.2921 (0.0001)	0.1312 (0.0180)	0.1378 (0.3964)	0.1494 (0.0000)
AVA	-0.2182 (0.0000)	-0.3421 (0.0000)	0.2964 (0.0001)	-0.0081 (0.4292)
IVA	0.2391 (0.0848)	0.3829 (0.0000)	0.2644 (0.0000)	0.1897 (0.0003)
SVA	0.1215 (0.0357)	0.2500 (0.0000)	0.0199 (0.7894)	7.3649 (0.0000)
TRADE	0.0314 (0.0767)	0.0682 (0.0000)	0.0498 (0.0000)	0.0011 (0.0957)
ODA	-0.0941 (0.0517)	-0.2036 (0.0000)	-0.4018 (0.0254)	-0.0960 (0.0014)
ED	0.0184 (0.0004)	0.0159 (0.0042)	0.0023 (0.8918)	0.0379 (0.0001)
ER	-0.1826 (0.0000)	-0.0008 (0.0011)	-0.0013 (0.0008)	-0.0006 (0.0751)
WGI	15.3083 (0.0000)	1.9327 (0.0002)	4.4543 (0.0000)	1.9093 (0.0000)

The composition of GDP consists of three-value additions: agriculture, forestry, and fishing value-added, Industry (including construction) value-added and services value-added. If we augment agriculture value-added, industry value-added it shows commodity-producing sector (CPS). Thus, the commodity-producing sector plus services value-added demonstrate total segments of the economy of any country. We have also taken the composition of GDP by disaggregated the GDP into three parts: agriculture value-added, industry value added and services value-added to accomplish sectoral growth analysis for tax.

The agriculture sector is considered the mainstay of developing economies but it is evident that most farmers are not paying taxes particularly agricultural income tax. Even the share of agriculture value-added is more than other segments of economy but share in tax to GDP ratio is less so there is a mismatch between tax revenue and agriculture sector contribution to growth. This mismatch between tax revenues and sectorial contributions to growth uncover the story of all tax reforms in developing countries therefore, equitable distribution of tax burden among several sectors based on their contribution is essential to boost tax to GDP ratio. In developing countries, mostly farmers hold small and uneconomic pieces of land and execute subsistence farming rather than commercial framing or mixed farming so they are unable to pay taxes. Our results confirm the negative relationship between agriculture value-added and tax revenues in all cases of countries except upper-middle-income countries. These countries have a positive association between agriculture value-added and tax revenues due to technology. Even these countries have less share of the agricultural sector in GDP but they transform their agricultural commodities into value-added products so the resultantly share of value-added taxes increases as these taxes have no exemptions like agricultural income tax. The studies by Stotsky and WoldeMariam,

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1997; Leothold, 1991; Gupta, 2007and Chaudhry and Munir, 2010 have also explored the negative association between agriculture value-added and tax revenues.

Industry (including construction) value-added has appeared with a positive sign in all countries specifications. Mostly industrial products are value-added products so it is relatively convenient to collect taxes from the secondary sector or manufacturing sector than the primary sector or agricultural sector. The industrial sector is a professionally organized sector which maintains their accounts and records in a better way. Hence, there is less likelihood of tax evasion in the industrial sector[2] (Ayenew, 2016). Our results are also consistent with the findings of Teera (2003) and Basirat et al. (2014).

The service sector has appeared as the largest and most leading sector in the world economy and contributing an ample share in GDP, employment opportunities, cross-border trade, foreign direct investment and tax collections. The service sector is expected to grow more due to the advancement of digital transformation, skill-oriented and knowledge-based activities (Hansda 2001). Different economists take different sectors to indicate the service value-added. Rath and Rajesh (2006) observed high growth rate in services led to economic growth. The results are compatible with Mawejje and Munyambonera, 2016.

Trade liberalization is the core variable of interest in this study. The trade to GDP ratio is used as a proxy of various phenomena such as globalization, trade barriers and the role of the external trade sector. Examining the exact and direct impact of trade liberalization on tax revenues is a difficult task due to feedback effects of trade, tax and other economic variables. In our results, trade liberalization and tax revenues are positively associated. The possible reasons for a positive link between trade liberalization and tax revenues are: firstly, trade openness enhance the tax to GDP ratio due to increase in employment, wages, tax collectors may collect more taxes in the form of income tax, consumption tax and corporate tax. In other words, trade liberalization stimulates the bilateral as well as international trade volumes and resultantly tax revenues increase. So, trade liberalization yields benefit to the countries in broadening their tax base but a country's level of economic development and structure should also be focused.

Secondly, trade openness decreases the tariff revenues on one side but it shifts the incidence of taxes indigenously as the flow of goods and services within the country would increase which accelerates income and consumption taxes. Many studies find a positive association between trade liberalization and tax revenues See, for example, Karimi et al, 2016; Aizenman and Jinjarak, 2009; Keen and Ligthart, 2002; Agbeyegbe et al., 2006; Tosun, 2005; Khattry and Rao, 2002.

Developing countries use official development assistance for financing their development projects. Dependence on aid may weaken the bureaucracy, institutional quality and accountability and increase corruption through rent-seeking behaviour. It may increase conflict on aid funds control and assuage the motivation to reform effective and well-organized policies and institutions which lead to curtailing in tax revenues. The parameter of official development assistance is negative in all

[2] Eltony (2002) pointed out that mining sector have a negative impact on tax revenues in GCC countries but have a positive for non-oil Arab countries. Moreover, mining sector shows the negative association between mining sector and tax revenues for all the Arab countries.

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specifications of countries. Our results are compatible with studies see, for example, Clist and Morrissey, 2011; Cordella and Ulku, 2007; Brautigam, 2000 and Dollar and Pritchett, 1998.

Fiscal deficit accumulates due to more government spending or less tax collection and consequently, the government has to rely on debt particularly on external debt. To finance the fiscal deficit, the government may rely on foreign exchange reserves, the printing of currency and borrowing (Sheikh, et al., 2013). In developing nations, debt servicing in the form of interest payments or principal payments is executed with tax revenues due to an easy option. Therefore, external debt is positively associated with tax revenues. Our results also indicate the same association between external debt and tax and matched with the studies by Chaudhry and Munir, 2010; Alamirew and Leykun, 2020.

Currency depreciation brings an increase in exports and a decrease in imports[3] while currency appreciation leads to a reduction in exports upsurge in imports. A country does not apply tariff and other restrictions on her exports whereas imports are normally taxed and other trade barriers are applied. Thus, a negative relationship exists between exchange rate and tax revenues in general and particularly with trade taxes. Our findings also reveal the negative relationship for all countries specifications. The findings are well-matched with the studies of Agbeyegbe et al., 2006; Addison and Levin,2012 and Dutt, 2020.

The world governance index indicates a positive association with tax revenues. This outcome expresses that good governance is ineludible for the rise in tax revenues. An acceptable reason for this phenomenon is that effective governance rises the people's trust in the government. Further, good governance can lead towards an effective administration of tax that raises the tax revenues consequently. A combination of the updated tax management as well as the good governance may help in achieving an improve tax ratio in these countries. Our results are also in line with studies Ajaz and Ahmad, 2010 and Arif and Rawat, 2018.

4.3 Fixed Effect based Results of Trade Liberalization and Government Expenditure Models

This section demonstrates the results of fixed effects estimates of trade liberalization and government expenditure for low income, low middle income, upper middle income and all developing countries. Table 5 shows the results.

GDP per capita growth exhibits a significant and positive relationship with government spending. A rise in economic growth expands the government expenditures due to the more provision of public goods and services. Our results have a compatibility with the studies such as Richter and Paparas, 2012; Kesavarajah, 2012; Aregbeyen and Akpan, 2013 and Obeng and Sakyi, 2017.

Table 5: Fixed Effect Estimates of Trade Liberalization and Government Expenditure Model

Dependent Variable: GE				
Variable	**Low Income Countries**	**Lower Middle-Income**	**Upper Middle-Income**	**All Developing Countries**

[3] It is worth mentioning that Marshall-Lerner conditions should be fulfilled to meet the requirements.

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		Countries	Countries	
C	0.0647 (0.0718)	14.1943 (0.0251)	0.0969 (0.3754)	30.5905 (0.0188)
GDPPCG	0.1712 (0.0003)	0.1483 (0.0183)	0.1980 (0.0003)	0.0449 (0.5297)
AVA	0.0574 (0.0662)	0.1776 (0.0090)	0.0795 (0.0166)	0.4091 (0.0156)
SVA	0.2967 (0.0000)	0.0458 (0.0990)	0.0480 (0.0424)	0.0241 (0.0978)
IVA	0.2975 (0.0000)	0.0161 (0.0849)	0.0134 (0.0652)	0.2740 (0.0878)
TRADE	0.0674 (0.0002)	0.0131 (0.1203)	0.3546 (0.0000)	0.0435 (0.0001)
TAX	0.0818 (0.0476)	0.4128 (0.0000)	0.0089 (0.0378)	0.1850 (0.0835)
INF	0.0298 (0.0631)	0.0657 (0.0511)	0.5637 (0.0001)	0.0519 (0.0000)
ODA	0.0895 (0.0511)	0.1575 (0.0029)	0.0136 (0.0429)	0.1107 (0.0447)
ED	-0.0675 (0.0006)	-0.0139 (0.0441)	-0.0843 (0.0000)	-0.0364 (0.0016)
URBAN	0.1767 (0.0000)	0.0488 (0.0388)	0.2178 (0.0896)	0.1928 (0.0000)
WGI	0.6664 (0.0978)	2.1049 (0.0003)	0.1850 (0.0835)	2.5502 (0.0776)

The composition of GDP is positively associated with public spending. It indicates that the composition of GDP influences the government expenditures as various segments of the economy grow, the government has spent more for the development of these sub-sectors of the economy. Our results are matched with Benin and Odjo, 2018.

There are two main hypotheses on trade liberalization and government spending: i) efficiency hypothesis and ii) compensation hypothesis. The first hypothesis indicates the negative link between trade liberalization and government spending while the second hypothesis exhibits the positive trade liberalization and government spending association. Our results are according to the compensation' hypothesis which suggests that more trade openness enhances the government size. More trade liberalization creates external risk, economic inequality, social polarization and insecurity so the government has to compensate them by boosting the spending in the form of transfer payments, safety nets and social welfare programs (Rodrik, 1998; Lin et al., 2014 and de Mendonça and Oliveira, 2019.

Tax revenues broaden the government size as the public sector has more resources or capacity to spend on development and non-development expenditures. Our findings show a positive relationship. Friedman,1978; Jibir and Aluthge, 2019 and Sheremeta and Uler, 2020 found the positive impact of tax revenues on government spending.

Inflation is a vital macroeconomic variable and shows macroeconomic stability. Owing to inflationary pressure, the public sector has to spend more on consumers and

producers to compensate them in the form of various welfare programs and transfer payments. Many studies have proved the positive link see, for example, Jibir and Aluthge, 2019; Jibir and Aluthge, 2019; Tayeh and Mustafa, 2011; Alavirad, 2003 and Greytak et al., 1974.

Foreign aid plays an important role in developing countries. A country with more foreign aid spends more on their development projects so a positive association between official development assistance and government spending exists. Our results find a positive relationship between official development assistance and government spending. Results are in line with Remmer (2004) and Obeng and Sakyi (2017) suggest that dependence on foreign aid leads towards the government expenditures growth.

The nexus between fiscal deficit, debt and public spending is complex and has feedback effects. When a country borrows more, it increases the fiscal deficit due to debt servicing and other expenditures and to finance the fiscal deficit, it takes more public debt. Thus, to reduce the fiscal deficit, government attempts to curtail expenditures if the level of public debt is increasing above the threshold level so a negative impact of external debt is expected with government spending. Our results are matched with the studies Baqir, 2002; Fosu, 2010; Aregbeyen and Akpan, 2013 and Shabbir and Yasin, 2015.

Urban population exhibits a positive relationship with government expenditures indicating that as the urban population of any country increases, the government would have to raise its expenditures as well. The studies by Kaufmann et al. 2009; Okafor and Eiya, 2011 and Aregbeyen and Akpan, 2013 have also found the same results.

WGI has taken in this analysis to capture the governance quality of the country. Our results show a positive relationship with government expenditures. The intuition is that the more politically stable government can implement long-term fiscal policies that can provide the better availability of public goods and services which perhaps demonstrates the positive influence of the political stability on public expenditures. Moreover, the effectiveness of government captures the quality perception as well as the degree of independence of the civil and public services (Kaufmann et al. 2009).

5.Conclusions and Policy Recommendations

The study examines the determinants of tax revenues and government expenditures in the context of trade liberalization for low income, lower middle income, upper middle income and all developing countries for the period of 1996 to 2019. Trade liberalization exhibit a positive impact on tax revenue and government expenditures. In the government revenue model, GDP per capita, industrial value-added, services value-added, external debt, governance index is positively related to tax revenues while agriculture value-added, official development assistance and exchange rate have appeared with a negative sign. In the government spending model, GDP per capita, agriculture value-added industrial value-added, services value-added, external debt and official development assistance governance index are positively related to government expenditures except for exchange rate. Based on the findings of the study, it is recommended that planners must liberalize international trade to enhance tax revenues and government spending in these countries.

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