## ARTICLE

# Reconnoitering the Sustainable Relationship between Revenue Income and GDP: A Comparative Study of Asymmetric Countries in the World

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ABSTRACT

This paper applies panel unit root test, country Pedroni cointegration test (PCT), Phillips-Peron cross section test (PPCST), vector error correction test and Johansen normalized cointegrating test (JNCT) for estimates the coefficients in the short-run and in the long-run to examine the inter-temporal relationship between the government revenues income and GDP. The paper took into account fifteen asymmetric countries with three income groups over the period from 2001 to 2016. The study justified the long run relationship between the articulated variables in the country PCT and the test results unearthed that four statistics out of seven on different indexes exhibited one percent level of significance. In the upper middle income country category, other than Brazil and Sri Lanka, rest of three countries showed a long run relationship, i.e. the study outcome reconnoitered the existence of a long run relationship between the two articulated variables. Decisively, the outcome of JNCT suggests that in the long run if the government revenue upsurge one percentage point then GDP growth rate will rise 0.037 and 0.28 percentage point for the countries that belong to high income and the upper middle income respectively. Meanwhile, the test find a negative result that allied to lower middle income nations, GDP growth rate will plummet 0.039 percent point due to one percent rise in revenue income.

## 1. Introduction

A lot of outlooks and issues are involved to imposing taxes on the different agents: like producers and consumers of an economy. Theoretically, the logical arguments and the administrative aspects of taxation known as *principles of taxation* which addressed by Adam Smith and he identified the four categories of the *canons of taxation*[①] may consider as one judgmental way to determine the rate of taxes and total volume of taxes. In addition to that, non-tax revenue is another comprehensive source of government revenue income. A strategic question needs to keep

① *Four canons of taxation: Equity, certainty, convenience and economy. https://www.academia.edu/5750563/Direct_and_Indirect_Taxes_and_ Smith_s_Four_Canons_of_Taxation*

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in mind for the policy maker to set out the level of revenue income for a particular economy. An optimal level of revenue income is the basic target for a particular country, but it is difficult to specify optimal level of revenue. The fixation of the volume of government revenue has always become a challenging task of each and every country. An incorrect decision of revenue income may affect severely on the growth of GDP in the short run and long run period of an economy as well. More importantly, each and every nation requires to justify their overall policy performance through the long run decisive relationship between the government revenue income and GDP. Also, it may be supported on the basic rules of economics, that is, *optimal use of resources.*

The purpose of the study is to explore the short run and long run relationship between the growth of GDP and government revenues for a panel data of fifteen countries identified by the three income groups over the period from 2001 to 2016. The three categories of the country groups are distinguished by their level of GDP and each country group comprised with five countries. The specification of the country groups are composed by World Development Indicator (WDI) of World Bank data store. The study takes into account the following fifteen countries under the three income groups.

Proper resource allocation and the distribution of resources are the taxing task for any economy. The level of revenue income is mainly set out by the capacity of production, i.e. GDP of an economy. The trend of GDP growth becomes a tool to set out the level revenue income for a country. To estimate the limit or setting the variable of level revenue income, the volume of GDP and its growth needs to be considered a focal point. Actually, to comprehend the relationship between the growth of revenue income and the growth of GDP, an empirical study might be useful tools and it also scrutinizes the time

associated nature in order to realize the influential factors of fiscal policy for a government. The effectiveness of government revenue administration for a nation these two variables become an indispensable component to determine the causal ordering as well as to ensure a perfecting of tax policy. This paper aims to examine the relationship between the growth of GDP and the growth of government revenues in a panel of fifteen countries. The articulated variables of panel data of fifteen uneven countries must be varied hugely in number.

## 2. Literature Review

To assess the inter-temporal relationship between the growth of government revenue income and the growth of GDP several hypotheses have been proposed. There are lots research findings were come up under consideration of the study. To apprehend the fiscal policy, the study has covered most pioneer research outcome of this field and the related findings mainly based on two types of statistical data analyses such as panel data and time series data. The literature has been pondered both single country and the countries that be affiliated to a group that allied to a particular homogeneity in term of their level of GDP, trade union etc.

The study[5] is to examine the inter-temporal relationship between government revenues and expenditures for a panel of 15 OECD countries over 1992 to 2006. Using a three-stage procedure, comprising the Fisher Phillips-Perron (FPP) panel unit root test (URT), the Kao Cointegration Test (CT), and the panel Granger causality test (GCT), the study find a bidirectional causal relation between government revenues and government expenditures, which lends support to the *fiscal synchronization hypothes* is of the nations that belongs to the OECD. In the context of Ethiopian economy in a time series study examined by [3] and enfolded the time span from 1974/75

**Table 1.** Three Clusters of Nations

| No. | High income country | No. | Upper middle income country | No. | Lower middle income country |
|-----|--------------------|-----|----------------------------|-----|-----------------------------|
| 01. | Australia | 06. | Argentina | 11. | Angola |
| 02. | Canada | 07. | Brazil | 12. | Bangladesh |
| 03. | Germany | 08. | Malaysia | 13. | Bhutan |
| 04. | United Kingdom | 09. | Russian Federation | 14. | India |
| 05. | United States | 10. | Sri Lanka | 15. | Philippines |

*Source: WDI, World Bank, 2018*

to 2013/14. This study has taken into account the same uttered variables of this paper; i.e. the growth of GDP and the growth of revenue income. This research determined the role of government revenue growth is fostering economic growth in the long run and the short run for Ethiopia. To analyze the study applied Johansen's cointegration test (JCT), vector autoregression (VA) and vector error correction model (VECM). Government revenue growth in general and with its component affects economic growth in the long run. Furthermore, in the short run the finding showed that there was independent relationship and the speed of adjustment is slow; only 27% and 7% for the components of total tax revenue growth and GDP growth respectively. Another study of time series data analysis was investigated by [12] in the perspective of the economy of Bangladesh during 1972 to 2015. The result inferred that GDP and tax were having a long-run negative relationship; likewise, tax has significant negative impacts on GDP and sustainable economic growth. If government increases taxation with conventional way then it leads to reduced GDP in the future. They argued that, the burden of heavy direct tax badly affect wage earners, infant and small business firms. The other study [11] of the economy of Bangladesh examined the relationship between GDP and indirect tax, this research incorporated econometric models for time series data of Bangladesh over a period of 43 years. This study revealed that, if the government, in the long run, increases the collection of indirect tax revenue by one percent ($ 167.511 million) then the GDP will decrease to a 0.96 percent ($ 2,572 million). Similarly, [23] have conducted a paper regarding government revenue income and growth of GDP in the Nigerian perspective. This paper appraises revenue sources in Nigeria; oil revenue, non-oil revenue and public debt decomposed into domestic and external debt with respect to its effect on economic growth in Nigeria. Additionally, due to over dependency on loosening revenue, it possessed the impending danger of downfall of the Nigerian government's ability to finance in the economy. The CT and GCT were conducted to appraise the long-run relationship between revenue sources and to examine direction of relationship between revenue sources and economic growth in Nigeria.

A definite research outcome has represented by [2] for the standpoint of Turkey regarding the time series analysis of taxes and spending variables comprised data from 1950 to 2007. They suggested that there exists a feedback mechanism between taxes and spending. In other words, in Turkish budgetary process, both taxes and spending levels affect each other so that higher tax levels and caused by higher spending levels and vise–versa. Another inves-

tigation suggested that, fiscal policymakers in 40 Asian countries should set revenues and expenditures simultaneously. Under this scenario the fiscal authorities of these countries with budget deficits should raise revenues and decrease spending simultaneously in order to control their budget deficits [22]. This panel study also corroborate GDP, revenue income and expenditure variables are cointegrated and explored a bidirectional causal relation between government revenues and government expenditure, which leads support to the fiscal synchronization hypothesis [2] (FSC) in these uttered countries. The relative issues of FSC were considered a study of Chinese experience over the period of 1997 to 1999. The results of Granger causality test based on the corresponding multivariate VECM suggest a feedback existed between government revenues and government expenditures, supporting the FSC for China over this sample period[6]. To verify the fiscal sustainability of 15 EU countries for the period from 1970 to 2003, the study [1] suggested that, small number of countries emerge as less likely to exhibit sustainability problems namely Germany, Netherlands, Finland, Austria the UK. Meanwhile, the other study of fiscal sustainability of 28 EU countries conducted by[4] and extracted that the panel estimates of the cointegration relationships point to a positive long run co-movement between government revenue and expenditures. Causality test shows the absence of any causal link between government revenues and expenditures both for the EU-28 and EMU.

In the fiscal policy issue, public debt is another variable to justify government budget through revenue income and revenue expenditure with respect to GDP. Usually, a country always tries to shrink their level of debt by raising revenue and curtail revenue spending simultaneously and it also helpful for contracting their budget deficit. The study of debt and its relative issues were covered by [8] in the Malaysian experience. The study examined the time series data of Malaysia for the period of 1970 to 2006. The study established a long run relationship between GDP and all types of debt in Malaysia. It was found that, all debts contribute negatively and significantly to the economic growth. Meanwhile, there was evidence to support growth driven debt hypothesis for external debt and short term debt. There was bidirectional relationship found between long term debts. Overall findings unearthed that, all types of debts exhibited negative long run relationship with the economic growth. The study of Wagner's Law and Keynes approach conducted by [21] in the perspective of Italian economy. Here, researcher used time series data

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② The fiscal synchronization hypothesis states that revenues and expenditures decisions are commanded mutually

cover the period of 1960 to 2008 and expressed data in logarithmic form .The relationship between several items of government spending and national income was more keen to exercise by Keynesian than Wagnerian views. In addition to that, there are *four hypotheses*[③] needs to consider justifying fiscal policy decision. In all perspective of fiscal hypothesis, irrespective of socioeconomic pattern of country, suggests that government revenues and expenditures are independent of each other.

There is no persuaded rule to determine the volume of government revenue from the GDP of a country in a fiscal year. On the other hand, the contributing wells of GDP and the collecting sources of revenue are always may not be same. Irrespective of different fountainheads of the articulate variables, the intention of the study is to justify, is there any inter-temporal relationship exists between the growth of government revenue income and the growth of GDP? In addition to that, for each country, a specific relationship, that is, deterministic coefficient would be a significant concern of the study. This study intends to examine the long run relationship between uttered variables and find out the precise association ship of two variables through each country group. Additionally, by the outcomes of the study relates to the obtainable prospective fiscal hypothesis.

## 3. Methodology and Data

The study conducted by three groups of countries and the each category of country group was distinguished by their level of GDP. Among the three groups each group consists of five countries. The country classification has taken from World Development Index (WDI) of World Bank data sources and all fifteen countries data regarding articulated variables are gathered from WDI which covered from the year of 2001 to 2016. The study has mainly focused on inter-temporal relationship of two variables, that is, government revenue income and GDP and these are converted as percentage term.

This paper applies panel unit root of Levin, Lin and Chu (LLC) tests for both without trend and with trend. To establish the long run relationship between the articulated variables, the study commenced panel cointegration thru the country [25] CT. The FPP test was proposed by [20] and [7] for cross section specific results. The study also conduct-

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③ *The four hypotheses: i) the tax-and-spend hypothesis suggests that changes in revenues bring adjusts in expenditures; ii) The spend--and-tax hypothesis suggests the opposite in that varies in expenditures induce changes in revenues;*
*iii) The fiscal synchronization hypothesis argues that revenues and expenditures decisions are commanded mutually; and iv) The institutional separation opinion narrates about the separation of the expenditure and the separation of taxation decisions through government.*

ed VECM and JNCT for long-run coefficients estimates to examine the inter-temporal relationship between the variables of government revenues income and GDP with panel data of fifteen countries with three income groups. The study intended to examine and endorse the long run relationship between the articulated variables by the country Pedroni test (CPT) and to estimate the precise relationship explored by PP cross test regarding the status of each country group. By exercising Johansen normalized CT of first cointegrating equation for understanding the each country group performance in the long run. The analytical and empirical parts were conducted with the help of the software, namely Eviews11 sv (X64) package, Microsoft Excel , MS Word with MathType.

### 3.1 Objective of the Study

The study conceives of the following objectives:

i)To find out the inter-temporal cointegration relationship between government revenue income and GDP growth regardless of the group of countries.

ii)To estimate the specific deterministic coefficient of government revenue income and GDP growth of each country group.

iii)To comprehend the outcomes of the study relates to the obtainable prospective fiscal hypothesis.

### 3.2 Test of Hypothesis

It is difficult to justify the dependent and independent variables between the articulated two variables. The research question is the government revenue determines by the growth of GDP or vice-versa. The tests of hypothesis of study are:

$H_0$: Government revenue income determines GDP for each country cluster.

$H_1$: GDP determines government revenue income for each country cluster.

### 3.3 Econometric Model

The model of the empirical study is considered that, a country's GDP and her revenue income are associated with each other, if other things remaining the same. An equation for time series has been constructed in order to find out the empirical results and the relationship with the said two variables.

General Model: $Y_t = a + bX_t + e_t$     (1)

Specific Model: $\ln GDPg_t = a + b \ln Rev_t + e_t$     (2)

Panel data model: $\ln GDPg_{i,t} = p_i \ln GDPg_{i,t-1} + q_i \ln Rev_{i,t} + \varepsilon_{i,t}$     (3)

$t = 2001, 2002 \ldots\ldots\ldots\ldots 2016$ and $i = 1, 2, 3, \ldots\ldots 15$, countries

**Table 2.** Panel unit root test LLC results: (without trend)

| Country Variables | High income country | | Upper middle income country | | Lower middle income country | |
|---|---|---|---|---|---|---|
| | Level | First difference | Level | First difference | Level | First difference |
| GDP growth (annual %) | -4.087165*** | -6.85168*** | -5.73077*** | -8.29492*** | -5.64961*** | -8.02093*** |
| Revenue, excluding grants (% of GDP) | -2.52751*** | -6.39799*** | -1.86010** | -7.20502*** | -2.13668*** | -4.67526*** |

*Note: For determination of bandwidth selection by Newey-West and Bartleett kernel estimation automatically selected by Eviews software 7. (***, ** and * show level of significance at 1%, 5% and 10%, respectively).*

**Table 3.** Panel unit root test LLC results: (with trend)

| Country Variable | High income country | | Upper middle income country | | Lower middle income country | |
|---|---|---|---|---|---|---|
| | Level | First difference | Level | First difference | Level | First difference |
| GDP growth (annual %) | -2.84078*** | -6.04495*** | -4.99750*** | -5.56192*** | -5.66724*** | -6.33912*** |
| Revenue, excluding grants (% of GDP) | -1.21941 | -4.68077*** | -0.74359 | -5.31292*** | -1.35766** | -3.05904*** |

*Note: For determination of bandwidth selection by Newey-West and Bartleett kernel estimation automatically selected by Eviews software 7. (***, ** and * show level of significance at 1%, 5% and 10%, respectively).*

Where, gross domestic product ($Y$ or $GDP$), revenue income ($X$ or $Rev$), and stand for the time periods. Here $a$ and $b$ are deterministic constant factor, p and q coefficients of panel data, $\varepsilon$ (or e) is a stochastic disturbance term with time from 2001 to 2016 for fifteen countries under three clusters and g stands for rate of growth.

## 4. Empirical Results

### 4.1 Panel Unit Root Test (LLC) Results

The empirical studies of LLC under URT have analysed and developed by [16], [17] and [18].④ provided some new results on panel unit root tests. They generalize the Quah's model to allow for heterogeneity of individual deterministic effects. There are two outcomes of panel URT under LLC test method of the government revenue and GDP:

### 4.1.1 Panel Unit Root Test (LLC) without Trend Results

In three categories of fifteen countries the studied two variables are presented by scale of level and first difference. Each variable explored six results of statistics for three country groups covered the index of level and first

difference. Results showed that eleven statistics are significant at one percentage level out of twelve statistics regardless the country group. In upper middle income countries revenue income variable represent at 5% level of significance. So, without trend of LLC test satisfied the stationary condition.

### 4.1.2 Panel Unit Root Test (LLC) with Trend Results

Irrespective of country groups, all fifteen countries, in first difference cases I(1) of two variables under three income categories fulfilled stationary condition at 1% level. So, the panel data set follow the stationary rule. In the level GDP growth find the significance at one percentage level for all fifteen countries but revenue income only succeed on lower income category at 5% level of significance.

### 4.2 Country Pedroni Cointegration Test

The study employed PCT [25] and finds seven statistics to analyze the relationship between revenue income and GDP. The [9] cointegration test is based on an examination of the residuals of a spurious regression performed using I(1) variables. If the variables are cointegrated then the residuals should be I(0). On the other hand, if the variables are not cointegrated then the residuals will be I(1). [24], [25] and [15] extend the Engle-Granger framework to tests involving panel data.

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④ *Levin and Lin proposed their test in first time in 1992. In 1993 they generalized the analysis allowing for autocorrelation and heteroscedasticity. Their paper in 2002 [19] collect major results of their researches.*

In the three income groups, out of seven statistics, four statistics of the test (*Panel PP, Panel ADF, Group PP and Group ADF*) revealed the evidence that at one percent level of significance for all fifteen nations under *within the dimension* and *between the dimensions* indexes, reflected both without trend and with trend. Moreover, irrespective country clusters the *Panel rho-Statistic* of the test acquired 5% level significance on the without trend classification and another outcome of *Group rho-Statistic* exhibited 10% level of significance for index of without trend. That is, six statistics out of seven, of the Pedroni test has estab-

lished the long run relationship between uttered variables irrespective of income level of 15 nations.

## 4.3 Phillips-Peron Cross Section Specific Test

To understand the specific country wise result of the long run relationship of two variables has addressed by PP cross section specific test. The analysis of PP test explored that, other than, Sri Lanka and Brazil, thirteen countries individually assured the said long run relationship. Their bandwidth results find more than zero regardless of the respective country groups and the identity of trend (without

**Table 4.** Panel country PCT results

| Country Group Pedroni Test Statistics | High income country | | Upper middle income country | | Lower middle income country | |
|---|---|---|---|---|---|---|
| | Without Trend | With Trend | Without Trend | With Trend | Without Trend | With Trend |
| | Statistics | Statistics | Statistics | Statistics | Statistics | Statistics |
| | **within-dimension** | | **within-dimension** | | **within-dimension** | |
| Panel v-Statistic | -0.297126 | -2.238371 | -0.193947 | -1.851485 | -0.841124 | -2.542142 |
| Panel rho-Statistic | -2.435293*** | -0.243108 | -2.898679*** | -0.360666 | -2.814850*** | -0.827098 |
| Panel PP-Statistic | -4.379898*** | -3.877936*** | -3.923378*** | -4.198398*** | -4.953532*** | -6.484752*** |
| Panel ADF-Statistic | -3.670587*** | -2.875158*** | -3.943540*** | -4.013687*** | -5.191623*** | -5.696677*** |
| | **between- dimension** | | **between-dimension** | | **between-dimension** | |
| Group rho-Statistic | -1.288480* | 0.594289 | -1.53137* | -0.581353 | -1.522582* | -0.106970 |
| Group PP-Statistic | -4.912591*** | -4.597688*** | -3.917150*** | -4.014600*** | -4.743175*** | -6.500786*** |
| Group ADF-Statistic | -4.025403*** | -3.142773*** | -3.947574*** | -4.121716*** | -5.408465*** | -6.304295*** |

*Note: For determination of optimal lag lengths used Schwarz Information Criterion (SIC) with maximum lag length 2, bandwidth selection by New-ey-West and kernel estimation by Bartlett automatically selected by Eviews software 7.( \*\*\*, \*\* and \* show level of significance at 1%, 5% and 10%, respectively).*

**Table 5.** PPCS specific test results

| High income country | | | Upper middle income country | | | Lower middle income country | | |
|---|---|---|---|---|---|---|---|---|
| Panel ID | Without Trend | With Trend | Panel ID | Without Trend | With Trend | Panel ID | Without Trend | With Trend |
| | Bandwidth | | | Bandwidth | | | Bandwidth | |
| Australia | 5.00 | 7.00 | Argentina | 1.00 | 3.00 | Angola | 2.00 | 0.00 |
| Canada | 6.00 | 8.00 | Brazil | 0.00 | 14.00 | Bangladesh | 1.00 | 1.00 |
| Germany | 6.00 | 10.00 | Malaysia | 1.00 | 3.00 | Bhutan | 2.00 | 11.00 |
| United Kingdom | 1.00 | 1.00 | Russian Federation | 2.00 | 4.00 | India | 8.00 | 7.00 |
| United States | 1.00 | 1.00 | Sri Lanka | 0.00 | 0.00 | Philippines | 2.00 | 2.00 |

*Note: Cross-sections Included: 15, Null Hypothesis: No Cointegration, Phillips-Peron results (non-parametric). Source: WDI, World Bank, 2018*

trend and with trend).

## 4.4 Vector Error Correction Tests

The study finds the country group wise different results of VECM test for short run relationship of articulated variables. If the JCT detected cointreagation amid the series that means there exists a long run association and it also ensured the equilibrium between explained and explanatory variables; that is, the empirical study. Uphold equilibrium between the growths of GDP the growth of government revenue income. So, the paper exercised VECM for testing short run association of cointregated series. The outcomes of VECM for three groups are:

### 4.4.1 The Result of High Income Countries

The result of VECM tests for short run GDP growth rate shows 84% error in each year. So these five countries require correcting 84% error each year, then it may reach to the equilibrium.

### 4.4.2 The Result of Upper Middle Income Countries

In short run, VECM inferred that GDP growth rate re-

vealed 75% error in each year. So nations are allied to the group need to amend 75% slip each year

### 4.4.3 The Result of Lower Middle Income Countries

Lastly, in short run, VECM find that GDP growth rate unearthed that 66% error in the model each year.

### 4.5 Johansen Normalized Cointegrating Tests

The study emphasized long run group wise specific result and it is also substantial as well. The [14] maximum likelihood (ML) methods of cointegration test widely used to identify the long run relationship between the time series variables. The Johansen method relies on a vector auto regression (VAR) model. A VAR is a system regression model, which includes more than one dependent variable (multivariate vector autoregressive models). Every variable is regressed on a combination of its own lagged values and lagged values of other variables from the system. For the three country groups the results are:

### 4.5.1 The Result of High Income Countries

The JNCT of first cointegrating equation result showed

**Table 6.** VECM for short-run coefficients estimates results

| Variables | High income country | | Upper middle income country | | Lower middle income country | |
|---|---|---|---|---|---|---|
| | GDP growth (annual %) | Revenue, excluding grants (% of GDP) | GDP growth (annual %) | Revenue, excluding grants (% of GDP) | GDP growth (annual %) | Revenue, excluding grants (% of GDP) |
| Coefficients β | -0.845160 | 0.0005180 | -0.750798 | -0.033812 | -0.664848 | 0.300391 |
| Standard error | 0.19327 | 0.07763 | (0.18599) | (0.09077) | (0.19416) | (0.30390) |

*Note: WDI data covered 2001 to 2016, fifteen countries, with the help of software Eviews 11 sv (X64)*

**Table 7.** JNCTs for Long-Run Coefficients Estimates

| Variables | High income country | | Upper middle income country | | Lower middle income country | |
|---|---|---|---|---|---|---|
| | GDP growth (annual %) | Revenue (% of GDP) | GDP growth (annual %) | Revenue (% of GDP) | GDP growth (annual %) | Revenue (% of GDP) |
| Coefficients β | 1 | 0.037 | 1 | 0.286 | 1 | -0.039 |
| Standard error | - | 0.045 | - | 0.113 | - | 0.049 |

*Note: WDI data covered 2001 to 2016, fifteen countries, with the help of software Eviews 11 sv (X64)*

for high income nations, in the long run, if revenue income (% of GDP) rate upswing one percent then GDP growth rate will rise 0.037 percent.

### 4.5.2 The Result of Upper Middle Income Countries

The result of the test (JNCT) of first cointegrating equation of upper middle income nations explored that, if revenue (% of GDP) rate upsurge one percent, then GDP growth rate will increase 0.286 percent in the long run.

### 4.5.3 The Result of Lower Middle Income Countries

The countries that are belongs to the lower middle income cluster, the outcome of JNCT showed the evidence that an inverse result of the said variables, here, if revenue (% of GDP) rate rise one percent point then GDP will drop 0.039 percent in the long run

## 5. Conclusions and Recommendations

Considering four stage procedures of panel econometrics test, comprising panel URT, country PCT, PP cross section test, VECM tests and JNCTs this study has analyzed and investigated the inter-temporal relationship between the government revenues income and the growth of GDP. The study of fifteen countries under three income group categories, explored the inter-temporal and long run relationship between uttered two variables. All fifteen countries irrespective of thee income clusters secured one percent level of significance by four statistics of the country PCT out of seven statistics. The country wise specific relationship of revenue income and GDP explored through PP cross section test and the results uncovered that all ten countries which belong to high income group and lower middle income group individually ascertained the said relationship. The rest of five nations that allied to upper middle income category; in this category the study unearth showed long run relationship from the data of three nations, namely, Argentina, Brazil and Russian Federation. Finally, the study outcome of JNCT suggests that in the long run if the government revenue increase one percentage point and then GDP growth rate will upswing 0.037 and 0.28 percentage point for high income and upper middle income countries respectively. Meanwhile, this same JNCT discovered a negative result for the lower middle income nations, where GDP growth rate will plummet 0.039 percent point due to one percent rise in the revenue income of the government.

Usually, government revenue growth including its component has a substantial effect on economic growth in the long run and the short run. In that case, fiscal policy maker performs a significant role to collect revenue with respect to fulfilling the target of optimal level of revenue income for each nation. To do so, it requires that, the fiscal institutions constitute with the principle of good governance that administering the revenue generated of an economy. In the broader perspective, this paper explored the following findings:

a)Regardless of country clusters, that is, ignoring the level of income the examined fifteen countries unearthed the evident of inter-temporal relationship between the government revenue income and GDP.

b)A specific deterministic relationship has established of the uttered variables for each group of countries in the study. The fiscal decisions are sustained by means of the GDP of all ten nations of high income and upper middle income categories. Because both categories secured the positive relationship and the result of upper middle income group did well (0.286) than high income group (0.039), that is, the growth of government revenue income positively reinforced by the growth of GDP of the said ten countries under the two clusters of the nations.

c)The study explored negative result for the five countries like Angola, Bangladesh, Bhutan, India and Philippines which were belongs to the lower middle income countries; the study assessed that the fiscal policy maker of those countries may cautious to set out their volume and sources of revenue income. The fiscal policy actor of these nations may rethink about tax policy. Likewise, they may restructure the tax policy in the light of cannon of taxation, which might be ensured the social justice and the equity of a nation. They may consider the fiscal hypothesis of tax-and-spend or spend-and-tax; any one of them. It could fix up through tax structure and tax net, canon of taxation, socioeconomic structure, the ratio of tax to GDP etc. of each country.

d)Attaining an optimal revenue income is a tough and unappealing task, but however, critical for revenue generation required for accelerating growth. Both parties of taxes giver and receivers would be happy by imposition of optimal taxation; that is, explores the state of win-win position for all parties: in the name of producers and consumers, in an economy and society as well. In addition to that, this fiscal decision meets the long-term development goal to enhance transparency, promote growth and improve tax compliance, which will be shielded from the perspective macroeconomic plan of a nation.

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