INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, ECONOMICS & MANAGEMENT

IJRCM

A Monthly Double-Blind Peer Reviewed (Refereed/Juried) Open Access International e-Journal - Included in the International Serial Directories

Indexed & Listed at:

Ulrich's Periodicals Directory ©, ProQuest, U.S.A., EBSCO Publishing, U.S.A., Cabell's Directories of Publishing Opportunities, U.S.A., Google Scholar, Indian Citation Index (ICI), J-Gage, India [link of the same is duly available at Inflibnet of University Grants Commission (U.G.C.)], Index Copernicus Publishers Panel, Poland with IC Value of 5.09 (2012) & number of libraries all around the world.

Circulated all over the world & Google has verified that scholars of more than **6185 Cities** in **195 countries/territories** are visiting our journal on regular basis.

Ground Floor, Building No. 1041-C-1, Devi Bhawan Bazar, JAGADHRI – 135 003, Yamunanagar, Haryana, INDIA

http://ijrcm.org.in/

CONTENTS

Sr. No.	TITLE & NAME OF THE AUTHOR (S)	Page No.
1.	**RECONCILIATION BETWEEN TAXATION AND GDP GROWTH IN BANGLADESH: ISSUES AND ARGUMENTS FOR SOCIAL JUSTICE** *Dr. AOULAD HOSEN & Md. ASAD*	1
2.	**A STUDY ON COPING STRATEGIES FOR RELIEVING STRESS AMONG TEACHERS WORKING IN PRIVATE SCHOOLS WITH SPECIAL REFERENCE TO TIRUPUR CITY** *A. PRABUCHANDRU & Dr. D. GNANA SENTHIL KUMAR*	12
3.	**EVALUATION OF OPERATING AND FINANCIAL PERFORMANCE IN POST-ACQUISITION (WITH SPECIAL REFERENCE TO UNILEVER-BLUE AIR)** *LAKSHMI M P & Dr. MANOJ KUMARA N V*	19
4.	**PERCEPTION TOWARDS LIC's MICRO INSURANCE POLICIES AMONG POLICY HOLDERS IN BANGALORE REGION** *MANJULA.R, ASHWINI.N & KARTHIK N.L*	23
5.	**A STUDY ON MARKETING STRATEGIES OF PHARMACEUTICAL INDUSTRY WITH SPECIAL REFERENCE TO PATHANAMTHITTA DISTRICT** *ASWATHY RAMACHANDRAN*	26
6.	**FINANCIAL PERFORMANCE ANALYSIS OF THE STATE BANK OF INDIA FROM 2011-2015 BY USING THE DUPOUNT SYSTEM FINANCIAL ANALYSIS** *ASHA T K*	30
	REQUEST FOR FEEDBACK & DISCLAIMER	36

CALL FOR MANUSCRIPTS

We invite unpublished novel, original, empirical and high quality research work pertaining to the recent developments & practices in the areas of Computer Science & Applications; Commerce; Business; Finance; Marketing; Human Resource Management; General Management; Banking; Economics; Tourism Administration & Management; Education; Law; Library & Information Science; Defence & Strategic Studies; Electronic Science; Corporate Governance; Industrial Relations; and emerging paradigms in allied subjects like Accounting; Accounting Information Systems; Accounting Theory & Practice; Auditing; Behavioral Accounting; Behavioral Economics; Corporate Finance; Cost Accounting; Econometrics; Economic Development; Economic History; Financial Institutions & Markets; Financial Services; Fiscal Policy; Government & Non Profit Accounting; Industrial Organization; International Economics & Trade; International Finance; Macro Economics; Micro Economics; Rural Economics; Co-operation; Demography: Development Planning; Development Studies; Applied Economics; Development Economics; Business Economics; Monetary Policy; Public Policy Economics; Real Estate; Regional Economics; Political Science; Continuing Education; Labour Welfare; Philosophy; Psychology; Sociology; Tax Accounting; Advertising & Promotion Management; Management Information Systems (MIS); Business Law; Public Responsibility & Ethics; Communication; Direct Marketing; E-Commerce; Global Business; Health Care Administration; Labour Relations & Human Resource Management; Marketing Research; Marketing Theory & Applications; Non-Profit Organizations; Office Administration/Management; Operations Research/Statistics; Organizational Behavior & Theory; Organizational Development; Production/Operations; International Relations; Human Rights & Duties; Public Administration; Population Studies; Purchasing/Materials Management; Retailing; Sales/Selling; Services; Small Business Entrepreneurship; Strategic Management Policy; Technology/Innovation; Tourism & Hospitality; Transportation Distribution; Algorithms; Artificial Intelligence; Compilers & Translation; Computer Aided Design (CAD); Computer Aided Manufacturing; Computer Graphics; Computer Organization & Architecture; Database Structures & Systems; Discrete Structures; Internet; Management Information Systems; Modeling & Simulation; Neural Systems/Neural Networks; Numerical Analysis/Scientific Computing; Object Oriented Programming; Operating Systems; Programming Languages; Robotics; Symbolic & Formal Logic; Web Design and emerging paradigms in allied subjects.

Anybody can submit the **soft copy** of unpublished novel; original; empirical and high quality **research work/manuscript** ***anytime*** in ***M.S. Word format*** after preparing the same as per our **GUIDELINES FOR SUBMISSION**; at our email address i.e. infoijrcm@gmail.com or online by clicking the link **online submission** as given on our website (***FOR ONLINE SUBMISSION, CLICK HERE***).

GUIDELINES FOR SUBMISSION OF MANUSCRIPT

1. **COVERING LETTER FOR SUBMISSION:**

DATED: _____

THE EDITOR

IJRCM

Subject: **SUBMISSION OF MANUSCRIPT IN THE AREA OF _____.**

(e.g. Finance/Mkt./HRM/General Mgt./Engineering/Economics/Computer/IT/ Education/Psychology/Law/Math/other, please specify)

DEAR SIR/MADAM

Please find my submission of manuscript titled '_____' for likely publication in one of your journals.

I hereby affirm that the contents of this manuscript are original. Furthermore, it has neither been published anywhere in any language fully or partly, nor it is under review for publication elsewhere.

I affirm that all the co-authors of this manuscript have seen the submitted version of the manuscript and have agreed to inclusion of their names as co-authors.

Also, if my/our manuscript is accepted, I agree to comply with the formalities as given on the website of the journal. The Journal has discretion to publish our contribution in any of its journals.

NAME OF CORRESPONDING AUTHOR	:
Designation/Post*	:
Institution/College/University with full address & Pin Code	:
Residential address with Pin Code	:
Mobile Number (s) with country ISD code	:
Is WhatsApp or Viber active on your above noted Mobile Number (Yes/No)	:
Landline Number (s) with country ISD code	:
E-mail Address	:
Alternate E-mail Address	:
Nationality	:

* i.e. Alumnus (Male Alumni), Alumna (Female Alumni), Student, Research Scholar (M. Phil), Research Scholar (Ph. D.), JRF, Research Assistant, Assistant Lecturer, Lecturer, Senior Lecturer, Junior Assistant Professor, Assistant Professor, Senior Assistant Professor, Co-ordinator, Reader, Associate Professor, Professor, Head, Vice-Principal, Dy. Director, Principal, Director, Dean, President, Vice Chancellor, Industry Designation **etc**. ***The qualification of author is not acceptable for the purpose***.

NOTES:

a) The whole manuscript has to be in ***ONE MS WORD FILE*** only, which will start from the covering letter, inside the manuscript. ***pdf. version is liable to be rejected without any consideration***.

b) The sender is required to mention the following in the **SUBJECT COLUMN of the mail**:

New Manuscript for Review in the area of (e.g. Finance/Marketing/HRM/General Mgt./Engineering/Economics/Computer/IT/ Education/Psychology/Law/Math/other, please specify)

c) There is no need to give any text in the body of the mail, except the cases where the author wishes to give any **specific message** w.r.t. to the manuscript.

d) The total size of the file containing the manuscript is expected to be below **1000 KB**.

e) Only the **Abstract will not be considered for review** and the author is required to submit the **complete manuscript** in the first instance.

f) ***The journal gives acknowledgement w.r.t. the receipt of every email within twenty-four hours*** and in case of non-receipt of acknowledgment from the journal, w.r.t. the submission of the manuscript, within two days of its submission, the corresponding author is required to demand for the same by sending a separate mail to the journal.

g) The author (s) name or details should not appear anywhere on the body of the manuscript, except on the covering letter and the cover page of the manuscript, in the manner as mentioned in the guidelines.

2. **MANUSCRIPT TITLE:** The title of the paper should be typed in **bold letters**, **centered** and **fully capitalised**.
3. **AUTHOR NAME (S) & AFFILIATIONS:** Author (s) **name**, **designation**, **affiliation** (s), **address**, **mobile/landline number** (s), and **email/alternate email address** should be given underneath the title.
4. **ACKNOWLEDGMENTS:** Acknowledgements can be given to reviewers, guides, funding institutions, etc., if any.
5. **ABSTRACT:** Abstract should be in **fully Italic printing**, ranging between **150** to **300 words**. The abstract must be informative and elucidating the background, aims, methods, results & conclusion in a **SINGLE PARA**. ***Abbreviations must be mentioned in full***.
6. **KEYWORDS:** Abstract must be followed by a list of keywords, subject to the maximum of **five**. These should be arranged in alphabetic order separated by commas and full stop at the end. All words of the keywords, including the first one should be in small letters, except special words e.g. name of the Countries, abbreviations etc.
7. **JEL CODE:** Provide the appropriate Journal of Economic Literature Classification System code (s). JEL codes are available at www.aea-web.org/econlit/jelCodes.php. However, mentioning of JEL Code is not mandatory.
8. **MANUSCRIPT:** Manuscript must be in ***BRITISH ENGLISH*** prepared on a standard A4 size ***PORTRAIT SETTING PAPER***. *It should be free from any errors i.e.* ***grammatical***, ***spelling*** *or* ***punctuation.*** *It must be thoroughly edited at your end*.
9. **HEADINGS:** All the headings must be bold-faced, aligned left and fully capitalised. Leave a blank line before each heading.
10. **SUB-HEADINGS:** All the sub-headings must be bold-faced, aligned left and fully capitalised.
11. **MAIN TEXT:**

THE MAIN TEXT SHOULD FOLLOW THE FOLLOWING SEQUENCE:

INTRODUCTION

REVIEW OF LITERATURE

NEED/IMPORTANCE OF THE STUDY

STATEMENT OF THE PROBLEM

OBJECTIVES

HYPOTHESIS (ES)

RESEARCH METHODOLOGY

RESULTS & DISCUSSION

FINDINGS

RECOMMENDATIONS/SUGGESTIONS

CONCLUSIONS

LIMITATIONS

SCOPE FOR FURTHER RESEARCH

REFERENCES

APPENDIX/ANNEXURE

The manuscript should preferably be in ***2000 to 5000 WORDS***, But the limits can vary depending on the nature of the manuscript.

12. **FIGURES & TABLES:** These should be simple, crystal **CLEAR**, **centered**, **separately numbered** & self-explained, and the **titles must be above the table/figure**. **Sources of data should be mentioned below the table/figure**. *It should be ensured that the tables/figures are referred to from the main text*.

13. **EQUATIONS/FORMULAE:** These should be consecutively numbered in parenthesis, left aligned with equation/formulae number placed at the right. The equation editor provided with standard versions of Microsoft Word may be utilised. If any other equation editor is utilised, author must confirm that these equations may be viewed and edited in versions of Microsoft Office that does not have the editor.

14. **ACRONYMS:** These should not be used in the abstract. The use of acronyms is elsewhere is acceptable. Acronyms should be defined on its first use in each section e.g. Reserve Bank of India (RBI). Acronyms should be redefined on first use in subsequent sections.

15. **REFERENCES:** The list of all references should be alphabetically arranged. ***The author (s) should mention only the actually utilised references in the preparation of manuscript*** and they may follow Harvard Style of Referencing. **Also check to ensure that everything that you are including in the reference section is duly cited in the paper**. The author (s) are supposed to follow the references as per the following:

- All works cited in the text (including sources for tables and figures) should be listed alphabetically.
- Use (**ed.**) for one editor, and (**ed.s)** for multiple editors.
- When listing two or more works by one author, use --- (20xx), such as after Kohl (1997), use --- (2001), etc., in chronologically ascending order.
- Indicate (opening and closing) page numbers for articles in journals and for chapters in books.
- The title of books and journals should be in italic printing. Double quotation marks are used for titles of journal articles, book chapters, dissertations, reports, working papers, unpublished material, etc.
- For titles in a language other than English, provide an English translation in parenthesis.
- ***Headers, footers, endnotes*** *and* ***footnotes*** *should* ***not be used*** *in the document.* However, **you can mention short notes to elucidate some specific point**, which may be placed in number orders before the references.

PLEASE USE THE FOLLOWING FOR STYLE AND PUNCTUATION IN REFERENCES:

BOOKS

- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

CONTRIBUTIONS TO BOOKS

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

JOURNAL AND OTHER ARTICLES

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–23

UNPUBLISHED DISSERTATIONS

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

ONLINE RESOURCES

- Always indicate the date that the source was accessed, as online resources are frequently updated or removed.

WEBSITES

- Garg, Bhavet (2011): Towards a New Gas Policy, Political Weekly, Viewed on January 01, 2012 http://epw.in/user/viewabstract.jsp

RECONCILIATION BETWEEN TAXATION AND GDP GROWTH IN BANGLADESH: ISSUES AND ARGUMENTS FOR SOCIAL JUSTICE

Dr. AOULAD HOSEN
CHAIRMAN
ACADEMIC COMMITTEE
SOCIAL SCIENCE GROUP
NATIONAL UNIVERSITY
GAZIPUR, BANGLADESH

Md. ASAD
FELLOW OF MASTER OF ADVANCED STUDIES IN ECONOMICS
NATIONAL UNIVERSITY
GAZIPUR, BANGLADESH

ABSTRACT

The study examines the relationship between Gross Domestic Product(GDP) growth and tax for the policy issues regarding long-term economic development of Bangladesh. This paper emphasizes the impact of taxation on GDP and demonstrates the influence that taxation has on the tax paying infant and small business firms. To analyze the relationship between GDP and tax, this research incorporated econometric models for time series data of Bangladesh over a period of 43 years. For overall estimation, unit root tests such as Augmented Dickey-Fuller (ADF 1981) test and Kwiatkowski–Phillips–Schmidt–Shin (KPSS 1992) tests have been employed for the incorporation of the econometric time series model; Johansen-Juselius cointegration test (1990) has been introduced for the existence of cointegration among the long run variables; Vector Error Correction Model (VECM) has been used for testing and assessing short-run association of cointregated series; Granger Causality Test (1969) has been used for unearthing pairwise causal relationship among the explained and all the other explanatory variables; and, finally stability tests by CUSUM and CUSUMSq have been deployed for examining whether the model is stable or not. The results show, if the Government in the long-run increases the collection of total tax revenue by one percent then the GDP will decrease to a 0.86 percent. The study concludes that the sustainable economic growth can only be achieved through a reformed tax policy on the basis of the country's socioeconomic situation and the canons of taxation.

KEYWORDS

GDP, total tax revenue, gross domestics saving, canons of taxation and sustainable economic growth.

JEL CODES

B22, B23, C01, C02, C22, C53, C82, C87, E02, E62, H2.

INTRODUCTION

Taxation is the major source of any government's revenue earning. Imposing tax is an intricate matter yet for covering government revenue earnings and ensuring steady tax policy and rate on different sectors. Every government should impose it prudently and optimistically by ensuring equity and social justice. In order to attract entrepreneurs, the Government of Bangladesh has been giving incentives in manufacturing and agricultural sectors since long.

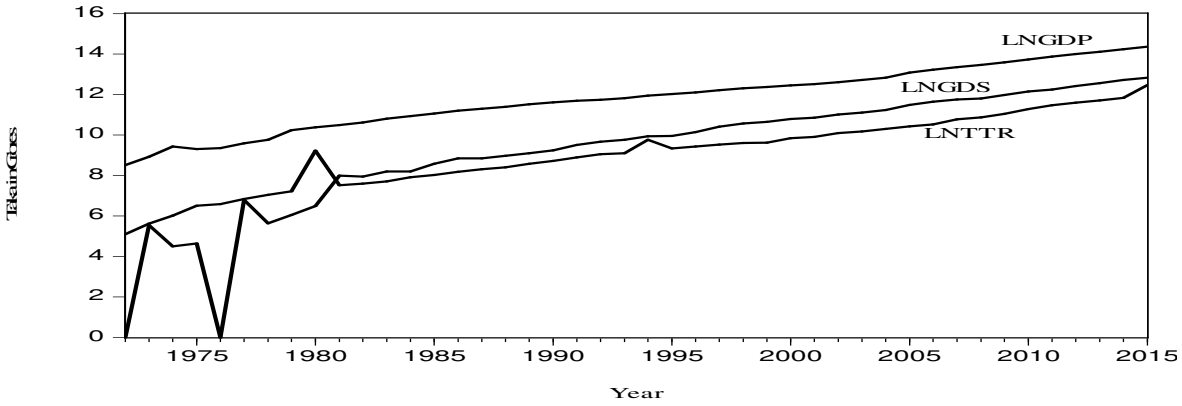
For the sake of economic assiduity, fiscal policy, including taxation, acts as a vital instrument of revenue earning all over the world. Taxation serves various development purposes to which Bangladesh is no exception as it also dependents on tax for raising its development budget especially in the area of infrastructure and human development. Here the government sector can play a vital role in this regard. Long-run relationship between tax and economic growth is vital for the sound implementation of policies as well as for ensuring social justice and equity.

The Government of Bangladesh adopted a vision to be a middle income country by the year 2021. It has also adopted one more vision to become a developed country and the 26th largest economy of the world by the year 2050. Under a Perspective Plan (2010-2021) the government has taken up some specific targets which incorporate issues such as achieve enhanced standard of living, better standard of education, improved quality of social justice, improved socio-economic milieu and sustainable development. In order to attain these marks, the government needs higher economic growth and for the higher economic growth it needs to improve the overall state of the infrastructure. To fulfill these issues, the target of GDP growth become plays a vigorous role in the economy. So here in perspective plan it was set out annually rise to 8.0 percent by 2015, and 10.0 percent by 2021 (Annual Report 2013-2014, 2015)

The revenue collection or tax system of Bangladesh can be divided into two parts: direct tax[i] and indirect tax[ii]. To achieve the aforementioned goals the Government of Bangladesh has almost indiscriminately raised all kinds of tax and VAT without giving any second thought on their future consequences. Besides, the government is also borrowing money from internal and external sources to fuel development budget, which would thus push the future tax burden to a new height. Imposing such a high rate of tax is a bad policy for a developing country like Bangladesh; which would eventually call in negative externalities. According to the Economic Studies of Brookings, high rate of tax reduces domestic consumption, savings, investments, and ultimately affects the GDP (Gale and Samwick 2014). A high rate of taxation could generate positive externalities only if then canons of taxation are the basis of such taxes is and only if such taxation creates positive incentives.

An increase in indirect tax, like supplementary duty and VAT, at the local level will rise negative externalities on both marginal people and business community. In Bangladesh the extreme poverty rate has dropped to 12.9 percent and poverty rate has dropped to 23.2 percent in 2016 (BBS, HIES 2016) yet most of the people are still living in the lower middle class strata and are struggling to meet their basic needs. Therefore, to ensure social justice and welfare for the people at the margin the government should adopt an indirect tax policy based on the canons of equity to trigger positive externalities. Theory conveys that, GDP, Gross Domestic Savings (GDS) and Total Tax Revenue (TTR) are interrelated (Keynes,1936). If the GDS increases then the GDP will increase but if the TTR increases then the GDS will fall. It ultimately means that the total investment will fall if the GDP falls. Figure 1.1 illustrates this relationship among GDP, GDS and TTR. Since the 1980s, all three of them are showing increasingly upward linear trend in Bangladesh while maintaining close link with each other.

FIGURE 1.1: RELATIONSHIP OF GDP, TOTAL TAX REVENUE, AND GDS

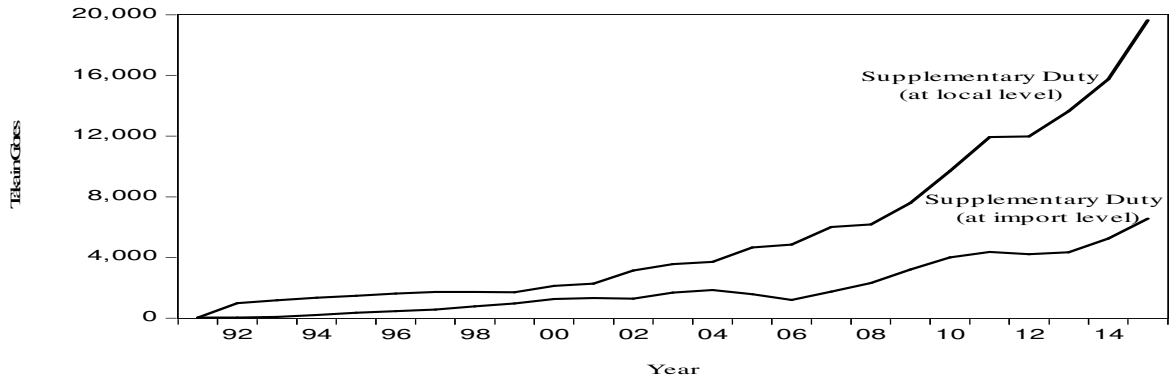


Source: National Board of Revenue (NBR)

The year 1972 and 1976 observed huge fluctuation between the GDP and GDS. In 1971, the year of independence, and in 1975, the year that witnessed the brutal assassination of the father of the nation, the country's savings were Tk.-167.50608 and Tk. -345.68894 cores respectively. However, its' taxation (TTR) had never faced a decreasing trend. The GDP from 1972 to 1979 was relatively low; as a result, the GDS was also very low between 1976 and 1982. In 1980 the government had collected a huge amount of tax. After 1980, the GDS increase rate was more than that of the TTR and it had witnessed almost parallel rate of increase with that of the GDP. Therefore, by this analysis we could say that the GDS have huge impact on the GDP; more than that of the TTR, because the GDS increased the GDP by rising the overall investment rate. However, the government never spends all that amount of TTR in the productive sector.

Supplementary duty is the major portion of indirect tax. The Government of Bangladesh has increased supplementary duty at local and import levels by risingTTR. Figure 1.2 shows the trends of supplementary duty at local and import levels between 1991 and 2015. The trends of supplementary duty at local and import levels are shooting upward on a year-by-year basis. Between 1993 and1999 the supplementary duty collection rate at the import level was relatively high compare to the local level, which was good for domestic investors but post 2000 the supplementary duty at the local level was increasing at a relatively higher rate than that of the import level.

FIGURE 1.2: TRENDS OF SUPPLEMENTARY DUTY AT LOCAL AND IMPORT LEVEL

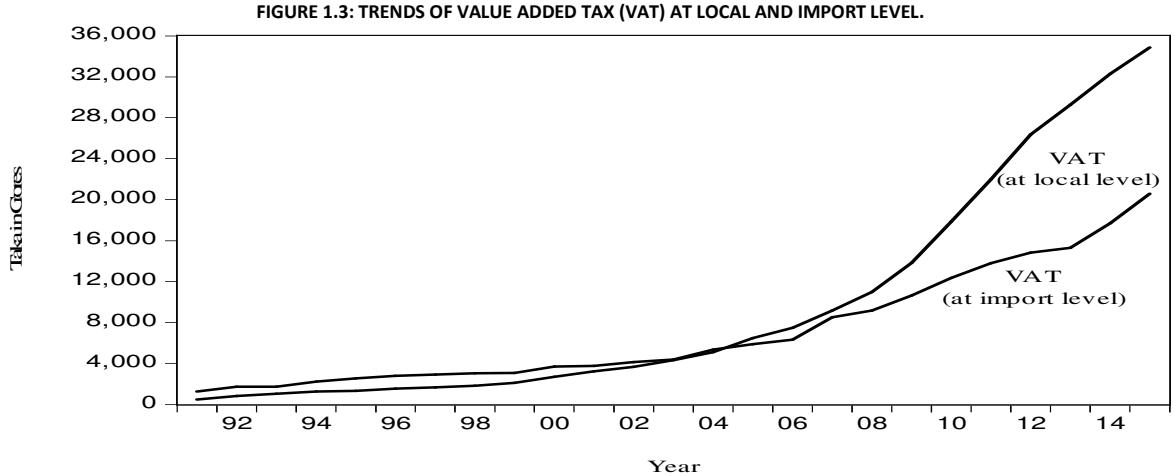


Source: National Board of Revenue (NBR)

In 2015, supplementary duty of Tk. 19630.96 cores was collected at the local level while the import level collection was Tk. 6560.2 cores. The supplementary duty collection at local levels was three times more than the import level. This type duty collection is destructive for domestic economy because then the imported goods become cheaper than the domestic products. Consumers by nature trend to buy cheap products that would in turn put the domestic producer into a tighter space. Such competition is bad for domestic investors because this will make them feel dis-incentivized.

The value added tax (VAT) also creates same kind of disincentive as it increases product's price. Figure 1.3 shows the trends of VAT at local and import levels between 1991 and 2015. Both trends were upward. Up until 2005 the VAT collection at import level was more than that of the local level, which was good for the domestic investors and also for the overall economy because it worked as an incentive. Prior to 2005 prices of local goods were relatively low due to a low VAT collection on local goods.

FIGURE 1.3: TRENDS OF VALUE ADDED TAX (VAT) AT LOCAL AND IMPORT LEVEL.

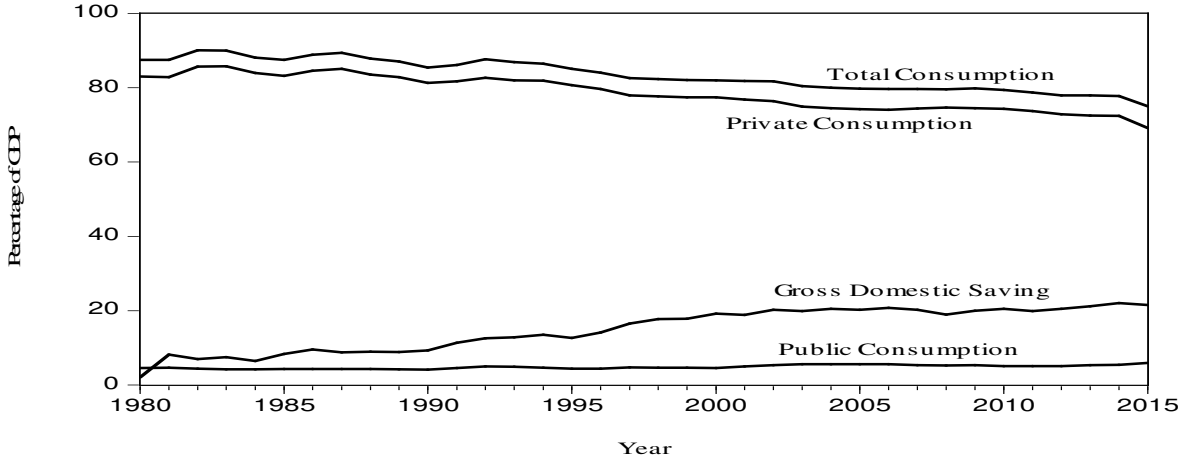


Source: National Board of Revenue (NBR)

The VAT collection at both local and import level went up after 2005. Between 2005 and 2015 government VAT collection at the local level was more than that of the import level. This is indicative of the fact that the government was hugely dependent on local level for its VAT collection. The low VAT collection on import level increased import of foreign goods, which has in turn increased consumption of foreign goods substituting for the local ones. Therefore, this form of VAT collection at the local level was not a good sign for the domestic economy.

Savings means disposable income (income after income tax) after consumption. From theory, we know that the prospective savings depends on disposable income and consumption(Keynes, 1936). The increasing rates of direct (income tax) and indirect tax (supplementary duty and VAT) unswervingly affect savings and consumptions. Figure 1.4 shows the trend of private, public, total consumption and the GDS. The total and private consumption are decreasing with a downward trend between 1980 and 2015 in relation to the constant rate but public consumption remained flat over the last 3.5 decades.

FIGURE 1.4: TRENDS OF GDS, PUBLIC, PRIVATE AND TOTAL CONSUMPTION

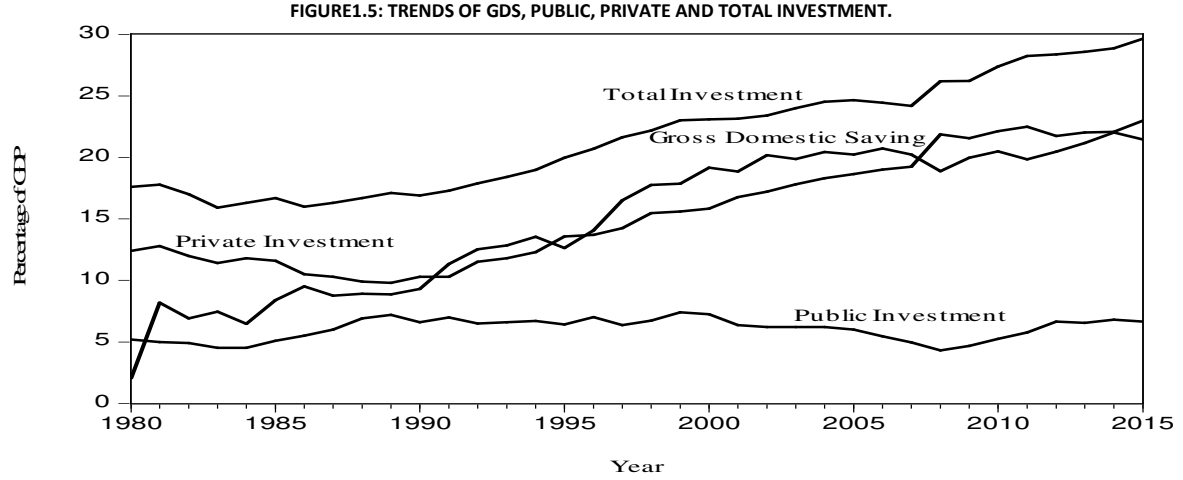


Source: Bangladesh Bureau of Statistics (BBS)

The total amount of consumption are dependent on private consumption. Arising GDS trend means that the GDP is rising against the backdrop of a total consumption decrease due to a overall taxation rise. The decreasing trend of consumption is a bad sign for the economy.

The Keynes general theory (1936) tells that saving equals to investment. Due to heavy taxation savings will decrease in the long-run as well as investment. Figure 1.5 shows that private and total investment was decreasing between 1980 and 1992. However, both private and total investments were rising with increasing trends between 1993 and 2015. Public investments were fluctuating around 6 to 7 percent up to 2005 while it experienced a rise between 1985 and 1991. Post 2005 onwards, up till the year 2011public investment once again experienced a fall. However, 2011 onwards the total investment has risen and continued to fluctuate around the 6 percent point.

FIGURE1.5: TRENDS OF GDS, PUBLIC, PRIVATE AND TOTAL INVESTMENT.



Source: Bangladesh Bureau of Statistics (BBS)

According to the figure 1.5 the GDS and the private investment showed a negative relation because when the GDS were increased then the private investment decreased and when the private investment increased then the GDS decreased. This had happened due to some internal and external economic forces like the high rate of taxation and various incentives. Based on the above observations it can be reiterated that the government should take up tax and VAT reforms policy following the canons of taxation and by ensuring social justice. This is how the strategic articulation plan of development, also known as the Perspective Plan 2021, of the Government of Bangladesh can be achieved.

REVIEW OF LITERATURE

A negative relation to economic growth confirmed by Rudolf Macek (2014), in the case of corporate taxation and personal income taxes approximated by World Tax Index. The study evaluates the impact of individual type of taxes on the economic growth by utilizing regression analysis on the OECD countries for the period of 2000–2011. Similar results were also achieved in the case of value added tax. Using time series data, Nadeem Iqbal et al. (2015) examined the empirical analysis of tax revenues and its impact on economic growth of Pakistan for years 1979-2010 using time series data. They show that there is significant positive impact of taxation on economic growth of Pakistan; i.e. if increase in sales tax and excise duties on all goods and services increase by 1 % lower the GDP growth of 3.8 % targeted at 4.1 % (IMF 2014).

The outcome of Plosser (1992) showed that, if government increases 0.05% of the average tax rate, the economic growth rate would be reduced by 0.4%. To know the result, he has compared the growth rate of per capita GDP in 24 OECD countries in 1960-1989 and ended up with the correlation coefficient of -0.52. Marginal tax rate plays a significant role in analyzing the long run impact on GDP growth rate through taxation, James et al. (2006) have indicated that high marginal tax rates, particularly rates at 50 percent or more, exert an adverse impact on long-term economic growth. They estimated that a 10 percentage point reduction in a country's top marginal tax rate will enhance the country's long-term annual growth rate of real GDP by approximately three-tenths of a percentage point.

Another significant study from Canadian Economic Perspective shows the impact of tax rate on economic growth. Ergete & Bev (2012) examined the impact of the Canadian provincial governments' tax rates on economic growth using panel data covering the period between 1977 and 2006 and found that a higher provincial statutory corporate income tax rate is associated with lower private investment and slower economic growth. Their estimates suggest that a 1 percentage point cut in the corporate tax rate is related to a 0.1–0.2 percentage point increase in the annual growth rate.

Engen & Skinner (1996) have reexamined the relationship between economic growth and taxation in light of the accumulated economic evidence. They also found that it is not necessarily obvious that high taxes are bad for economic growth, either in theory or in the data. However, the evidence is consistent with lower taxes having modest positive effects on economic growth. The impact of tax found out differently in the various income groups in the society and finally it become a useful explanatory variable to determine economic growth. Kalecki (1976) argued that taxation on lower income groups reduced real wages leading to less savings and hence investments. While for the higher income groups, increased taxes decreased the level of consumption; with the overall effect of reducing economic growth. Since demand for goods and services reduced by a across the board higher tax burden, inflationary pressures thus also minimized. To achieve a target economic growth the reform of tax policy play significant role:

Blanchard and Perotti (2002), claim that both increases in taxes and increases in government expenditures affect investment spending negatively. Accordingly, tax reforms through raising individual and corporate taxes do not necessarily spell out economic growth through increased government revenue but they could also derail economic growth through reduced social welfare and poor investment incentives. Taxes levied to the public and business entities must be reasonable and an effective tax reform strategy should not aim at increasing the citizens' tax burden. Instead, reforms should focus on streamlining the system and ensuring that tax proceeds are used effectively to achieve economic growth.

Arnold (2008) examined a set of panel growth regressions for 21 OECD countries and found that a significant effect of taxes on growth. Babalola & Aminu (2011) investigate the relationship between Fiscal policy and Economic growth (1977-2009) and found positive and significant causal relationship between income tax and economic growth. John et al. (2014) examines the dynamic causal relationship between tax revenue components and economic growth in Nigeria. They used time series data on different types of Taxes and GDP from 1986 to 2012. They found that total tax revenue has a significant effect on economic growth and that there exist a long-run relationship with equilibrium between aggregate tax revenue and economic growth. Lutfunnahar (2007) identified the determinants of tax share and revenue performance for Bangladesh along with 10 other developing countries for 15 years through a panel data analysis. The results suggested international trade, external debt and higher population growth are significant determinants of tax efforts. The study concluded low tax to GDP ratio for Bangladesh and other economies by not utilizing their tax revenue at full capacity that results in budgetary imbalance through raising tax revenue. It is not a one to one simple relationship between tax rate and GDP growth. A reciprocal relationship also given by Roshaiza et al. (2011). They analyze the relationship of economic growth and taxation revenue. This study included the annual data of Malaysia between 1970 and 2009. They used the GDP as measure of economic growth and concluded with the result that changes in taxes have no effect on economic growth. Another views found from neo-classical growth model of Solow. According to Solow (1956) in his model implied that taxes do not affect the steady state of growth. In other words, tax policy though distortionary, has no impact on long-term economic growth rates and total factor of productivity.

IMPORTANCE OF THE STUDY

Tax is an important part of any country's fiscal policy irrespective of its standing in the development ladder. By nature, Bangladesh's economy is rather vulnerable. As a powerful economic indicator the taxation policy influences Bangladesh's economy through consumption, saving and investment. The tax-based revenue influences economic growth negatively if the revenue budget solely depends on it. Therefore, this study aims to calculate the negative impact of tax revenue on economic growth and tries to find a way out of those while at the same time devises positive changes in the taxation policy to attain economic sustainability.

STATEMENT OF THE PROBLEM

The issue of tax policy and its impact on GDP growth rate is a delicate matter. It is very difficult to address and recommend proper policies of taxes without the long run study between tax rate and growth rate. To attain the sustainable GDP growth rate those relationship need to be figure out.

OBJECTIVES OF THE STUDY

The main objective of this study is to estimate the impact of tax revenue on GDP to show the actual impact of taxation on economic growth of Bangladesh. Besides, it has the following other objectives, too.

1. To analyze the long-run relationship between the GDP growth and tax rate with the cointegration potentiality.
2. To know the causal relationship between GDP and tax.
3. To forecast the impact of taxation on economic growth for sustainable development.
4. To learn about the issues related to justice and reconciliation in Bangladesh.

HYPOTHESIS

The null hypothesis of the study is

Ho: There is a significant negative relationship exist between GDP growth rate and tax rate

RESEARCH METHODOLOGY

SOURCE OF DATA - This paper is based on secondary time series data for the period from 1972 to 2015; collected from Bangladesh Bureau of Statistics (BBS), National Board of Revenue (NBR) Ministry of Finance, and Ministry of Planning of the Government of Bangladesh. The time series data covered a period that is 43 years long.

The overall methodology has two parts, theoretical and empirical. The empirical part is arranged by some econometric tests - ADF and KPSS tests for stationarity and Unit Root testing of a time series, Johansen's Cointegration tests for investigate long-run relationship, VECM for testing short run association of cointregated series, Pairwise Granger Causality tests for Pairwise causal relationship and CUSUM and CUSUM sq tests are for model stability.

ECONOMETRIC MODEL- A country's economic growth and her fiscal policy (tax) are interdependent. Sustainable economic growth demands appropriate fiscal policy. So, an equation for time serieshas been constructed in order to find out the relationship between Gross domestic products (GDP) or economic growths with respect of total tax revenue of Bangladesh;

$$Y_t = \alpha + \beta_1 T_t + \varepsilon_t \quad (1)$$

t =1992, 1993.....2014

Where, gross domestic product (Y), tax revenue (*T*) and t stand for the t^{th} time periods, α is a deterministic constant factor and ε_t is a mean zero covariance stationary process and if the estimated value of β_1 is stationary significant then GDP and tax revenue can be forecasted.

Rewrite equation (1) as:

$$Y_t = \alpha + \beta_1 dT + \beta_2 idT_t + \varepsilon_t \quad (2)$$

$$T_t = dT_t + idT_t$$

Here, tax revenue divided by direct tax *(dT)* and indirect tax *(idT)*
Now, by taking natural log in both sides we have:

$$\ln Y_t = \alpha + \beta_1 \ln dT_t + \beta_2 \ln idT_t + \varepsilon_t \quad (3)$$

THE EMPIRICAL PARTS

In this section, we investigate whether there is a long-run relationship between GDP and tax revenue. The unit root tests of time series data is an augment of the univariate time series of unit root tests. The univariate unit root tests not easily to except null hypothesis of time series in unit root approach. Now, Assuming the simple time series model for GDP (Y_t) with autoregressive AR (1) process.

$$Y_t = \phi Y_{t-1} + \varepsilon_t \quad (4)$$

Where, t = 1, 2, 3, ……., t is the time dimension, ε_t is a stationary error term.
Equation (4) can be expressed as;

$$\Delta Y_t = \rho Y_{t-1} + \varepsilon_t \quad (5)$$

Therefore, the null hypothesis time series is stationary around a deterministic trend (trend-stationary) and the alternative hypothesis is unit root.

Augmented Dickey-Fuller (ADF) Test- The ADF test (1981) for a unit autoregressive root tests the null hypothesis $H_0 : \gamma = 0$ against the alternative $H_1 : \gamma < 0$ in the following regression:

$$\Delta Y_t = \alpha + \gamma Y_{t-1} + \sum_{j=1}^{\rho} \delta_j \Delta Y_{t-j} + \varepsilon_t \quad (6)$$

Where Δ is the first difference operator and ε_t is a white noise error term and ρ is the number of lags in the dependent variable Y_t. In the hypothesis testing H_0 implies Y_t has a stochastic trend, while H_1 implies Y_t is stationary. If Y_t is stationary around a deterministic linear time trend, then the trend 't' i.e., the number of observation must be added as an explanatory variable. Alternatively equation (6) can be written as;

$$\Delta Y_t = \alpha + \beta t + \gamma Y_{t-1} + \sum_{j=1}^{\rho} \delta_j \Delta Y_{t-j} + \varepsilon_t \quad (7)$$

In the equation (7) Y_t is a random walk with drift around the stochastic trend. Here β is an unknown coefficient and the ADF statistic is the OLS t-statistic testing null hypothesis $\gamma = 0$ or not. If, the series found that the null hypothesis $\gamma = 0$ is rejected in the level then the data implies stationary and differentiation will not needed to take. If, series is found that the null hypothesis $\gamma = 0$ is accepted in the level then first differentiation should be taken and second differentiation also can be taken in order to make the series of data stationary.

Kwiatkowski–Phillips–Schmidt–Shin (KPSS) Test- The alternative test ADF introduced in 1992 by Kwiatkowski, Phillips, Schmidt and Shin called henceforth the KPSS test, has a null of stationary of a series around either mean or a linear trend; and the alternative assumes that a series is non-stationary due to presence of a unit root. The procedure is a test of non-stationary against the null hypothesis of stationary in the model;

$$Y_t = \alpha + \beta t + \gamma \sum_{i=1}^{t} Z_i + \varepsilon_t$$
$$= \alpha + \beta t + \gamma Z_t + \varepsilon_t \quad (8)$$

Where, ε_t is a stationary series, β is unknown coefficient and Z_i is an independent and identically distributed random variable stationary series with zero and variance one (these are merely convenient normalizations because a nonzero mean would move to α and a nonunit variance is absorbed in γ). If γ equal zero, then the process is stationary and trend stationary if γ is nonzero then Y_t is non stationary.

The KPSS test of the null hypothesis $H_0 : \gamma = 0$, against the alternative $H_0 : \gamma < 1 \text{ or } H_0 : \gamma = 1$. Under the null hypothesis α and β can be estimated by OLS. Let e_t denote the t^{th} OLS residual

$$e_t = y_t - \alpha - bt \quad (9)$$

and let the sequence of partial sums be,

$$E_t = \sum_{i-1}^{t} e_t, \qquad t = 1, ..., T$$

The KPSS statistic is;

$$\text{KPSS}=\frac{\sum_{t=1}^{T} E_t^2}{T^2\hat{\sigma}^2} \quad (10)$$

Where,

$$\hat{\sigma}^2=\frac{\sum_{t=1}^{T} e_t^2}{T}+2\sum_{j=1}^{L}\left(1-\frac{j}{L+1}\right)r_j \text{ and } r_j=\frac{\sum_{s=j+1}^{T} e_s e_{s-j}}{T}$$

and L is chosen by the researcher. Under the normality of the disturbances ε_t the KPSS statistic is an LM statistic that the researcher derive at under the general condition. If, computed value is greater than critical value then the null hypothesis $\gamma=0$ stationary is rejected at a given level of significance. If, the series found that the null hypothesis $\gamma=0$ is accepted in the level then the data implies stationary and differentiation will not needed to take. If, the null hypothesis $\gamma=0$ is rejected in the level then first differentiation should be taken and second differentiation can be taken in order to make the series of data stationary.

Johansen Cointegration Test- The Johansen (1988) Maximum Likelihood (ML) methods of cointegration test widely used to identify the long run relationship among 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. Here, the researcher considers the following *n* dimensional VAR model of order *k*.

$$Y_t=\mu_t+\sum_{i=1}^{K} A_i Y_{t-1}+\varepsilon_t \quad (11)$$

Where Y_t is a $n\times 1$ vector of variables that are integrated of order one which commonly denoted $I(1)$ and ε_t a $n\times 1$ vector and μ_t is an independently and identically distributed random variable. In the case of the stochastic process of Y_t. Johansen and Juselius (1990) propose two different ratio tests of the significance of these canonical correlations and thereby the reduced rank of the Π matrix: the trace test and maximum eigenvalue test, shown in equations (13) and (14) respectively.

$$\Delta Y_t=\mu_t+\Pi Y_{t-1}+\sum_{i=1}^{K-1}\Gamma_i\Delta Y_{t-i}+\varepsilon_t \quad (12)$$

Where,

$$\Pi=-\left(I-\sum_{i=1}^{K} A_i\right) \text{ and } \Gamma_t=-\sum_{j=i=1}^{K} A_j$$

and $\Delta=1-L$, where L is the lag operator; I is the *n* × *r* matrix; A and elements of Y_t will be given by the rank of Π, denoted as r,λ is an eigenvalue of estimated Π. In the Trace test, the null hypothesis that there are at most r cointegrating vectors is tested (Against a general alternative) by calculating the test statistic;

$$\lambda_{trace}(r)=-T\sum_{i=r+1}^{n}\ln\left(1-\hat{\lambda}_i\right) \quad (13)$$

In this case, each in $\hat{\lambda}_i$ will be equal to zero (since log $1=0$), and λ_{trace} will also be equal to zero. However, the farther the estimated eigenvalues are from zero, the more negative is each of the expressions and the larger the λ_{trace} statistic. In the maximum eigenvalue test, the null hypothesis of *r* cointegrating vectors is tested against the alternative of $(r+1)$ cointegrating vectors by calculating the test Statistic.

$$\lambda_{max}(r,r+1)=-T\ln\left(1-\hat{\lambda}_{r+1}\right) \quad (14)$$

Again, if the estimated eigenvalue, $\hat{\lambda}_{r+1}$, is close to zero λ_{max}, will be large, and the null hypothesis that the number of cointegrating vectors is r will be rejected.

Vector Error Correction Model (VECM)- If in Johansen cointegration test detected cointreagation between the series that means there exist a long-run relationship with equilibium between explained and explanatory variables. So, researcher applies VECM for testing short-run association of cointregated series. The regression equations of VECM are as follows:

$$\Delta Y_t = \alpha_1 + p_1 q_1 + \sum_{i=0}^{n} \beta_i \Delta Y_{t-i} + \sum_{i=0}^{n} \delta_i \Delta T_{t-i} + \sum_{i=0}^{n} \gamma_i Z_{t-i} \quad (15)$$

$$\Delta T_t = \alpha_2 + p_2 q_2 + \sum_{i=0}^{n} \beta_i \Delta Y_{t-i} + \sum_{i=0}^{n} \delta_i \Delta T_{t-i} + \sum_{i=0}^{n} \gamma_i Z_{t-i} \quad (16)$$

Where pq is the error correction component of the model that measures the speed at which prior deviations from equilibrium are corrected. VECM indicates that any short term fluctuations between explained and explanatory variable give rise to the stable long run relationship between the variables.

Granger Causality Test- Finally the Granger Causality test (1969) is carried out for checking the casual relationship between two variables such as T (representing tax revenue) and Y (representing GDP or economic growth). It is a prediction based econometrical concept. To say one variable T Granger causes another variable Y is to say that, by using past values of both variables T and Y, we can better predict future values of Y than by using only past values of Y that is, past observations of T contain information useful for predicting Y, beyond what is available from past observations of Y itself. Suppose T and Y from a bivariate time series given by the dynamic relationship.

$$Y_t = \phi + \sum_{i=1}^{n} \alpha_i Y_{t-i} + \sum_{j=1}^{n} \beta_j T_{t-j} + \varepsilon_{1t} \quad (17)$$

$$T_t = \lambda + \sum_{i=1}^{n} \delta_i Y_{t-i} + \sum_{j=1}^{n} \omega_j T_{t-j} + \varepsilon_{2t} \quad (18)$$

Where, ϕ and λ represent intercepts, ε_{1t} and ε_{2t} are the white noise disturbance terms which are assumed stationary. The T will Granger Cause Y if the calculated F statistics is significant at conventional level and similar will occur in case of Y to T.

EMPIRICAL RESULTS

This Part has been arranged by unit root ADF test (1981) and KPSS test (1992), Johansen-Juselius cointegration test (1990), Vector Error Correction Model (VECM), Granger Causality test (1969) and stability test.

TABLE 1: UNIT ROOT TESTS RESULTS (WITHOUT TREND)

Variable	Method	Level	First difference	Second difference
LNGDP	ADF	-1.276746	-5.902586***	-9.283513***
LNDT	ADF	-0.301599	-2.348484	-4.592000***
LNIDT	ADF	-1.738212	-10.26220***	-13.83611***
LNTTR	ADF	-1.298493	-10.00137***	-13.68274***
LNGDS	ADF	-1.110575	-3.326297**	-2.977467**

Note: For determination of optimal lag lengths used Schwarz Information Criterion (SIC) with maximum lag length automatically selected by Eviews software 7. (***, ** and * show level of significance at 1%, 5% and 10%, respectively).

Source: Estimates of Unit Root Tests Results (Without Trend), 2018

Table 1, the time series data unit root test ADF provides empirical evidence that GDP, DT, IDT, TTR and GDS are non stationary[iii] at level but in first and second difference are stationary[iv] because at first and second difference the null hypothesis of unit root is rejected and accepted alternative hypothesis at 1% and 5% level of significance.

TABLE 2: UNIT ROOT TESTS RESULTS (WITH TREND)

Variable	Method	Level	First difference	Second difference
LNGDP	ADF	-2.819584	-5.911985***	-9.353313***
LNDT	ADF	-2.117740	-1.924586	-4.974445***
LNIDT	ADF	-5.304905***	-10.26962***	-5.600671***
LNTTR	ADF	-5.032328***	-9.905557***	-13.54477***
LNGDS	ADF	-1.601710	-13.03359***	-3.965786**

Note: For determination of optimal lag lengths used Schwarz Information Criterion (SIC) with maximum lag length automatically selected by Eviews software 7. (***, ** and * show level of significance at 1%, 5% and 10%, respectively).

Source: Estimates of Unit Root Tests Results (With Trend), 2018

Table 2, the time series data unit root test ADF provides empirical evidence that DT and TTR are stationary at level because these rejected null hypothesis of unit root and accepted alternative hypothesis at 1% significance. Also the empirical evidence of GDP, DT and GDS are non-stationary at level but in first and second difference are stationary because at first and second difference the null hypothesis of unit root are rejected and accepted alternative hypothesis at 1% and 5% level of significance.

TABLE 3: STATIONARY TESTS RESULTS (WITHOUT TREND)

Variable	Method	Level	First difference	Second difference
LNGDP	KPSS	0.839735	0.409266**	0.295641*
LNDT	KPSS	0.853892	0.220516*	0.360547**
LNIDT	KPSS	0.844266	0.268574*	0.405086**
LNTTR	KPSS	0.849900	0.176300*	0.403668**
LNGDS	KPSS	0.798859	0.356221**	0.300548*

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

Source: Examination of Stationary Tests Results (Without Trend), 2018

Table 3, the time series data stationary test KPSS provides empirical evidence that GDP, DT, IDT, TTR and GDS are non stationary at level because the null hypothesis of stationary is rejected but in first and second difference are stationary because at first and second difference the null hypothesis of stationary is accepted and rejected the alternative hypothesis of non-stationary at 5% and 10% level of significance.

TABLE 4: STATIONARY TESTS RESULTS (WITH TREND)

Variable	Method	Level	First difference	Second difference
LNGDP	KPSS	0.146582***	0.210163***	0.150848***
LNDT	KPSS	0.128092**	0.220490	0.111210*
LNIDT	KPSS	0.134737**	0.170408***	0.415520
LNTTR	KPSS	0.120336**	0.151617***	0.463720
LNGDS	KPSS	0.205663***	0.156309***	0.166131***

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

Source: Examination of Stationary Tests Results (With Trend), 2018

Table 4, the time series data stationary test KPSS provides empirical evidence that GDP, DT, IDT, TTR and GDS are stationary at level because the null hypothesis of stationary are accepted at level and rejected the alternative hypothesis non stationary at 1% and 5% level of significance.

TABLE 5: JOHANSEN TESTS FOR COINTEGRATION: 1972 – 2015

H_0	H_1	λ_{trace}	Prob.	λ_{max}	Prob.
$r=0$	$r=1$	289.3395***	0.0001	33.87687***	0.0000
$r\leq 1$	$r=2$	163.2256***	0.0000	27.58434***	0.0000
$r\leq 2$	$r=3$	74.51326***	0.0000	21.13162***	0.0000
$r\leq 3$	$r=4$	32.05733***	0.0001	14.26460***	0.0001
$r\leq 4$	$r=5$	2.026251	0.1546	3.841466	0.1546

Note: Here r is number of cointegration vectors and lag intervals is 5. (*** and ** show level of rejection at 1% and 5% respectively).

Source: Results of Johansen Tests for Cointegration: 1972 – 2015 from NBR data, 2018

Table 5, The Johansen-Juselius (1990) maximum likelihood approach used to examine the long run relationship between the explained and explanatory variables. Here the cointegration of null hypothesis is H_0 and the alternative hypothesis is H_1. The J-J cointregration test shows that the null hypothesis $r=0$ (none) to $r\leq 3$ (at most 3) are rejected because the λ_{trace} and λ_{max} statistic value are less than 5% level of significance respectively and accepted the alternative hypothesis $r=1$, $r=2$, $r=3$ and $r=4$ again the null hypothesis $r\leq 4$ (at most 4) is accepted because the λ_{trace} and λ_{max} statistic value are more than 5% level of significance respectively and rejected the alternative hypothesis $r=5$. These results provide the evidence that there are at least four cointegrating equation model. So, the evidence provides that there exist long-run relationship between explained variable (GDP) and all other explanatory variables (DT, IDT, TTR and GDS).

TABLE 6: VECTOR ERROR CORRECTION TESTS FOR SHORT-RUN COEFFICIENTS ESTIMATES

Variables	LNGDP	LNDT	LNIDT	LNTTR	LNGDS
Coefficients β	0.135137	2.500982	1.270085	2.245742	-1.313832
Standard error	0.46294	1.54756	1.44226	1.38138	0.53799

Note: *** and ** show the level significance at 1% and 5% respectively. Standard errors in parentheses represent asymptotic p-values associated with the tests.

Source: Results of VECT from NBR data, 2018

Table 6, the vector error correction tests results of first cointegrating equation implies that the model is statistically insignificant which also implies that the change of explanatory variables (DT, IDT, TTR, and GDS) does not causally affect explained variable (GDP) in short run. The coefficient of the model implies that percentage of error in the variables. In the GDP 14% error occurred for each year. Therefore, 14% error need to be corrected each year then it will reach equilibrium after 7.14 years and all other variables DT, IDT, TTR and GDS are already in equilibrium.

TABLE 7: JOHANSEN NORMALIZED COINTEGRATING TESTS FOR LONG-RUN COEFFICIENTS ESTIMATES

Variables	LNGDP	LNDT	LNIDT	LNTTR	LNGDS
Coefficients β	1	-0.043709	-0.047176	-0.856425	0.131790**
Standard error	-	0.11183	0.29752	0.39542	0.02413

Note: *** and ** show significance at 1% and 5% respectively. Standard errors in parentheses represent asymptotic p-values associated with the tests.

Source: Results of Johansen Normalized Cointegrating Tests from NBR data, 2018

Table 7, the Johansen Normalized cointegrating test result of first cointegrating equation implies that only GDS is statistically significant at 5% level of significance though the other variables GDP, DT, IDT and TTR have statistically insignificant long running relationships. The coefficients of cointegrating equation model implies that if DT rise in 1% then GDP will fall 0.044%, if IDT rise in 1% then GDP will fall 0.047%, if TTR rise in 1% then GDP will fall 0.86% and if GDS rise in 1% then GDP will rise 0.13% in the long run.

TABLE 8: PAIRWISE GRANGER CAUSALITY TESTS RESULT

Null Hypothesis:	Obs	F-Statistic	Prob.
LNDT does not Granger Cause LNGDP LNGDP does not Granger Cause LNDT	43	0.68198 0.22619	0.4138 0.6370
LNIDT does not Granger Cause LNGDP LNGDP does not Granger Cause LNIDT	43	0.03088 35.5093	0.8614 5.E-07
LNTTR does not Granger Cause LNGDP LNGDP does not Granger Cause LNTTR	43	0.00060 32.3436	0.9805 1.E-06
LNGDS does not Granger Cause LNGDP LNGDP does not Granger Cause LNGDS	43	1.27361 41.0752	0.2658 1.E-07
LNIDT does not Granger Cause LNDT LNDT does not Granger Cause LNIDT	43	0.97808 32.3638	0.3286 1.E-06
LNTTR does not Granger Cause LNDT LNDT does not Granger Cause LNTTR	43	0.47328 36.6754	0.4955 4.E-07
LNGDS does not Granger Cause LNDT LNDT does not Granger Cause LNGDS	43	1.27832 25.3391	0.2649 1.E-05
LNTTR does not Granger Cause LNIDT LNIDT does not Granger Cause LNTTR	43	12.8503*** 16.7964***	0.0009 0.0002
LNGDS does not Granger Cause LNIDT LNIDT does not Granger Cause LNGDS	43	2.24605 26.3676	0.1418 8.E-06
LNGDS does not Granger Cause LNTTR LNTTR does not Granger Cause LNGDS	43	1.12726 26.6469	0.2947 7.E-06

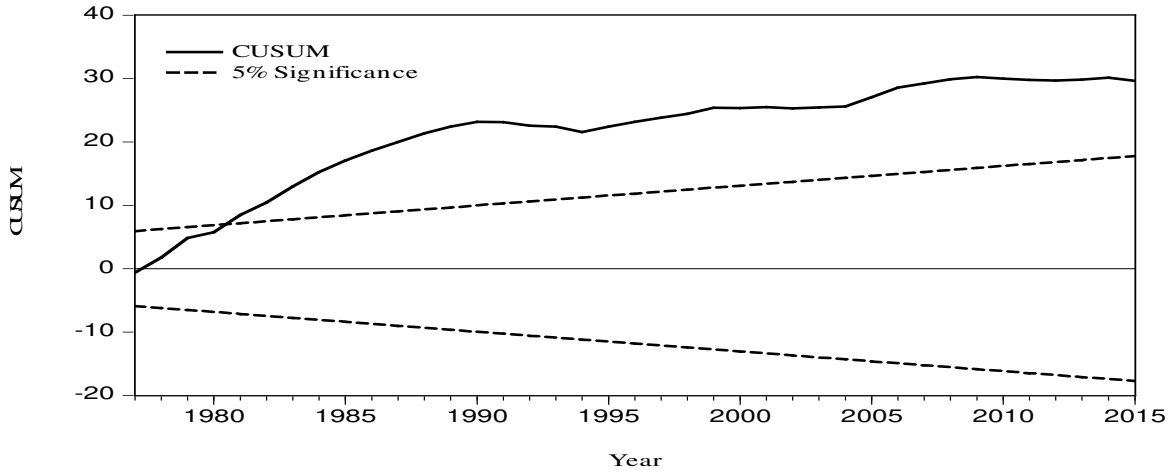
Note: *** and ** show the level rejection at 1% and 5% respectively.

Source: Estimates of Pairwise Granger Causality Tests Result, 2018

Table 8, the Pairwise Granger causality tests result shows that the independent relationship among the existing variables one by one. There is no cause and effect between GDP, DT, IDT, TTR and GDS because they are not statistically significant. Only TTR Granger cause IDT and IDT Granger cause TTR at 1% level of significance respectively which has no impact on economic growth (GDP).

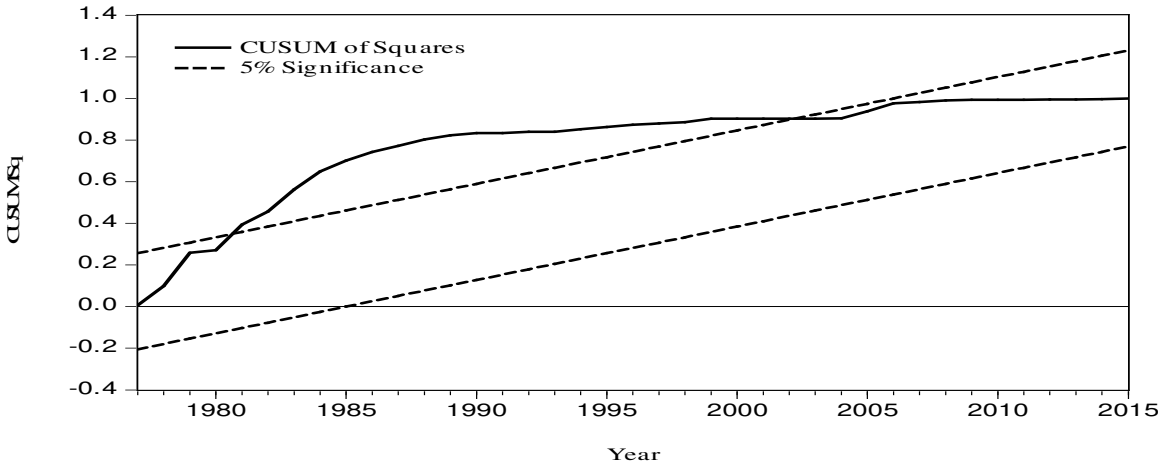
Stability Test - The cumulative sum (CUSUM) and cumulative sum of squares (CUSUMsq) are used to examine whether the short run and long run parameters are stable or not. The CUSUM test takes the value of cumulative sum of recursive residuals for lower and upper bounds at 95% confidence interval at each point (Pesaran, Shin and Smith, 2001). If the statistics of both test lie between lower and upper critical bounds at 5% significant level (the regression equation is correctly specified) then the hypothesis is not rejected (Bahmani-Oskooee and Nasir, 2004).

FIGURE 4.1: CUMULATIVE SUM OF RECURSIVE RESIDUALS AT 5% SIGNIFICANT LEVEL



Source: Result of Cusum test from NBR data

FIGURE 4.2: CUMULATIVE SUM OF SQUARES OF RECURSIVE RESIDUALS AT 5% SIGNIFICANT LEVEL



Source: Result of Cusum test from NBR data

Both CUSUM and CUSUMsq tests (Figure 4.1 and 4.2) propound that there is unstable relationship between economic growth and taxation because both the CUSUM and CUSUMsq lines are not aligning within the 5% critical bounds.

RECOMMENDATIONS

Based on this study results, the Government of Bangladesh should adopt the following recommendations immediately for ensuring sustainable development.

1. Taxation should be progressive based on the canons of taxation. The basic plan of revenue collection shuld be based on direct tax instruments and dependency on indirect tax instruments especially dependency on VAT gradually transform to direct tax instruments.
2. For sustainable economic growth, the government should keep the stability of macroeconomic indicators especially fiscal policy instruments.
3. In order to maintain sustainable economic development the government should give incentives to maintain the long-run positive relationship between fiscal policy instruments (tax) and economic growth rate (GDP).
4. Bangladesh Bank can play a significant role in short-run and long-run periods to stabilize the GDP growth rate and tax rate with transforming tax base and policies through combination of monetary policy and fiscal policy instruments.
5. To maintain social justice and equity the dependency on the instruments of indirect tax to direct tax and this transformation should be worked under a particular plan rather than quick application.
6. Government supposed to increase taxation areas and tax bases for their fiscal requirements which finally will ensure the prevailing and upcoming development targets.
7. Revenue collection policy and procedure of the government have to be retionalized and reform. The objectives of the tax reform policy follow the basic rules of equity and social justice.

CONCLUSION

This paper empirically analyzes the long run relationship between GDP growth and tax for forecasting sustainable economic growth of Bangladesh. For analyzing the long term relationship the paper uses time series data for the period starting at1972 and ending at 2015. This study of 43 years used autoregressive AR (1) distributed model for the unit root test. For the unit root test used ADF test(1981) and KPSS test (1992), for long run cointegration test among the variables used the Johansen-Juseliusco integration test (1990), VECM used for short run relationship between variables, Granger Causality test (1969) used for parewise Granger cost test among the explained and for all other explanatory variables finally used stability tests to examine whether the model is stable or not. The result implies that GDP and tax are having long-run negative relationship, which also shows that tax has significant negative impacts on GDP and sustainable economic growth. If government increases taxation with conventional way and without any concern for internal and external economic agents then it leads to reduced economic growth (GDP) in the future. For long-run sustainable economic growth the country should review, reform and improve its tax policy and tax to GDP ratio on the basis of its socio-economic conditions with respect to equity and social justice. The burden of heavy direct tax badly effect wage earning people, infant and small business firms. The imposition of indirect tax on marginalized people and most of the time violates social justice. Therefore, the government should take up direct and indirect tax reform policy on the basis of socio-economic condition and the canons of taxation.

END NOTES

[i] The direct taxes are combination of income tax and other taxes like corporate tax, taxes on kinds of land rents, holding taxes.

[ii] The indirect taxes are combination of import duty, export duty, excise duty, supplementary duty (local and import level), VAT (local and import level), turnover taxes.

[iii] Non stationary means time series will have time varying mean or time varying variance or both.

[iv] Non stationary means time series will have time varying mean or time varying variance or both.

SCOPE FOR FURTHER RESEARCH

This paper attempts to evaluate the long run relationship between tax and GDP for sustainable economic growth. In the future researchers could incorporate more comprehensive data and improve the result finally evaluation methodology for more accurate results.

REFERENCES

1. Adam S. (1776), "The Wealth of Nations," A Translation into Modern English, ISR/Google Books, 2015, Book 5, pp. 423, 429, EBook ISBN 9780906321706
2. Annual Report 2013-2014 (2015), Research and Statistics Section National Board of Revenue, Ministry of Finance Bangladesh.
3. Annual Report 2015-2016 (2016), Research and Statistics Section National Board of Revenue, Ministry of Finance Bangladesh.
4. Arnold, J. (2008), "Do Tax Structures Affect Aggregate Economic Growth?: Empirical Evidence From a Panel of OECD Countries," OECD Economic Department Working Paper No. 643.
5. Babalola, S. J., Aminu, U. (2011), "Fiscal Policy and Economic Growth Relationship in Nigeria," International Journal of Business and Social Sciences, Vol. 2,(17).
6. Bahmani-Oskooee, M. and A. Nasir (2004), "ARDL Approach to Test the Productivity Bias Hypothesis," Review of Development Economics Journal, pp. 483-488.

7. Bangladesh Economic Review (2005, 2006, 2007, 2008, 2009, 2010, 2010, 2012, 2013, 2014, 2015, 2016), Finance Division, Ministry of Finance Bangladesh.
8. Blanchard, O., Perotti, R. (2002), "An Empirical Characterization of the Dynamic Effects of Changes in Government Spending and Taxes on Output," Quarterly Journal of Economics, Vol. 117, (4), pp. 1329-68.
9. Dickey, D. A., W. A. Fuller (1979), "Distribution of the Estimators for Autoregressive Time Series with a Unit Root," Journal of the American Statistical Association, Vol. 74 pp. 427-431.
10. Dickey, D. A., W. A. Fuller (1981), "Likelihood Ratio Statistics for Autoregressive Time Series with a Unit Root", Econometrica, Vol. 49, pp. 1057-1072.
11. Engen, E., Skinner, J. (1996), "Taxation and economic growth',' National Tax Journal, Vol. 49, (4), pp. 617-642.
12. Ergete, F., Bev, D. (2012), "The Impact of Tax Cuts on Economic Growth: Evidence from the Canadian". National Tax Journal, vol. 65,(3), pp. 563–594.
13. Gale, G., William, Samwick, A. (2014), "Andrew Effects of Income Tax Changes on Economic Growth" Economic Studies at Brookings, Washington, DC 20036 (https://www.brookings.edu/wpcontent/uploads/2016/06/09_Effects_Income_Tax_Changes_Economic_Growth_Gale_Samwick.pdf)
14. Granger, C. W. J. (1969), "Investigating Causal Relations by Econometric Models and Cross-spectral Methods," Econometrica. 37 (3), pp. 424–438.
15. Household Income and Expenditure Survey (HIES) (2015), National poverty level of Bangladesh Based on Quarterly Estimates, Bangladesh Bureau of Statistics.
16. James, D., Gwartney, Robert, A., Lawson (2006), "The Impact of Tax Policy on Economic Growth, Income Distribution and Allocation of Taxes," Social Philosophy and Policy, Vol. 23, (2), pp. 28 -52.
17. Johansen, S. (1998), "Statistical Analysis of Cointegrating Vectors." Journal of Economic Dynamics and Control, Vol. 12, pp. 231-254.
18. Johansen, S., K. Juselius (1990), "Maximum Likelihood Estimation and Inference on Cointegration–With Applications to the Demand for Money" Oxford Bulletin of Economics and Statistics, 52, pp.169-210.
19. John U. I., Ebieri, J., Emmanuel, A (2014), "Assessment of the Long-Run Equilibrium Relationship between Tax Revenue and Economic Growth in Nigeria: 1986 to 2012." The SIJ Transactions on Industrial, Financial & Business Management (IFBM), Vol. 2,(2).
20. Kalecki, M., (1976), "Essays on Developing Economies," Sussex, The Harvester Press Ltd.
21. Keynes, J, M, (1936), "The General Theory of Employment, Interest and Money," London, Macmillan (reprinted 2007).
22. Kwiatkowski, Phillips, Schmidt, Shin (1992), "Testing the Null Hypothesis of Stationary against the Alternative of a Unit Root," Journal of Econometrics, 54, pp. 159-178.
23. Lutfunnahar, B. (2007), "A Panel Study on Tax Effort and Tax Buoyancy with Special Reference to Bangladesh," Working Paper 715, Policy Analysis Unit (PAU) Research Department, Bangladesh Bank.
24. Nadeem, I., Muhammad, F. A., Suliman, S. (2015), "Emprical analysis of tax revenues and its impact on ecomic growth of Pakistan," Journal of Economics and Sustainable Development, Vol.6. (1)
25. National Accounts Statistics (1996, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016) Bangladesh Bureau of Statistics, Statistics and Informatics Division, Ministry of Planning, Dhaka.
26. Perspective Plan of Bangladesh (2010-2021), "General Economics Division Planning Commission Government of the People's Republic of Bangladesh April 2012," Towards Middle Income Economy, 2-3.
27. Pesaran, M. H, Y. Shin, R.J. Smith (2001), "Bounds Testing Approaches to the Analysis of Level Relationships," Journal of Applied Econometrics, pp. 289-326.
28. Plosser, C. I. (1992), "The search for growth---Federal Reserve of Kansas City Symposium Series, Policies for Long-Run Economic Growth," Economic Researcher, Vol. 35(2), pp. 57-86.
29. Revenue Collection FY 2015-2016, (2016), Research and Statistics Section National Board of Revenue, Ministry of Finance Bangladesh.
30. Roshaiza, T, Loganathan, Nanthakumar, and Sisira, R., N. (2011), "The Effect of Economic Growth on Taxation Revenue: The Case of a Newly Industrialized Country," International Review of Business Research Papers, Vol. 7(1), pp. 319-329
31. Rudolf, M. (2014), "The Impact of Taxation on Economic Growth: Case Study of OECD Countries," Review of Economic Perspectives-Narodohospodarsky Obzor, Vol. 14 (4), pp. 309-328
32. Solow, R. (1956), "A Contribution to the Theory of Economic Growth," Quarterly Journal of Economics no. 70, pp. 65-94.
33. The Seventh Five Year Plan (2016-2020),"General Economics Division Planning Commission Government of the People's Republic of Bangladesh December 2015".
34. The Sixth Five Year Plan (2011-2015),"General Economics Division Planning Commission Government of the People's Republic of Bangladesh December 2010".

REQUEST FOR FEEDBACK

Dear Readers

At the very outset, International Journal of Research in Commerce, Economics & Management (IJRCM) acknowledges & appreciates your efforts in showing interest in our present issue under your kind perusal.

I would like to request you to supply your critical comments and suggestions about the material published in this issue as well as, on the journal as a whole, on our e-mail **infoijrcm@gmail.com** for further improvements in the interest of research.

If you have any queries, please feel free to contact us on our e-mail **infoijrcm@gmail.com**.

I am sure that your feedback and deliberations would make future issues better – a result of our joint effort.

Looking forward to an appropriate consideration.

With sincere regards

Thanking you profoundly

Academically yours

Sd/-
Co-ordinator

DISCLAIMER

ABOUT THE JOURNAL

In this age of Commerce, Economics, Computer, I.T. & Management and cut throat competition, a group of intellectuals felt the need to have some platform, where young and budding managers and academicians could express their views and discuss the problems among their peers. This journal was conceived with this noble intention in view. This journal has been introduced to give an opportunity for expressing refined and innovative ideas in this field. It is our humble endeavour to provide a springboard to the upcoming specialists and give a chance to know about the latest in the sphere of research and knowledge. We have taken a small step and we hope that with the active co-operation of like-minded scholars, we shall be able to serve the society with our humble efforts.

Our Other Journals