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Research Article

Trend Analysis of Tax Mobilisation in Ghana for the period 2006 - 2014

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ABSTRACT

This research work assesses the performance of the revenue agencies as independent bodies, and under one autonomous authority, before and after the integration in 2010. The study employed the quantitative research approach, and data was analysed using regression models and other statistical tools. From the study the results of both one and two tail T-Tests gave significant difference of revenue growth before and after 2010 for the period 2006-2014 at a significant level of 5%. Also the result also showed that four years prior to the integration, on average the efficiency was better than four years after the integration. However, with continuing increase of revenue mobilization, the contribution to country's GDP four years after the integration was better fours prior to the integration, which is in tandem with the objectives stated in the World Bank 2008 report. It is recommended that, Management takes a close look at the costs particularly, operational costs that is costs of raising taxation; compliance costs - costs in acquiring and maintaining tax accounting; and administrative costs – costs of providing assistance and guidance to taxpayers. Again management should relook into the payment arrangements whereby taxpayers with certain threshold are required to file their tax returns at designated offices.

Key words: economic recovery programme, tax reforms, integration, efficiency, revenue mobilization.

THEORITICAL ISSUES

Tasks of Tax Administration

Task is the defining activity of any organization, that is, the fundamental and intrinsic tasks to be carried out by the organization and its parts. The performance of this task is among the primary motives for the organization's existence and any analysis from a design viewpoint has to commence with a consideration of the nature of tasks to be performed, anticipated work flow patterns, and an appraisal of the extra complicated characteristics of the work, (Wyman).

Silvani and Baer (1997) postulated that, in turn for an efficient tax administration, the broad strategy of the tax authority should have an integrated approach to the process of tax collection as a guiding principle, where each facet in the process of tax collection is vital to the strategy of tax administration. They, Silvani and Baer (Ibid) also stressed that to attain a considerable step up in the general tax administration performance each facet in the process of tax collection requires improvement. They detailed that process of tax collection involves: (1) taxpayer registration, (2) tax returns and payments processing, (3) computer operations, (4) detection of stop filers and collection of arrears, (5) delinquent taxpayers, (6) audit, (7) the sanctions and penalty system, (8) taxpayer services and publicity, (9) management and organization, and (10) personnel.

Temporarily, Baurer (2005) recommended that all modern tax administrations do similar types of activities or business processes. Some of these activities (core business practices) openly relate to the tax administration mission as others offer the support framework to appropriately perform this mission. Core business processes are interconnected and continuing communications and harmonization connecting these processes is indispensable. For instance, appreciably escalating the amount of audits in a given year will influence services of taxpayer and enforced collection resource requirements. Likewise, improved attention to non-filers will have influence on audit and collection resource needs. Legislative changes will have comparable impacts. The combination of the entire features into the growth of the yearly operating plan for a tax administration

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becomes a complex and demanding job. It is then imperative to assess the tasks of tax administration as planned in the framework of performance management to ensure that the tasks are harmonious with the remaining elements in the tax administration transformation process.

Conceptual Framework of Integrated Tax Administration

Integrated Tax Administration

Tax integration is the organization of single procedure, system or resource to be employed in diverse tax applications, in place of every application having its own (World Bank, 2008). This definition also comprises the constitution of cross-reference connections, which unite processes with dissimilar objectives, other than with identical source data. For instance:

One appeal procedure and process for all tax assessments;

One invoicing structure for different taxes; and

One information desk for all sorts of tax clients.

To demonstrate this, suppose that a message is integrated in the Excise Duty file of a taxpayer showing that a certain event might also influence the VAT and income tax situations of that taxpayer. Cross-reference connections to that message are also built-in in the taxpayer's VAT and Income Tax files. Several Tax Administrations have fashion in certain tax integration facilities in their operations. These are frequently the outcome of incidental enhancements of their organization and rarely the outcome of a planned search for integration possibilities (World Bank, 2008).

According to World Bank (2008) reports on public sector reform, preconditions for tax integration are depended on cultural, economic and organizational circumstances. There is a strong interrelationship between these three. A society's collective behaviour and values or culture are the basis of any organization in that society. Indissolubly linked with culture is the stage of development of a society (World Bank, 2008).

Diverse cultures may produce different organization models and management styles. Alternatively, diverse stages of economic, demographic and technology development in a country bring about different taxation policies and different organizational needs for the Tax Administration. All influences, culture and development stage, produce different tax organization models and therefore in different needs for tax integration (World Bank, 2008).

The next set of preconditions made up in the need to begin organizational changes such as tax integration very cautiously and methodically. In most cases, an effort to improve the operations devoid of a systematic approach emerged to be futile (World Bank, 2008). A significant tool for the implementation of tax integration ideas may be the ostensible Business Process Redesign (BPR). This process stems from the view that operational processes often wedge through the functional layers of an organization, this layering therefore being an obstruction for finest operations (World Bank, 2008). BPR offers the chance to detect indistinguishable steps in different processes, which can be developed and operated once for all of these, rather than repeating the same step for every process.

Tax integration is by no means a goal in itself though it can be an instrument to assist in achieving one or more of the following objectives:

Effectiveness: execution of the political goals to an optimal extent;

Efficiency: implement the tasks with maximum result at minimum cost; and

Serviceability: obtaining a high level of client's satisfaction will increase the compliance of the client (World Bank, 2008).

The task for the development and implementation of integration possibilities depends on the level of these possibilities. They may be at strategic, tactical or operational level. On the other hand, the impact of integration may very well go beyond the boundaries of its implementation area (World Bank, 2008).

Integrated Assessment Model for Tax Administration

Strengthening domestic resource mobilization is not just a question of raising revenue rather it is also about designing a tax system that promotes inclusiveness, encourages good governance, matches society's views on suitable income and wealth inequalities and promotes social justice (PREMPSGG, 2011).

The need for a broad model that covers all or the most significant dimensions of tax administration is a pressing issue. The Integrated Assessment Model for Tax Administration (IAMTAX) reacts to the growing need to assist policy-makers in developing countries in reforming tax policy and administration systems (PREMPSGG, 2011).

IAMTAX is a comprehensive model and is built upon a systematic and holistic approach that seeks to assess the overall performance of tax administration by analyzing a wide array of elements encompassing three levels of analysis:

Legal and regulatory framework including substantive tax laws and complementary regulations (procedural features);

Institutional set up/capacity building; and

Core business functions (operational level).

The actual performance of a given tax administration is analyzed and assessed based primarily on key data and information gathered from the tax administration under the three levels of analysis as outline above, during the diagnostic study. The model analyzes administration of the tax system within an integrated framework that is embedded in a specific environment. While the model is built on a benchmarking analysis, it recognizes the fact that no one-size fits all. As a result, the model places strong emphasis on a country's context and its evolving nature by proposing an evolving framework to better accommodate changes in the country's environment.

The proposed measurement framework has been developed around a reference system that consists of fourteen core analytical dimensions widely recognized to be key features of modern tax administrations.

These core analytical dimensions are linked to a set of good practices (GP), outcome indicators (OI), and high level intermediate indicators (HLII).

The reference system ultimately centers on a new paradigm of tax administration that focuses on encouraging compliance and broadening the tax base, client orientation, and equity and certainty in the application of tax laws. Core analytical dimensions include:

Tax legislation and regulation;

Tlient/taxpayer orientation;

Encouraging of compliance and broadening of the tax base;

Use of Information and Communication Technology (ICT);

Market segmentation;

Risk-based approach to control of compliance;

Strategy and use of information;

Human resource management;

International dimensions of taxation;

Equity in tax administration;

Moving to a process oriented tax administration that has a significant level of autonomy to conduct its operations in a business-like manner and putting strategic planning at the core of this approach;

Business processes;

Analytical work and its use in strategy and policy making; and

External communications and stakeholder consultation.

The measurement framework outlined above can be used as a benchmarking tool based on the scoring system. Based on data collected on tax administration and on a good knowledge of the broader institutional and political environment, the diagnostic tool would allow the team to put in context and adjust the menu of good practices and performance indicators to the particular circumstances of the country.

In order to assess performance of a given tax administration in terms of alignment with proposed GP of the reference system, "fixed benchmarks" or "range of values" are assigned to the extent possible to OI and HLII.

The overall score of a given tax administration would be the sum of scores of each core analytical dimensions. Final score of each dimension is given by the average of all corresponding OI, GP, and select HHII according to the following formula:

$$CDIM_i = \frac{\sum\left(\frac{OI_i}{n} + \frac{GP_i}{n} + \frac{HLI_i}{n}\right)}{3}$$

CDIM	Core Dimension
OI	Outcome Indicator
GP	Good Practice
HLI	High Level Intermediate Indicator

The model can also determine how a given tax administration scores respectively in good practices, outcome indicators or the intermediate indicators as well as a particular area or function, for example, tax audit, revenue arrears management. Moreover, it can assess the performance of a tax administration in a specific level or sub-level of analysis, by calculating the respective scores.

Performance of tax administrations would be scored but not ranked. The scoring system would allow us to compare a given tax administration's performance against the desired standard in each of the proposed core analytical dimensions as well as progress over time. Comparisons with other tax administrations can be made in the understanding that the model does not intend to rank tax administrations but to provide countries with a rough picture of where its tax administration stands both in relation to a so-called gold standard and to other tax administrations with similar key characteristics and context.

The measurement framework can also be used as a tool to measure performance of tax administration over time. In the preparation stages of a project, the upstream diagnostic of the tax administration would help the task team assess the actual performance of the tax administration within the context in which it operates and establish the baseline for the full set of indicators. The baseline would be used to assess and monitor progress of tax administration through the project cycle and beyond by:

Identifying to the extent possible underlying factors that impact the operational effectiveness of the tax administration together with key capacity constraints;

Determining the impact of the project on improved levels of performance of tax administration;

Distilling lessons for the future; and

Establishing the roadmap for a tax administration reform strategy aimed at achieving specific goals and agreed levels of performance.

No scoring system is applied when the measurement framework is used to measure performance of tax administration over time. When it comes to Project Development Objectives and Key Performance Indicators (KPIs) of a project with tax reform or tax administration component, they can be selected from the performance framework according to their relevance and adequacy to the objectives of each component. Irrespective of this selection, it is advisable to apply the entire measurement framework to the tax administration to monitor its overall progress over the implementation. Thus the measurement framework of the IAMTAX would contribute towards achievement of two main objectives:

Identify and assess performance gaps of tax administration by comparing the actual performance against a set of desirable benchmarks and good practices; and

Assess and monitor performance of the tax administration over time.

Good practices and corresponding indicators are likely to vary significantly across countries. Despite the fact that good practices, fixed benchmarks, and ranges of values have been established to the extent possible from existing comparative analysis, other benchmarking exercises, analytical work and results from the extensive experience of both the WB and the International Monetary Fund (IMF), there are still some concerns about the reliability and accuracy of this assessment. In some cases subjective judgment is involved to some extent while in others values/ratios make sense only in the context of a given tax administration, level of capacity and development constraints, or once specific factors impacting on the values/ ratios have been taken into account (PREMPSGG, 2011).

Tax Administration in Ghana

Although there have been a significant improvement in tax collection over the years, available statistics indicate that the state continue to loose huge sums of money in the form of taxes. During the pre-independence era, the income tax department as provided for in the Income Tax Ordinance (No. 27) was responsible for tax collection in Ghana. In 1961 and 1963, Act 68 and Act 178 and 197 were respectively enacted as amendments to the Ordinance. The name was subsequently changed to Central Revenue Department in 1965 by Act 312 following the post-independence introduction of other new taxes and duties. In 1985, the National Revenue Secretariat (NRS) was established to coordinate the activities of the various tax institutions in the country. It was then closely followed by the PNDC Law143 which established the Department of Customs Excise and PNDC law 144 which created the Customs Excise Preventive Service (CEPS) as a para-military and quasi self-accounting institution responsible for Indirect taxation in the country and was enhanced with the strengthening of its customs preventive functions to include duties for which the erstwhile Border Guards were previously responsible. The Value Added Tax was introduced in 1995 but following mass protest by the citizens of the country it was withdrawn and later reintroduced in 1998 as Value Added Tax (VAT) Act 1998 (Act 546) after a comprehensive education of the citizenry. The VAT law have had several amendments with the latest being the GRA *Value Added Tax* (Amendment) Act, 2017 (*ACT* 948). In the year 2000, NRS was replaced by the Internal Revenue Service with the IRS Act 2000 (Act 592). This act too had six amendments since its inception –{Internal Revenue (Amendment) Act, 2002 (Act 622)1, Revenue Agencies (Retention of Part of Revenue) Act, 2002 (Act 628)2, Internal Revenue (Amendment) Act, 2003 (Act 644)3, Internal Revenue (Amendment) Act 2004 (Act 669)4, Internal Revenue (Amendment) Act, 2006 (Act 700)5, Internal Revenue (Amendment) (No.2) Act, 2006 (Act 710)6 and the current IRS Act 2015 (Act 896)}

Government over the past years have undertaking institutional reforms for the revenue institution with the aim of enhancing their efficiency and effectiveness in the mobilization of both direct and indirect taxes from individuals and corporate tax payers. As a result, the government in 2009 integrated the IRS, CEPS and VAT Service into a single agency known as Ghana Revenue Service (GRA) with the GRA Act 2009 (Act 791). Ghana Revenue Authority has been divided into three divisions. These comprise of the Domestic Tax Revenue Division (DTRD), Custom Division and Support Services Division. The Authority is headed by the Commissioner General with commissioners heading the various divisions. The organizational structure of the Authority is pyramid shaped.

According to Drucker (1979), when an organization lacks a good organizational structure, it makes it very difficult for such an organization to function efficiently and effectively, however; a good structure itself does not produce or guarantee good performance. Although the GRA has a good organizational structure, the desired impact on its operations especially in the informal sector is yet to be felt. For the purpose of ensuring effectiveness and efficiency in its operations, the Act specifically outlined the following functions in section 3 for the GRA:

To make assessment and collection of taxes, interest accrued and punishment on taxes due to the Republic;

To deposit into the Consolidated Fund the amount collected unless otherwise provided by the Act and other Acts;

To carry out tax education and promote tax compliance;

To fight tax fraud and evasion in a collaborated effort with revenue agencies in other countries and other competent law enforcement agencies;

To advise the District Assemblies on how to assess and collect their tax revenue;

To assemble and print out reports and statistics related to its revenue collection;

To make suggestions to the Minister on revenue collection policy; and

To carry out any other duties as prescribed by the Minister or by any other enactment relating to revenue.

RESEARCH APPROACH

Research Design

This section deals with the techniques and procedures used to obtain and analyse the data. The researchers obtained secondary data from the internet, publications and annual reports from reliable institutions, such as International Monetary Fund, Ministry of Finance, Ghana Revenue Authority and the World Bank. The study employed the quantitative research approach, and data was analysed using regression models and other statistical tools. This was to situate the study in the context of existing information on the issue whiles aiding the direction and flow of the study.

Data Analysis

Data from the various sources were analyzed using regression models and other statistical tools. Results were then finally displayed in tables, from which the research findings, recommendations and conclusions were drawn.

Table2: Gra Revenue Performance - 2004 & 2014 (Millions Gh¢).

TAXTYPE	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
PAYE	182,611,835.40	228,589,019.50	315,089,343.70	372,220,726.69	512,679,838.85	780,470,511.46	981,389,156.60	1,301,521,764.00	2,242,086,148.00	2,396,627,861.00	3,038,233,449.27
SELF-EMPLOYED	27,176,430.10	31,300,463.30	35,944,800.50	45,589,162.24	64,180,049.77	75,086,952.35	1,003,859,279.53	129,551,273.00	167,724,640.00	199,284,501.00	215,484,556.03
CORPORATE	251,203,558.70	317,613,295.50	315,373,818.80	418,669,151.54	554,992,960.90	737,472,078.64	96,754,605.06	1,698,035,757.00	2,416,869,435.00	2,653,423,049.00	3,307,531,265.82
MINERAL ROYALTIES	21,574,370.60	23,595,190.30	31,625,478.90	4,088,204.20	5,900,650.90	90,415,901.65	144,697,345.40	222,024,706.00	359,392,853.00	364,673,038.00	470,356,948.81
OTHERS	55,686,053.80	43,540,536.20	36,102,005.80	32,874,705.00	43,296,813.00	107,140,320.79	214,603,628.14	394,890,696.00	216,959,335.00	291,575,558.00	590,994,019.29
DIRECT TOTAL	538,252,248.60	644,638,504.80	734,135,447.70	873,441,949.67	1,181,050,313.42	1,790,585,764.89	2,441,304,014.73	3,746,024,196.00	5,403,032,411.00	5,905,584,007.00	7,622,600,239.22
DOMESTIC VAT	143,170,000.00	178,600,000.00	233,300,000.00	336,930,000.00	407,450,000.00	299,375,547.00	677,258,211.86	898,619,384.00	1,099,914,095.34	1,282,292,975.01	1,921,521,217.67
DOMESTIC NHIL	9,380,000.00	35,490,000.00	46,800,000.00	67,420,000.00	81,540,000.00	59,875,109.00	135,451,641.79	179,723,876.38	219,944,913.31	256,458,695.08	320,253,536.26
EXCISE	61,560,000.00	65,990,000.00	74,700,000.00	62,110,000.00	58,590,000.00	53,762,161.00	119,234,912.07	154,355,068.51	188,522,099.43	167,306,129.94	161,560,657.54
CST	32,100,000.00	86,023,504.00	127,956,307.19	134,940,321.21	142,058,122.28	178,759,528.46	234,227,661.90				
INDIRECT TOTAL	214,110,000.00	280,080,000.00	354,800,000.00	466,460,000.00	579,680,000.00	499,036,321.00	1,059,901,072.91	1,367,638,650.10	1,650,439,230.36	1,884,817,328.49	2,637,563,073.37
DTRD TOTAL	752,362,248.60	924,718,504.80	1,088,935,447.70	1,339,901,949.67	1,760,730,313.42	2,289,622,085.89	3,501,205,087.64	5,113,662,846.10	7,053,471,641.36	7,790,401,335.49	10,260,163,312.59

DATA ANALYSIS

Table3: Results before the Integration

Before	
7.52E+08	
9.25E+08	
1.09E+09	
1.34E+09	
1.76E+09	
2.29E+09	
Mean	1359378425
Median	1214418699
Mode	#N/A

Minimum	752362248.6
Maximum	2289622086
Range	
Variance	331470645671688000.0000
Standard Deviation	575734874.4619
Coeff. of Variation	42.35%
Skewness	0.8553
Kurtosis	-0.1874
Count	6
Standard Error	235042778.2595

Source: Authors Construct, 2021

Table4: T – test before and after the Integration.

Before	**After**
752362249	3,501,205,087.64
924718505	5113662846
1088935448	7053471641
1339901950	7790401335
1760730313	10260163313
2289622086	

Source: Authors Construct, 2021

Table5: T Test: Two Independent Samples.

SUMMARY	Hyp Diff	Mean	0						
Groups	**Count**	**Mean**	**Variance**	**Cohen d**					
Before	6	1359378425	3.31471E+17						
After	5	6,743,780,844.64	6.68196E+18						
Pooled			3.15391E+18	3.03188522					
T TEST: Equal Variances		Alpha	0.05						
	std err	**t-stat**	**df**	**p-value**	**t-crit**	**lower**	**upper**	**sig**	**effect r**
One Tail	1075376323	5.00699365	9	0.000365975	1.833113	yes	0.85781		
Two Tail	1075376323	5.00699365	9	0.00073195	2.262157	-7.8E+09	-3E+09	yes	0.85781
T TEST: Unequal Variances		Alpha	0.05						

	std err	t-stat	df	p-value	t-crit	lower	upper	sig	effect r
One Tail	1179676924	4.564302574	4.331625614	0.004268481	2.131847	yes	0.909872		
Two Tail	1179676924	4.564302574	4.331625614	0.008536963	2.776445	-8.7E+09	-2.1E+09	yes	0.909872

Source: Author's Construct, 2021

RESULTS

To gauge the revenue growth before and after 2010 for the period of 2006-2014, result of a T Test analysis revealed the following: the annual revenue mean for the period before and after 2010 were GHS 1,359,378,425,00 and GHS 6,743,780,844.64 with variances of 3.31471E+17 and 6.68196E+18 respectively. The analysis again gave a pooled variance of 3.15 with a Cohen d of 3.03. This analysis had research hypothesis such that mean difference of revenue before and after 2010 equates 0. (See Table)

Table6: Summary of revenue growth before and after 2010 for 2006-2014.

Groups	Count	Mean	Variance	Cohen d
Before	6	1,359,378,425.00	3.31E+17	
After	5	6,743,780,844.64	6.68E+18	
Pooled			3.15E+18	3.031885

Assuming the variances were equal based on the summary given in Table 4, the results of both one and two tail T-Tests gave significant difference of revenue growth before and after 2010 for the period 2006-2014 at a significant level of 5%.

Again assuming the variances were unequal based on the summary given in Table 1, the results of both one and two tail T-Tests gave significant difference of revenue growth before and after 2010 for the period 2006-2014 at a significant level of 5%.

In a nutshell, all things being equal for period 2006-2014 with a motivation initiative in the year 2010 the results of the two T-Tests run above support that, the initiative had an impact on revenue growth at a confidence level of 95%.

FINDINGS OF THE STUDY

The study involved comparing total revenue collection by the three agencies, Custom, Excise and Preventive Service, Value Added Tax Service, and Internal Revenue Service as individual units before the year 2010 and revenue mobilisation agencies integrated into single authority named Ghana Revenue Authority (GRA) after the integration.

From the study the results of both one and two tail T-Tests gave significant difference of revenue growth before and after 2010 for the period 2006-2014 at a significant level of 5%.

Also the result also showed that four years prior to the integration, on average the efficiency was better than four years after the integration. However, with continuing increase of revenue mobilization, the contribution to country's GDP four years after the integration was better fours prior to the integration.

CONCLUSION

The study concludes that the effect of tax integration administration on domestic revenue mobilization in Ghana has shown basically in the quantum improvement of total revenue collection and its enhanced contribution to the country's GDP. Of this conclusion, the result falls in line with some of the objectives stated in the World Bank 2008 report, on a need for the tax integration to be effective, and serviceability.

RECOMMENDATION

On the basis of the above the following recommendations are made:

Management should take a close look at the costs particularly, operational costs - costs of raising taxation; compliance costs - costs in acquiring and maintaining tax accounting; and administrative costs – costs of providing assistance and guidance to taxpayers.

The management should relook into the payment arrangements whereby taxpayers with certain threshold are required to file their tax returns at designated offices.

The management should make good utilization of information and communication technology (ICT) in order to reduce or avoid human interface that possibly leads to tax avoidance and evasion.

REFERENCES

1. Ali-Nakyea A. (2008). Taxation in Ghana, Principles, Practice and Planning 2nd Edition; Page 141-161.
2. GRA Act 2015 (Act 896)}.
3. GRA Act 2009 (Act 791).
4. Income Tax Ordinance (No. 27)

5. Internal Revenue (Amendment) Act, 2003 (Act 644)
6. Internal Revenue (Amendment) Act 2004 (Act 669)
7. Internal Revenue (Amendment) Act, 2006 (Act 700)
8. Internal Revenue (Amendment) (No.2) Act, 2006 (Act 710)
9. Internal Revenue (Amendment) Act, 2002 (Act 622)
10. International Monetary Fund Annual Report 2014: From Stabilization to Sustainable Growth,
11. IRS Act 2000 (Act 592).
12. PNDC Law143 which established the Department of Customs and Excise
13. PNDC law 144 which created the Customs Excise Preventive Service (CEPS)
14. Revenue Agencies (Retention of Part of Revenue) Act, 2002 (Act 628)
15. Silvani, C. & Baer, K. (1997). Designing a Tax Administration Reform Strategy: Experiences and Guidelines, International Monetary Fund, Fiscal Affairs Department.
16. The World Bank Annual Report 2008: Year in Review
17. Value Added Tax (VAT) Act 1998 (Act 546)
18. Value Added Tax (Amendment) Act, 2017 (ACT 948).