



## Horizontal Mergers and Corporate Performance: Evidence from Ghana Revenue Authority (GRA)

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### Author's contribution

The sole author designed, analyzed and interpreted and prepared the manuscript.

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### ABSTRACT

Horizontal Mergers and Acquisitions (M&A) have been extensively used by firms as vehicles for growth and competitiveness strengthening within the context of the global economy. Restructuring of government has been a constant theme over the last three decades and revenue administration has not been completely immune to this trend. It is in this spirit that Ghana in 2009 merged all her revenue agencies into a Revenue Authority under Ghana Revenue Authority Act (Act 791) known as the GRA. The GRA has been seen by many as a possible solution to critical problems, such as poor revenue performance, low rates of compliance, ineffective staff, corruption etc. However, since the formation of GRA in 2009, no comprehensive assessment has been made of the Authority that exist today and of how well it has served its intended purpose. The objective of this research therefore is to determine the effect of the merger on the overall corporate performance of the GRA by compiling and ranking the perceptions of GRA management and employees on the improvements in the sixteen (16) key reform areas and also explore the extent to which the perceived improvements have translated into total volume of revenue mobilized post-merger. The study used total yearly revenue and GDP figures for the period of 2005 to 2014. The data was further broken down into pre-merger (2005 - 2009) and post-merger (2010 – 2014) periods. Integration of tax reform, provision of momentum for change and increase tax revenue were ranked

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top three in terms of best-improved areas. The revenue – to – GDP ratio analysis also revealed that even though both revenue and GDP grew positively post-merger, the revenue growth rate was slower than that of the GDP. The results of the t – test and F – test indicates that there is significant difference between the pre and post-merger revenues and hence concludes that the merger has had a great impact on the corporate performance of the GRA. The study however recommends that, the GRA be strengthened by resourcing it with the requisite manpower, infrastructure and technology to enable it function better. Ghanaians should be educated on the relevance of payment of tax and stiffer punishments should be handed to tax defaulters. Government must check corruption and work towards creating a congenial economic atmosphere for industrial units to generate more revenue.

*Keywords: Horizontal mergers and acquisitions; Ghana; revenue; authority; GDP and corporate performance.*

## 1. INTRODUCTION

Mergers and acquisitions became a "trend" during the 1960s and 1980s Lev [1], with so-called merger "waves" during this period. Many firms engaged in merger activities during these merger "waves", not only in the United States and Europe, but also in Australia and Japan, Lubatkin and Lane [2], the reason being that mergers and acquisitions have played an important role in the business environment since the 1960s emerging not only as a part of financial activity but also as part of investment strategy.

Mergers are basically divided into three categories namely horizontal, vertical and a conglomerate. A horizontal merger involves two firms operating in the same kind of business activity, e.g. VAT service and internal revenue service. Vertical merger however occurs between firms in different stages of production operation. Finally, conglomerate merger occurs between firms engaged in unrelated types of business activity, which makes it possible for the merged firms to broaden the product line and operations in non-overlapping geographic areas.

Horizontal Mergers and Acquisitions (M&A) have been extensively used by firms as vehicles for growth and competitiveness strengthening within the context of the global economy. In the largest cross-national comparison of the effects of M&A that has been carried out to date. Gugler et al. [3] find that almost 42% of the completed 45,000 mergers around the world during 1981-1998 was horizontal. They also identify horizontal mergers that increase profits by increasing efficiency.

A common view of mergers and acquisitions is that they are stimulated by the firms' objectives to obtain more benefit from the merged firms compared to their total value if they were

independent. Dutz [4] argues that even though mergers are profitable for shareholders, they are socially undesirable and should be prohibited because they may result in rationalization of capacity. Some studies such as Caves [2] indicate that mergers are profitable activities and socially desirable, because they create value and are economically efficient. Increased efficiency may arise through synergistic effects, which means that synergistic gains such as operating synergy and financial synergy can also be reached through mergers and acquisitions (Maquieira et al. [5]).

Restructuring of government has been a constant theme over the last three decades as governments have sought to deliver services more effectively and at a lower cost to citizens. In some cases, traditional government structures (e.g., a government ministry organized along hierarchical lines) have been viewed as too rigid to respond to the rapidly changing needs of the public and the challenges confronted by government in modern society. While changes in government have been described as "evolutionary rather than revolutionary," Gray, John, and Chapman [6], a developing trend has been for government to devolve power to agencies or appointed bodies acting on their behalf. Hindriks et al. [7] observed that Canada and New Zealand employ a similar approach, and significant areas of government whose diversity range from film classification to advertising standards are being run by agencies, rather than traditional ministries of government.

Revenue administration has not been completely immune to this trend. Governments of developed countries sought ways to deliver better service and some have turned to a form of semi-autonomous agency to help them meet goals of improved collections, better service to taxpayers,

and more flexible human resource management options. Governments of developing countries share many of these goals and have additional complications. Problems related to low capacity and the need for massive administrative reforms, combined with corruption and long periods of non-performance, have made the case for a different form of government structure, compelling both to decision-makers as well as to the donor agencies interested in funding the needed reforms.

Over the course of the last 30 years or so, many countries have embarked on programs of reform for their revenue administrations (tax and customs), and some of these have decided to adopt the idea of a "Revenue Authority" (RA) as the delivery model for improved administration. Revenue Authority (RA) refers to a governance model for revenue administration where traditional ministry of finance departments (tax and usually customs administrations) are merged as an organization or agency with a degree of autonomy from government and independence from standard public service policies (Cunningham and Bert [8]).

It is in this spirit that Ghana in 2009 merged the Value Added Tax Service, Custom Excise and Preventive Service, and Internal Revenue Service to form the Ghana Revenue Authority (GRA) under Ghana Revenue Authority Act (Act 791 [9]).

Prior to the setting up of the GRA, the three revenue agencies operated autonomously under different laws that regulated their operations. The agencies had separate Boards, Commissioners and managements.

This merger of the various revenue agencies into a Revenue Authority simply known as the GRA, has been seen by some as a possible solution to critical problems, such as poor revenue performance, low rates of compliance, ineffective staff, and corruption. It has often been argued that the RA can lead to improvements, including better accountability for results, synergies in administration across the revenue departments, and management based on professional skills and isolated from external influences.

However, since the merger of the revenue agencies into a Revenue Authority in 2009, no comprehensive assessment has been made of the GRA that exist today and of how well they have served their intended purpose.

The objective of this research therefore is to determine the overall corporate performance of the GRA by compiling and analyzing the improvements in the key reform areas and also explore the extent to which the perceived improvements have translated into total volume of revenue mobilized as a result of the merger.

Specifically, this paper seeks to answer the following three questions. First, what is the perception of GRA executives and workers on the improvements made in the key reform areas as a result of the merger?

Secondly, what is the resulting synergistic effect of the Authority in mobilizing revenue as measured by revenue – to – GDP ratio?

Lastly, is there a statistically proven significant difference between the revenue mobilization performance of the revenue agencies (pre – merger) and Ghana Revenue Authority (post – merger)?

The Hypotheses of the study are stated below as;

**H<sub>0</sub>:** There is no significant statistical difference between the total revenue mobilized in the pre and post-merger periods.

**H<sub>1</sub>:** There is a significant statistical difference between total revenue mobilized in the pre and post-merger periods.

The remainder of this paper is organized as follows; Section 2 gives a brief review of relevant literature. Section 3 presents the methodology employed. Section 4 highlights the results and discussion, while section 5 draws conclusions and makes appropriate recommendations.

## 2. REVIEW OF LITERATURE

### 2.1 History and Development of Revenue Authorities (RAs)

A revenue authority (RA) is simply a term to describe a governance regime for an organization engaged in revenue administration that provides for more autonomy than that afforded a normal department in a ministry. Since RAs are organizations within a national government, it can be useful to look at typical national government structures along a spectrum that indicates decreasing government control and increasing autonomy.

Also, restructuring of government has been a constant theme over the last three decades as

governments have sought to deliver services more effectively and at a lower cost to citizens. In some cases, traditional government structures (e.g. a government ministry organized along hierarchical lines) have been viewed as too rigid to respond to the rapidly changing needs of the public and the challenges confronted by government in modern society. While changes in government have been described as “evolutionary rather than revolutionary,” Manning and Matsuda [10], a developing trend has been for government to devolve power to agencies or appointed bodies acting on their behalf.

The creation of the first RA dates to the mid-1980s. There are close to 40 RAs around the world clustered largely in Africa and Latin America. Generally, revenue administrations in these regions were faced with the need for massive reform, and the creation of an RA was seen by some as a call in the right direction. Development agencies of some national governments have at times actively promoted RAs as a solution to poor performance (e.g., DFID, USAID) and international organizations have also played a role in this field. Private sector consulting firms have honed and marketed their expertise in this area and had a strong presence in Africa through the 1980s and 1990s. Countries that have opted for an RA represent a little over 20 percent of the membership of the IMF (Kidd and Crandall, [11]).

## **2.2 Assessments of Revenue Authority Performances**

Taliercio [12] looks at the overall performance of RAs by assessing six case studies across Latin America and sub-Saharan Africa: Peru, Mexico, Venezuela, Kenya, Uganda, and South Africa. Although he concludes results are mixed, he presents two main findings: (1) performance improved most where the RAs had comparatively more autonomy; and (2) performance improved where autonomy was stable. This is based on the author’s assertion that managers with greater autonomy are able to take reforms further and faster.

Taliercio looks at two main criteria upon which to base assessments; management and performance. Management criteria for human resources include the scale of retrenchment and whether staff had to re-apply for their jobs at the time of establishment of the RA, skill, salary levels of staff, total wages, grading structures, retention, turnover, and corruption levels. For

financial management, criteria include collection costs, adequacy of funding, and investments in training and IT. Other management criteria encompassed decentralization, standards, and relations with the private sector. All these are important, Taliercio argues, since “behind any gains in performance are internal reforms to management and personnel systems, most of which would not have been possible without autonomy.”

His second area is performance in practice, covering revenue collection, compliance, taxpayer registration and services, tax revenues as a share of GDP, growth rates in arrears, VAT productivity, audit coverage, and the like. Measuring such criteria to assess performance engenders all the difficulties inherent in measuring tax administration results in general. Taliercio recognizes these difficulties, and talks of painting a picture based on case studies rather than “presenting a rigorous quantitative analysis that controls for exogenous variables.” He speaks of the problems of “data availability,” the general lack of a rigorous methodology for evaluating tax administrations (the great difficulty of measuring the marginal impact of tax administration reform on outcomes such as revenue collection), “measuring” autonomy, and sustainability of reforms.

Taliercio asserts that various reforms would not have been possible without autonomy (an example being staff improvements and reduced corruption in the Kenya Revenue Authority).

In other areas, Taliercio states that the more autonomous RAs have reasonably low collection costs (expenditure as a percent of revenue collected). While this measure may work to identify trends over time in a static tax policy environment, the comparison of this ratio between and among countries is fraught with difficulty because of the many exogenous factors affecting the ratio.

Mann [13] makes a very useful summary of the advantages and disadvantages that have been put forward regarding RAs. On the advantages, or benefits side, he lists: Enhanced revenues; greater efficiency; more competent staff; depoliticization of tax administration; reduced corruption; improved services; more professional work ethic; comprehensive accounting for tax revenues; and integration of databases. Disadvantages of RAs are listed as well. Excluding those already mentioned by Taliercio,

Mann adds: Potential inherent conflict with the ministry of finance; and the possibility of establishing an “unnecessary” organization whose tax collection functions, given the political will and resources, could be upgraded within already existing departments of the ministry of finance.

Mann also points out that cost-benefit analyses are not usually carried out when considering the creation of an RA, something he advises should be done as a matter of importance. The paper makes a number of recommendations in terms of RA features and governance, in all cases recommending the maximum autonomy possible as best practice. The section on governance structure deals only with appointment processes for the board, its members, the CEO, and so on.

In terms of quantifiable data to assist in the basic evaluation of RAs, Mann uses VAT compliance and productivity rates and general tax-to-GDP ratios to make judgments about pre- and post-RA performance. He clearly states, however, that this type of analysis does not control for all the exogenous variables in addition to tax administration efforts that affect outcomes. The paper talks about providing performance indicators that will permit an assessment of RA performance, though not necessarily in assessing the RA governance model *per se*.

This paper does not address the issue of how and when the “modality” of the RA impacts revenue administration. Given the caveats necessary on the quantitative analytical tools available and the relatively small sample size, Mann’s conclusion is tempered; RAs have neither lived up to expectations, nor can they be categorized as having failed. They do, however, he says, provide a platform from which tax administration efficiencies can be generated, but their mere establishment offers no guarantee of success. Throughout the paper, discussions of the decision to establish an RA appear to apply equally to any governance model. In a general sense, the paper addresses the question of tax administration reform, rather than the modality of the RA.

Jenkins [14] wrote a seminal article (most later studies refer to it), which reflects changes in the concept of public administration that had emerged by the early 1990s that public administration should be focused on citizens and their needs, and that different public institutions had different organizational needs. It notes

further an increased emphasis on tax reform in developing countries, and the reality that tax law or tax policy is only as good as its administration.

Jenkins’ main observation is that a critical impediment to change for tax administrations is that they were traditionally a part of the general civil service. This, he opines, has led to situations where salaries are low, qualifications of staff poor, hiring subject to political patronage, and opportunities for rent seeking plentiful. Furthermore, public perceptions of this state of affairs were leading to diminished voluntary compliance, the key underpinning of a modern tax administration. Revenue administrations, Jenkins states, need to be more like the central banks—good pay, equipment, facilities, and so on. To respond to this, he notes, many countries have set up autonomous (or semi-autonomous) RAs.

Based on the above assessment, Jenkins called for a restructuring of revenue administrations to attain independence in the same manner as central banks: Appointment of a CEO for a specified term; authority to establish operating policies; clear and transparent objectives; and a measure of financial independence. It was clear that these more independent revenue administrations should be fully responsible for their own recruitment, training, and salary structure.

RA practice in the 2000s generally followed the lines described by Jenkins (although many RAs in Latin America did not choose to create a revenue board), with one exception. Jenkins suggests the CEO should support the board, but not have line authority over the heads of the revenue departments. This, in fact, was the model for some of the early RAs, such as Kenya. However, all RAs have now moved to the model of a fully empowered CEO (See subsequent sections of this study), especially as modern concepts about integrated and function-based organizations have led to the merging of previously separate revenue departments, except for customs (Delay, Devas, and Hubbard, [15]).

A DFID-commissioned study by the University of Birmingham in 1999 reviewed the experience of DFID-funded projects to support tax administration in Africa against wider international experiences to determine lessons for future work. With specific reference to RAs, the paper concluded that while RAs have much

to offer (especially where civil service management inhibits proper HR management) they are not a panacea, do not prevent political interference, and are no guarantee against incompetence or malpractice. The study also notes that the urgency of the need to mobilize revenues in some countries makes the model attractive and that there may be important symbolic value in the “fresh start” which such institutional change promises (Gray and Chapman [6]).

Overall, there are several common themes that emerged from these varied papers on RAs.

With the exception of Jenkins [14], all the papers grapple with the problem of quantification and how to measure RA performance to assess whether the RA governance model made a difference. In no case were any of the authors able to present or to propose an analytical model that would produce measurable results for the RA. In instances where some quantifiable variables are presented, they are variables that are designed to measure the progress of reform, whether through an RA or through a traditional department of government.

### 3. METHODOLOGY

The paper made use of both primary and secondary source of data. Primary data was collected using questionnaires. The secondary data was collected mainly from the database of the Ghana Statistical Service and from other refereed sources. The data collected was analyzed using Excel and the results summarized into graphs, trends percentages and scatter diagrams. This study employed two methods or analysis in determining the degree of impact of the merger on the corporate performance of the GRA. Thus qualitative and quantitative analysis.

The study identified and ranked the perceived impact of the GRA governance model on the sixteen (16) key reform areas of revenue administration reform.

The paper made use of data collected on total yearly revenue and GDP figures from Ghana Statistical Service for the period of 2005 to 2014. The data was further broken down into pre and post-merger periods. The pre-merger period spans from 2005 to 2009 and post-merger from 2010 to 2014.

Revenue – to – GDP ratio per year was determined for both the pre and post-merger periods.

The *F* and *P* – values were determined using the analysis of variance (ANOVA) to test the hypothesis of the research.

## 4. RESULTS AND DISCUSSION

### 4.1 Perceived Impact of the Merger on Key Reform Areas

The study identified the following typical revenue administration reform areas. These areas were used as Key Performance Indicators and views were sought on the degree of improvement the Revenue Authority has had on the governance model in order to achieve revenue administration reforms in Ghana.

The respondents were asked to quantify in column 3 the degree of impact of the revenue authority model, using a scale of 1 to 10 (10 being high impact, 1 low and 0 no impact).

Integration of tax, provision of momentum for change and increase tax revenues ranked as the top three most improved upon areas and improved introduction of taxpayer segmentation and improved self-assessment were the least ranked.

Table 1 highlights the perception of the improvement in the 16 identified key reform areas and their rankings.

### 4.2 Total Revenue Performance for the Period (2005 – 2014)

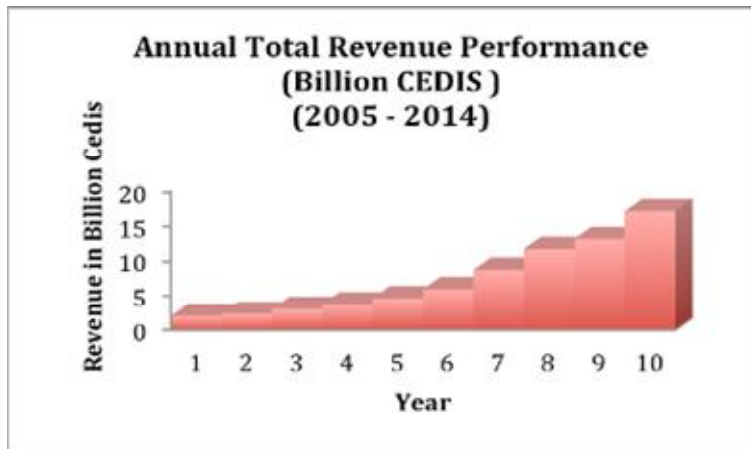
From the analysis of the data, it was clear that the total annual revenue for the period under consideration has increased positively from year to year and this can be seen in Fig. 1.

In the Fig. 1, the 1 to 10 on the vertical (year) axis represents the years under consideration where year 1 represents 2005 and year 10 represents 2014.

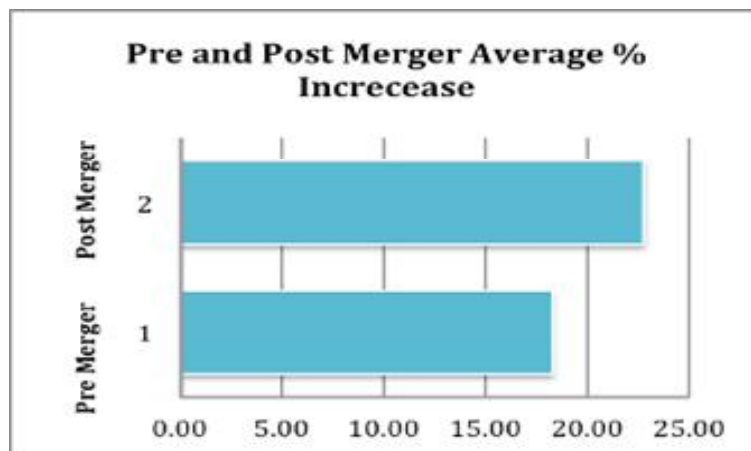
The analysis also revealed that the average rate of increase in revenue from year to year for the post-merger period (2010 – 2014) was greater than that of the pre-merger period (2005 - 2009) as highlighted by the Fig. 2.

**Table 1. Ranking on perceived impact of RA model on reform**

Rank	Typical revenue administration reform areas	Average degree of impact
1	Integrate tax administration	9.05
2	Provide a catalyst or momentum for reform	8.67
3	Increase tax revenues	8.23
4	Improve automation	7.92
5	Improve services to the public	7.68
6	Simplify laws, regulations, and procedures	7.35
7	Improve compliance management	7.21
8	Improve budget provision	7.01
9	Improve remuneration	6.80
10	Introduce risk management	6.76
11	Improve human resources regime	6.50
12	Improve public confidence	6.44
13	Improve anti-corruption measures	6.42
14	Improve valuation, classification and origin	6.34
15	Introduce taxpayer segmentation	6.12
16	Introduce self-assessment	5.98



**Fig. 1. Annual total revenue performance**



**Fig. 2. Pre and post-merger average increment**

The study also revealed that the highest annual percentage change (i.e. 31.74%) in revenue occurred in the year 2011, which is the second year of the post-merger period and this can be seen in Fig. 3.

This could be due to the fact that the improvement in the various key reform areas was not very much appreciable in the first year of the post-merger and it is normal that major strides towards the achievement of the purpose of the merger can always be made from second year onwards.

### 4.3 Revenue – to – GDP Ratio Trend

This ratio is the total government tax collections divided by the country's GDP. When tax revenues grow at a slower rate than the GDP of a country, the tax-to-GDP ratio drops and vice

versa. Five years prior to the establishment of the GRA (2005- 2009), revenue – to – GDP ratio has been decreasing. The revenue to GDP ratio decreased from 25.19% in 2005 steadily to 11.6% in 2009 even though revenue increased substantially year in year out over these years. This means that the revenue was growing at a slower rate than the GDP during the period.

Post-merger (2010 - 2014), the revenue – to – GDP ratio rose to 16.01% of GDP in 2010, 18.01% in 2011, dropped to 16.41% in 2012 and further fell to 15.61% in 2013 and finally to 11.78% in 2014 as depicted shown Fig. 4.

What this means is that even though both the revenue and GDP has been increasing over the years under consideration, the GDP is faster than the growth in revenue. This rapid increase

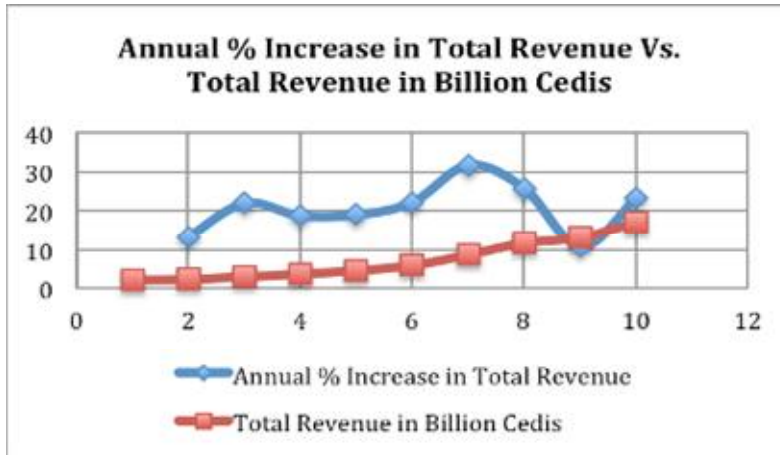


Fig. 3. Annual total revenue Vs. annual % increase in total revenue

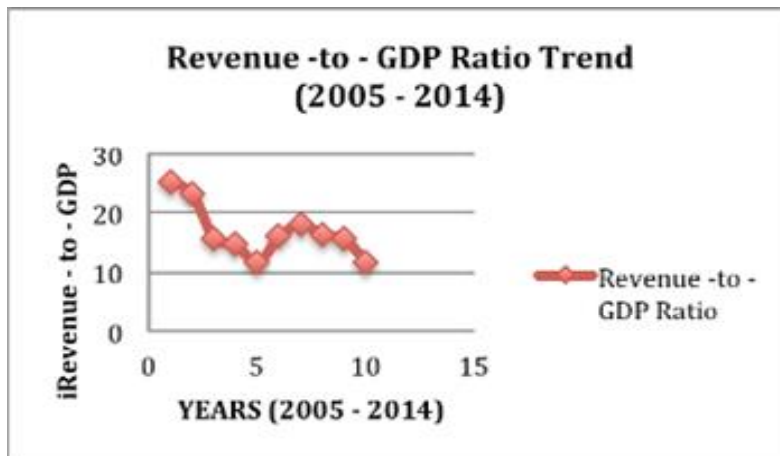


Fig. 4. Revenue – to – GDP ratio trend



in the GDP of Ghana can be attributed mostly to the addition of the oil and gas revenue to Ghana's GDP from 2011. Hence even though the revenue – to – GDP ratio decrease for some periods after the merger this study can confidently confirm that holding the contribution of the oil revenue component of Ghana's GDP constant, the revenue – to – GDP ratio would have increased steadily and positively for all the periods after the merger of the various revenue agencies into a Revenue Authority.

That is from the post-merger part of Fig. 5 it is evidently clear that since the GRA was established, tax revenue collection increased from 19.07% in 2009 to 22.27 percent in 2010 and shot to 31.74% in 2011 then fell to 25.76 in 2012, 10.77% in 2013 and 23.22% in 2014.

The Table 2 shows the data for total revenue and GDP on yearly basis for the period under consideration. The data was divided into Pre and Post merger periods. Post-merger ranges from

2005 to 2009 and 2010 to 2014 makes the post-merger period.

The fourth column of the table shows the revenue – to – GDP ratios whilst the fifth and sixth column shows the percentage change in the revenue and GDP respectively for comparison purposes.

#### 4.4 Statistical Significance of the Merger

Results of the t-Test from the ANOVA in Table 3 gives a  $P = 0.003$  which means that there is a significant difference between revenue collected during the pre-merger period (2005 - 2009) of the revenue agencies to the post-merger period (2010 - 2014) of the GRA. Also from the ANOVA values in Table 3, the F calculated = 17.27 and the F critical = 5.32. Since the F calculated is greater than the F critical, this again shows that there is a significant difference between the revenue figures for the pre-merger period and

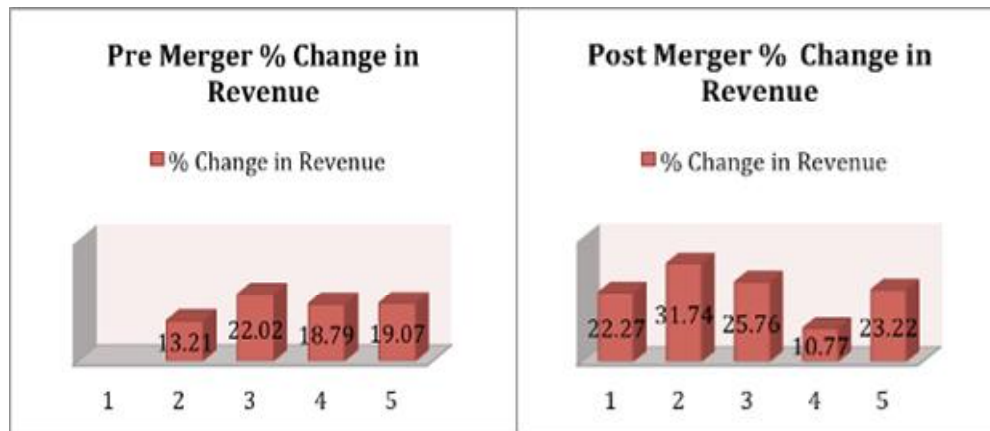


Fig. 5. Pre and post-merger percentage change in revenue

Table 2. Total revenue, total GDP, percentage change in total revenue and GDP

Year	Total revenue (Billion CEDIS)	Total GDP (Billion cedis)	Revenue -to - GDP ratio	% Change in revenue	% Change in GDP
<b>Pre-merger</b>					
2005	2.0576	8.1696	25.19		
2006	2.37082	10.24715	23.14	13.21	20.27
2007	3.04026	19.28745	15.76	22.02	46.87
2008	3.74376	25.5028	14.68	18.79	24.37
2009	4.62588	39.85641	11.61	19.07	36.01
<b>Post-merger</b>					
2010	5.95145	37.20336	16.00	22.27	-7.13
2011	8.71853	48.40284	18.01	31.74	23.14
2012	11.74319	71.58213	16.41	25.76	32.38
2013	13.16119	84.2994	15.61	10.77	15.09
2014	17.14212	145.57564	11.78	23.22	42.09

Source: Ghana statistical service

**Table 3. Single factor ANOVA table**

<b>SUMMARY</b>						
<b>Groups</b>	<b>Count</b>	<b>Sum</b>	<b>Average</b>	<b>Variance</b>		
Pre-merger	5	15.83832	3.167664	1.0854287		
Post-merger	5	56.71646	11.343292	18.263085		
<b>ANOVA</b>						
<b>Source of variation</b>	<b>SS</b>	<b>df</b>	<b>MS</b>	<b>F</b>	<b>P-value</b>	<b>F-critical</b>
Between groups	167.102233	1	167.102233	17.272875	0.003182	5.317655
Within groups	77.3940554	8	9.67425693			
Total	244.496288	9				

post-merger period. Hence the study rejects the null hypothesis and accept that alternative hypothesis which states the merger of the various revenue agencies into a revenue Authority otherwise known as Ghana Revenue Authority (GRA) contributed significantly to the improvement in revenue mobilisation. It is difficult to gauge what percentage of this improvement in tax revenue collection can be attributed to improvements in tax administration associated with the establishment of the GRA, especially because some tax rates have increased and new taxes have been introduced. However, it is clear from the opinions of the management and staff of the GRA, data and the results of the analysis that tax administration effectiveness has improved and the level of noncompliance has fallen drastically since the establishment of the GRA till date.

## **5. CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Conclusions**

Overall, there has been a proven improvement in the revenue mobilization and compliance with the tax and the rest of the key reform areas under the revenue authority module.

The main reason for the merger according to the information gathered from the experts interviewed was to create the needed synergy in order to enhance or boost revenue mobilization. The study revealed that the revenue – to – GDP ratio has declined over some years even though revenue volumes have been increasing positively year after year. The GDP of Ghana therefore grows faster than the revenue.

The following could be the cause of the slower growth rate of the revenue compared with the GDP.

The undocumented Ghanaian economy which is undeclared income earned through some economic activities over a period of time.

A large size of the undocumented economy includes cases of non-declaration of income due to ignorance, fear from harsh attitude of tax collector, and low literacy rate. It is estimated that Ghana has an undocumented economy that is quite huge compared to the size of the regular economy. The constant increase in revenue from 2005 to date reflects partly the increase in the role of the revenue agencies and increasing revenue potential of Ghana. Also the sharp increase in the revenue collection after the merger made a strong case for the rationale for creating the GRA.

The undocumented economy has been the major cause of low revenue – to – GDP ratio. GRA has tried its best since its inception to get this major chunk of the informal economy into registration but even then the informal sector has been successful in escaping the documentation, for example when VAT mode was introduced in 1998 to collect tax at each stage of supply chain so that every person involved in transaction should be registered, they started practice of fake and flying invoices. Through the use of fake and flying invoices they get the benefit of VAT modetaxation but the real purpose of getting the economy documented is not being fulfilled.

The various tax amnesties and opportunities to whiten money through different products, have not been too successful to bring enough people into the tax net and the study believes the adoption of a GRA will help widen the tax bracket further to increase revenue.

Ghanas share of taxpayers to population is low when compared with a large developing and developed countries.

Socio – economic problems facing Ghana are glaring. Poverty and unemployment are some of the social problems which are taking a toll on the revenue collection of Ghana. It is so because economic activity has declined and foreign investors are reluctant in investing in Ghana.

Besides, this economic situation in Ghana is not satisfactory. The energy crisis is almost destroying the industrial base of Ghana. Most of industries are bearing losses and are contributing nothing to the Government exchequer in recent years.

Finally, at this point, it is difficult to gauge what percentage of this improvement in tax revenue collection can be attributed to improvements in tax administration associated with the establishment of the GRA, especially because some tax rates have increased and new taxes have been introduced. However, it is clear from the opinions of the management and staff of the GRA and this paper can also argue that the increase in tax rates and introduction of new taxes were as a result of the improvements made in the key reform areas under the GRA which revealed that tax administration effectiveness has improved and the level of noncompliance has fallen drastically since the establishment of the GRA till date. This paper therefore concludes from the discussions and the results of the statistical significance of the merger that, the GRA has helped to increase tax revenue.

## 5.2 Recommendations

First of all, the Ghana Revenue Authority should be resourced in terms of qualified personnel and equipment in order to properly identify and block the tax leakages as a result of the underground economic activities and also increase the existing tax net.

In addition, there should be a constant public education of Ghanaians on the need to pay taxes and the consequences of tax evasion and avoidance.

Also Ghana's tax non-compliance punishments must be harsh enough to serve as deterrent to other potential tax non-compliers.

Finally the acute power shortages affects the total output of the industries which results in lower taxes. This paper recommends that Government of Ghana finds a long-term solution to the frequent power outages in order for industries to get stable supply of electricity to produce more and pay more in tax revenue.

## COMPETING INTERESTS

Author has declared that no competing interests exist.

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