

The Impact of Electronic Transaction Tax on Developing Countries: A Case of Ghana

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Abstract

Premised on the assertion that financial digitalization is currently the panacea and game-changer in delivering progress in emerging economies through universal financial inclusion, the purpose of this paper is to establish the effect of transaction tax in Ghana. The paper argues that developing economies, especially Ghana should participate and continue to engage with citizens to deal with the challenges of the digital economy. In Ghana, electronic transactions pose a threat to the government as sellers sell goods and services without having a significant physical presence and also do not correspond to the existing threshold under current tax rules. The paper found that transaction tax exemptions on digital financial innovations such as mobile money services can stimulate economic growth through an increased level of financial inclusion labelled as the main enabler for digital services. Ghanaians have mixed perceptions concerning the electronic transaction tax (e-levy). The study gave recommendations based on the findings.

Keywords: Digitalization, Economy, Electronic, Financial, Tax.

Introduction

The Internet is widely used and continues to grow in importance in the way businesses are done [6] argued that the internet has changed the way people do business and communicate with each other. Transaction parties are no longer limited to products and services within their physical reach, but instead, have access to goods and services beyond their physical reach. Businesses see huge cost-cutting, revenue-generation, marketing and market access prospects, and, most crucially, improved customer service opportunities through direct links that allow for quick inquiry and feedback when on the internet. Paradoxically, consumers experience more convenient access to the global market virtually, where they can choose from a greater range of products and purchase from the comfort of their own homes, among other things [3].

In the developing world, most governments have had specific concerns about the impact of

the Internet on their domestic economy as they move to incorporate some aspects of this technological revolution for the benefit of their citizens. Relatedly, the existing laws regulating commercial interactions in Ghana are predominantly conventional/traditional in their provisions and approaches being tied to the physical presence of the parties. In this manner, the inability or difficulty for governments to diversify extensively goods and services on the internet faces the challenge of losing/suffering from a reduced tax base which consequently hurts the global economy.

Especially after 2020, the COVID-19 pandemic disrupted both developed and developing economies around the world. Notable in the traditional landscape are losses and job cuts affecting the business operations including services, manufacturing, etc. On the side of tax authorities, the consequence of the economic slowdown after 2020 affected significantly tax revenue leading to the need to

consider alternative revenue sources such as digital services tax [8], popularly referred to as e-levy in Ghana. [10] argued that the more compounded challenge is the dominance of heavy reliance on importation as a result of low production with a correspondingly high demand for goods and services.

Unlike the drastic effect on traditional business, digital/e-commerce services have not been adversely hampered by the global health pandemic. Therefore, the upsurge of earnings appears to all and sundry that such digital business thrives amidst adverse economic downturns. Ongoing discussions confirm that digital business becomes an absolute alternative revenue source for governments in developing economies. Thus, the digital economy turns out to be the unexploited source and focus of revenue mobilization authorities and governments in developing countries [10]. Against this background, e-transactions will raise new taxing obligations, both in terms of adapting tax legislation and enforcing them.

Objectives of the Study

To come up with an appropriate model that will suit Ghana as a developing country and the ongoing discussion in the media space, the current study;

1. Examined the potential impact of electronic transaction tax on Ghana.
2. Assessed Ghanaians' perceptions of the electronic transaction tax (e-levy).

Literature Review

In recent times, literature on digital service tax is expanding both at the local and international levels. Most of the identified papers are qualitative studies and identified papers are discussed under themes. However, literature in Ghana and the developing world is quite limited. An initial review of the literature found themes like E-Commerce on the Tax Base of Developing Countries and the impact of electronic transaction tax on developing countries.

The Impact of E-Commerce on the Tax Base of Developing Countries

To support development, developing countries must earn enough tax income. However, poor tax compliance, weak institutions, and technical issues with tax collection typically hinder revenue mobilization. Throughout the world, a herculean task to protect, increase or expand the revenue with minimum hindrance on both the e-market and physical market is the responsibility of tax administrators. Concerns of governments centre on the impact of e-commerce on the state and local revenue [4].

For instance in Ghana, tax arrangements are suited to those businesses and transactions related to conventional trade [4]. Yet the growth of e-commerce is fast reducing the ability of governments to raise revenue from traditional sources in traditional ways. E-commerce leads to the gradual elimination of intermediaries, such as wholesalers or local retailers, who have been critical for identifying taxpayers, especially private consumers. Past studies revealed that digital technology appears to have an impact on taxation. Specifically, it destroys the economic and legal basis for the existing rules of international taxation, implying the necessity of a complete overhaul which developing economies have not yet. The situation is detrimental to developing economies. Extending the existing rules into the digital era will increase the revenue share of developed countries as against the developing countries [6].

Several studies have highlighted the impact of e-commerce on the tax base in developing countries. [13] assessed whether the growth of e-commerce correlates with increased tax revenues in developing nations. Empirical analysis using cross-country data to examine the relationship between e-commerce development and tax revenue trends was conducted by the researchers. The study brought to light that a positive association existed between e-commerce growths and tax

revenues, though this might be an indirect effect of overall economic growth. Also, e-commerce was seen to contribute to tax base expansion if appropriate tax policies were in place.

In 2014, [14] analyzed how digitalization and e-commerce affect the tax base, particularly in BRIC countries. The study focused on Brazil, Russia, India, and China where policy analysis and review of international tax principles in the context of digital trade were conducted. The findings of the study indicated that traditional tax rules were inadequate for the digital economy. Developing countries risked revenue losses without reforms to address digital transactions. Moreover, it was recommended by the study adopting new nexus rules and profit allocation methods would improve the tax base transactions.

Ref. [15] analyzed the implications of e-commerce growth on tax and accounting operations in Romania. The researchers conducted a comparative analysis of traditional and electronic commerce scenarios to identify tax challenges. The study uncovered that e-commerce complicated the determination of income sources for taxation. Also, there is a need for international tax systems to address the unique aspects of digital transactions.

Purpose of Electronic Transaction Taxes in Developing Countries

Electronic transaction taxes (ETTs) which are common to the Ghanaian business landscape (such as Ghana's Electronic Levy (E-Levy), have gained prominence in recent years as governments seek innovative ways to expand their tax bases and adapt to the digitalization of financial services [16].

Electronic transaction taxes in the case of Ghana were introduced for several purposes. One of the purposes is that ETTs widen the tax net by targeting the informal sector, which often eludes traditional taxation mechanisms [17]. In Ghana, for instance, approximately 7.7 million workers operate within the informal economy, making it challenging for the government to

collect income taxes from this segment. The E-Levy, introduced in 2022, aims to address this gap by taxing electronic transactions, thereby indirectly taxing the informal sector's income [17].

Also, ETTs are viewed as tools for boosting domestic revenue, especially in contexts where traditional tax sources are insufficient or declining. Ghana's E-Levy was projected to raise approximately GH¢6.96 billion (US\$1.1 billion) in 2022, with expectations of increasing this figure in subsequent years [18].

The rapid expansion of digital financial services in Africa presents both opportunities and challenges for taxation. Ghana's mobile money sector, for example, experienced a 143% year-on-year increase in transaction value in the first quarter of 2021. ETTs aim to capitalize on this growth by taxing the increasing volume of digital transactions, thereby aligning tax policy with evolving financial behaviours [19].

Impact of Electronic Transaction Tax on Developing Countries

In developing countries, internet use and its economic potential are growing exponentially and are expected to grow from 5 million in 2010 to 20 million in 2015, which translates to a compound annual growth rate of 76%. Two questions come to mind. First, what will be the impacts on the tax incomes of Ghana? Secondly, how significant is this revenue loss for Ghana? The analysis of trade and tariff data revealed that the growth rates for both exports and imports of digitized products are significantly higher than the growth rates for total merchandise trade. Bearing in mind the growth rate of digitized products is related to revenue loss, it is possible to calculate potential revenue losses resulting from a shift from physical to electronic delivery of goods. This loss of revenue could significantly impair the ability of some states to provide basic services to their population. [12] project hundreds of billions of dollars in annual purchases by consumers and businesses over the internet just

three to four years from now. Not all such purchases represent lost sales tax revenues to state and local governments, of course; some will be goods and services that are not taxed, and others represent purchases upon which the tax will be remitted by the seller or the purchaser.

Therefore, the growth of e-commerce activities leads to an emerging issue, especially taxation and provides an impact on tax revenue collection in the country. [2] explains that the growth of e-commerce transactions in India leads to the need for special tax provisions to reduce the number of tax evasion and emphasizes that e-commerce is the new way of tax evasion by traders.

Some studies have collectively highlighted the impact of the implementation of electronic transaction taxes and digital tax administration systems in developing countries. To cite a few, [20] in Tanzania assessed the impact of the digital tax administration system on compliance among small and medium enterprises (SMEs). The researchers adopted the quantitative case study approach by using structured questionnaires to gather from 133 SMEs in the Tanga Region. The data gathered were analyzed by using descriptive and regression analysis. The findings indicated that the digital tax system significantly improved tax compliance among SMEs. Also, key drivers of the improvement included electronic filing, tax data analytics, and overall system usability.

Elsewhere in the Copperbelt and Lusaka provinces of Zambia, [21] investigated the effects of electronic tax services on revenue collection and tax compliance among SMEs. The study was descriptive in its design where the Unified Theory of Acceptance and Use of Technology (UTAUT) model were employed to guide the collection of data from 400 SMEs. The study uncovered a significant increase in revenue collection and tax compliance among SMEs since the introduction of e-services. The correlation coefficient was 0.157 with a p-value

of 0.017, indicating statistical significance after the regression test was conducted.

In 2023, [22] conducted a cross-country analysis by exploring the potential impact of selected digital technologies on tax collection and compliance. Data were gathered through the use of the International Survey on Revenue Administration (ISORA), Tax Administration Diagnostic Assessment Tool (TADAT), and Revenue Administration-Gap Analysis Program (RA-GAP) from multiple developing countries. It was revealed by the study that digital technologies can enhance tax collection, but effects vary by the type of specific digital service or tools introduced. The adoption of e-registration, e-filing, e-payment, and electronic fiscal devices (EFDs) showed positive impacts on tax revenue and compliance.

Perceptions of Ghanaians on Electronic Transaction Taxes in Developing Countries

In Ghana, electronic transaction taxes such as the introduction of the E-Levy in 2022 were met with substantial public opposition. An Afrobarometer survey revealed that 76% of Ghanaians viewed the E-Levy as a bad idea, primarily because they believed it would increase the tax burden on the poor and ordinary citizens. Only 19% supported the tax, indicating widespread disapproval [23].

The trust in government institutions plays a crucial role in shaping public perceptions of ETTs. Research indicates that individuals with higher trust in government are more likely to comply with the E-Levy, whereas those with lower trust levels exhibit resistance [24].

Public perceptions of ETTs influence financial behaviours. In Ghana, negative perceptions of E-Levy have led some individuals to reduce their use of electronic transactions, potentially hindering financial inclusion efforts [25]. Such behavioural responses highlight the importance of considering public sentiment when implementing ETTs to avoid unintended

consequences that may counteract financial inclusion goals.

In developing countries, people have different perceptions concerning the introduction and how electronic transaction taxes are mobilized. Several studies have highlighted the perception of people in the acceptance and effectiveness of electronic transaction taxes in developing countries. [26] assessed Ghanaians' perceptions of the Electronic Transaction Levy (E-Levy) and its impact on their intention to use electronic transactions, financial inclusion, and financial well-being. The researchers gathered survey data from 782 respondents and adopted the Partial Least Squares Structural Equation Modeling (PLS-SEM) for the analysis of data based on survey data. The study revealed that negative perceptions of the E-Levy significantly reduced the intention to use electronic transactions. The study highlighted the importance of public perception in the adoption of digital financial services.

Ref. [27] also evaluated the impact of the E-Levy and merchant payment exemptions on payment methods and customer preferences, as well as merchants' perceptions of the tax system in Ghana. A mixed-methods approach involving surveys was employed to gather data from 1,065 businesses and focus group discussions to also gather another set of data from a few Ghanaian citizens. The findings indicated that larger, digitally and financially inclusive businesses were more likely to adopt digital merchant payments. The exemption encouraged the use of mobile money for merchant payments, leading to a shift away from personal accounts. Merchants using the exempted service expressed more satisfaction with various aspects of the E-Levy policy and showed greater trust in the government and the fairness of the tax system.

Ref. [28] gauged public opinion on the proposed 1.75% E-Levy before its implementation by the Ghanaian government. A nationwide survey was conducted to gather

data from individuals to examine their concerns. The study found that most respondents rejected the E-Levy at the proposed rate, indicating potential challenges in achieving projected revenue targets. The study suggests the need for alternative measures, including expenditure cuts, to address revenue shortfalls.

Materials and Methods

Research Approach

This study adopted the mixed methods approach to research whereby both qualitative and quantitative methodologies were combined in the gathering of data. For the qualitative method, EBSCO Discovery Service was adopted to gather qualitative data. Also, for the quantitative method, a survey was employed to gather quantitative data.

EBSCO Discovery Service

EBSCO Discovery Service (EDS) is a unified search platform provided by EBSCO which allowed the researcher to search across a wide range of library resources which were related to the study's topic. To use this search system, a unified search which searches multiple databases simultaneously in relation to the tax systems in Ghana was first initiated. After this procedure, the Boolean operator was employed to streamline the relevant data that needed to be answered by the study's research question.

Boolean's operator was used to combine various terms. Impact* and Electronic Transaction Tax* and Ghana. These terms were combined using the AND operator. The results of the Search terms obtained were critically appraised. For this, the researcher applied filters to gather only scholarly peer reviewed articles that have been published within the last 10 years (2015 – 2025).

Survey Method

The survey method is a type of descriptive method that provides researchers the room to

take a snapshot of the current state of affairs by defining, understanding, and measuring phenomena or experiences without attempting to change them or explore underlying mechanisms [29]. For this study, the survey was employed to solicit the perceptions of Ghanaians on electronic transaction taxes.

The survey method was used to gather data from individual Ghanaians across Ghana. The survey method was conducted online due to the inability of the researcher to locate individual respondents face-to-face.

Population, Sample and Sampling Technique

The population of the study were Ghanaians who knew about the various electronic transaction taxes and paid taxes in their business transactions. A sample of 250 Ghanaians were selected as the respondents of the study. Due to the structure of the survey as it was online, the study was not limited to a specific sampling technique. The google forms were used as an instrument for data collection. Questions that addressed the study's topic were designed with Google Forms. After this process, the link for the Google forms was sent out to respondents.

Data Analysis

The researcher used descriptive statistics in the analysis of quantitative data. The aim was to organize and present quantitative data in a summary format using tables, graphs, percentages, and bar charts. The descriptive data analysis was done using Statistical Package for Social Scientists (SPSS) software version 13.

For qualitative data, thematic analysis was applied to generate themes from the EBSCO Discovery Service (EDS) results that were obtained. The themes were generated to answer the research questions the study sought to answer. After the analysis of both qualitative and quantitative data, a report was written for the results obtained. The findings were merged

during the discussion to provide a cohesive understanding. The findings were discussed in relation to the literature that was reviewed.

Ethical Considerations

The researcher attached an introduction that explained the purpose of the study to the respondents with the assurance that it was meant for academic purposes only. Informed consent, anonymity and confidentiality of the respondents were upheld during the collection and analysis of data.

Research Limitations

Whereas secondary data was used for this current study project, primary data from users of mobile money/electronic services and other digital financial channels such as the internet and electronics in Ghana were not sampled for empirical evidence. Due to the allotted time and resources available, the researcher depended on secondary data for this study.

Results and Discussion

Impact of E-levy Tax on Ghana's Digital Economy

In the last decade, data from the Bank of Ghana continue to reveal significant use of digital transactions. Unlike high-income earners, low-income earners are sensitive to transaction costs. That means a higher e-levy tax rate on retail electronic transactions, primarily discourages the use of electronic transactions in Ghana. The consequence demotivates users to revert to cash transactions to avoid taxes and thus less tax revenue to the government of Ghana. In all, this trend will eventually wreak havoc on the progress made toward financial inclusion thus far. The recently conceived tax policy may result in lower tax collection and market inefficiencies. This leads to unfavourable consumer behaviour. Government agencies must continue to review the tax rates upon periodic feedback from consumers and sellers of digital services.

Challenges in Taxing a Digital Economy

Tax equity is a concern for electronic/digital users. The concept of tax neutrality is that the same rules needed to apply to both traditional-oriented business and electronic forms of commerce. The principle of tax neutrality requires that any equitable tax system treat economically similar income equally. For e-commerce to flourish, the principle of tax neutrality, as applied to e-commerce, would require that income earned through electronic means should be taxed similarly to income earned through more conventional channels of commerce. To do otherwise is to place e-commerce at a competitive disadvantage relative to other modes of commerce thereby defeating one of the purposes of an equitable tax system [9].

The OECD pointed out that “the retention of traditional principles for the taxation of

electronic commerce is the concept of tax neutrality” [5]. Accordingly “taxation should seek to be neutral and equitable between forms of electronic commerce and between conventional and electronic forms of commerce. Business decisions should be motivated by economic rather than tax considerations [11]. Taxpayers in similar situations carrying out similar transactions should be subject to similar levels of taxation”.

The Type of Transactions Respondents Pay E-levy on

Table 1 below presents the types of transactions by respondents that attract e-levy. From the table, the majority of respondents, 101 representing 40.4% indicated that they pay e-levy charges on both their personal and business transactions.

Table 1. Which transactions do you pay e-levy on?

	Frequency	Percent
Personal transactions	62	24.8
Business transactions	87	34.8
Both transactions	101	40.4
Total	250	100.0

Purpose of E-levy

Table 2 below presents the purpose of introducing e-levy in Ghana. From the table, 137 representing 54.8% indicated that e-levy was introduced to formalize and boost the

economy, whilst 69 representing 27.6% indicated that it was introduced to encourage financial inclusion. Only 16 respondents representing 6.4% indicated that the e-levy was introduced to fund national projects.

Table 2. Purpose of e-levy

	Frequency	Percent
Fund national projects	16	6.4
Broadening tax base	28	11.2
Encourage financial inclusion	69	27.6
Formalize and boost economy	137	54.8
Total	250	100.0

Perceptions of Respondents on E-levy

Table 3 below indicates the perceptions of respondents on e-levy. A total of 5 perception statements were identified and the respondents were allowed to indicate their extent of agreeability using the Likert scale of strongly disagree (SD) to strongly agree (SA). For income generation, 84 respondents representing 33.6% disagreed that the income generated from e-levy is used for the intended purpose, whilst 29 representing 11.6% strongly agreed to the same issue. The average value of the response, 2.78 (standard deviation = 1.247) is lower than the middle point of 3. This implies that the e-levy income has not been used for its intended purpose as perceived by a lot of the respondents. In terms of the digital economy, 94 respondents representing 37.6% agreed that the e-levy is a good way to boost the Ghanaian digital economy, whilst only 15 representing 6.0% strongly disagreed. The average value of

3.84 (standard deviation = 1.186) is higher than the central value of 3 implying that the majority of the respondents perceived that e-levy boosts the digital economy. In terms of e-levy payment, 98 respondents representing 39.2% disagreed that there are difficulties in paying e-levy charges, whilst 25 representing 10.0% strongly agreed. The mean value of 2.62 (standard deviation = 1.265) which is lower than the central point value implies that the majority of the respondents perceive that it is easier to pay the e-levy charges without any difficulties. Moreover, concerning e-levy charges, 119 respondents representing 47.6% strongly agreed that e-levy charges paid on online transactions are very high, whilst 13 representing 5.2% disagreed. The average value of 4.05 (standard deviation = 1.220) which is higher than the midpoint value implies that the majority of the respondents consider the charges of e-levy to be extremely high.

Table 3. Perceptions of Respondents on E-levy

Perceptions on e-levy	SD	D	N	A	SA	Total	AVE	St. D
The income generated from e-levy is used for intended purpose	38	84	52	47	29	250	2.78	1.247
	15.2	33.6	20.8	18.8	11.6	100.0		
E-levy is a good way to boost the digital economy	15	27	28	94	86	250	3.84	1.186
	6.0	10.8	11.2	37.6	34.4	100.0		
There are difficulties in paying e-levy charges	47	98	32	48	25	250	2.62	1.265
	18.8	39.2	12.8	19.2	10.0	100.0		
E-levy charges paid on online transactions are high	20	13	20	78	119	250	4.05	1.220
	8.0	5.2	8.0	31.2	47.6	100.0		

Perceptions of Ghanaians on the Electronic Transaction Tax

Ghanaians revealed that their involvement in both personal and business transactions on digital platforms attracts e-levy charges. The majority of Ghanaians believe that e-levy was introduced to formalize and boost the economy through digitalization. This finding supports the

report by the [22] which revealed that the introduction of e-levy is viewed as a tool for boosting domestic revenue and the economy as a whole, especially in contexts where traditional tax sources are insufficient or declining. Moreover, mixed perceptions of Ghanaians indicate that the introduction of e-levy has both positive and negative impacts.

Positively, most Ghanaians perceive that the introduction of e-levy was a good way to boost the Ghanaian digital economy, and its mode of payment has been very easy without any difficulties. However, many Ghanaians also perceive that the income generated from e-levy has not been used for its intended purpose as proposed by the government. Also, a lot of Ghanaians complained that the charges of e-levy are extremely high. The finding above corroborates the findings of [28] who gauged public opinion on the proposed 1.75% E-Levy prior to its implementation by the Ghanaian government. Their study found that most respondents rejected the E-Levy at the proposed rate, indicating potential challenges in achieving projected revenue targets.

Conclusion and Recommendation

Because clients are easily reached without any barrier, the rapid rise of e-commerce brings value to individuals (profit) as well as a means to raise additional taxes. This results in a positive relationship between the e-commerce business and the government's tax revenue collection; as the business profit rises, the government's tax revenue potentially rises through e-levy. It is against this background, that [11] cautions about poorly designed tax policy that has detrimental outcomes in the end.

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It is recommended that governments and citizens in developing countries should embrace the significant role of transaction tax exemptions in promoting digital financial innovations such as mobile money services for an increased level of financial inclusion. As mobile money has greatly spurred financial inclusion in the past decade, the government should not only defeat its purpose but rather by way of introducing transaction taxes on mobile money services but scrape it off to champion a progressive increase in the level of universal financial inclusion prescribed as a key enabler in eliminating global poverty, especially in developing countries.

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