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An Empirical Study of Digital Inclusion and Compliance Burden in Digital Tax Systems

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Abstract-- The high pace of digitalization in the taxation system has changed the way compliance is conducted across the globe with the intention of promoting efficiency, transparency, and revenue collection. This paper investigates the connection between digital inclusion and compliance tax on small taxpayers under digital tax systems. Particularly, it examines the effect of digital access and digital literacy on the financial, time and psychological cost of tax compliance. A quantitative research design was utilized to collect primary data of 240 small taxpayers comprising the sole proprietor, micro-enterprises, and self-employed professionals. Three important constructs had been measured using a structured questionnaire and included Digital Access, Digital Literacy and Compliance Burden. Descriptive statistics, reliability analysis, Pearson correlation and multiple regression techniques were used in analyzing the data. The results demonstrate moderate levels of digital access, digital literacy and perceived compliance burden among the respondents. The outcome of the correlation shows that there is a high positive correlation between the variables of digital inclusion and compliance burden. When using regression analysis, it is observed that digital literacy is significantly related to compliance burden, although there is a marginal effect of digital access. The model describes about 57 percent of the difference in burden of compliance. The article finds that digital literacy is increasingly a significant factor that influences compliance experiences as compared to digital access. Even though digital reforms are expected to streamline operations, low levels of digital competence can cause greater difficulties in complying with small taxpayers. These findings underscore the importance of having inclusive policies, capacity-building programs and user-friendly digital tax systems to make sure that technological innovations minimize and not increase compliance burdens.

Keywords-- Tax Compliance Burden, Digital Access, Digital Inclusion, Digital Literacy, Small Taxpayers, Tax Administration, E-Governance, Tax Digitization.

I. INTRODUCTION

The international trend of digital governance has changed the way people administer their government, especially in taxation. The adoption of digital tax systems is on the rise and governments in developed and developing economies are adopting digital tax systems like online return filing, e-invoicing, electronic payment gateways and real-time reporting of transactions. These reforms would bring about transparency, efficiency, tax evasion and also make the compliance processes easier.

The digital platforms are projected to reduce paperwork, shorten the processing duration, and establish a smooth process of communication between the taxing bodies and the taxpayers. Nevertheless, as much as these reforms have significant benefits, the effects they have on small taxpayers are not always beneficial.

Micro and small businesses, self-employed people, and the members of the informal sector are small taxpayers that can often work with limited financial resources, lack of administrative capacity, and access to more sophisticated technologies. In their case, compliance is not only a legal task but an activity, which requires time, technical skills and money. The nature of compliance has been changed by the introduction of digital tax systems because some of the obligations of compliance like record maintenance, data uploading, and timely electronic reporting are transferred to the taxpayers. This shift in most instances has made more people depend on tax professionals and digital services providers, hence, leading to high costs of compliance.

Digital inclusiveness is a critical factor to define how digital transformation can alleviate or increase compliance burden. Digital inclusion is not just about internet access but includes digital literacy, device affordability, regulatory requirements awareness and the capacity to adjust to changing systems of technology. In case of poor digital inclusion, the process of compulsory digital compliance can either deliberately or inadvertently leave vulnerable taxpayers behind or subject them to greater risks of error and penalty.

Consequently, exploring the overlap between the digital addition and the compliance weight bears has been critical to the interpretation of the actual consequences of tax digitization on the small taxpayers. This paper aims to examine the impact of digital systems on compliance experience and also to come up with the policy measures that can facilitate efficiency as well as inclusiveness in the tax administration.

II. REVIEW OF LITERATURE

The increased digitalization of the tax administration has also caused a substantial transformation on the compliance procedures across the globe.



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The effects of digital systems on taxpayers have been investigated by several scholars. behavior and compliance burden. James and Alley (2017) examined the transition to electronic tax systems and found that on the one hand, digital filing can more effectively streamline the administrative process, but on the other hand, this also heightens the level of technological competence of taxpayers. In line with this, Bird and Zolt (2018) would argue that technological changes in tax administration usually favor the government by providing better monitoring, but can put small enterprises at an unfair advantage by increasing compliance costs during transition periods.

According to a study by Chen and Qureshi (2020) the digital infrastructure played a significant role in enabling online tax compliance especially in emerging economies. They came to the conclusion that e-filing systems are limited in terms of their effectiveness due to low internet penetration and inability to use digital access. Consistent with this, the Organisation for Economic Co-operation and Development (OECD, 2019) stated that the inclusion of policies in digital transformation of the tax system should be inclusive to avoid marginalisation of small and susceptible taxpayers.

According to Coolidge (2012), the relative compliance costs incurred by small firms are usually higher than those incurred by the large firms because such firms do not have internal administrative capacity. Joshi et al. (2014) also observed that informal and micro-businesses cannot fit in the complex regulatory structures particularly when compliance goes entirely digital.

The behavioral side of the tax compliance decision was focused by Kirchler (2007) who identified those psychological factors as perceived fairness, trust, and complexity. Mckerchar (2003) also established that the higher the tax complexity the more the non-compliance among small taxpayers is unintentional.

Recent studies are more concentrated on digital literacy as a factor of compliance. Eilu (2018) discovered that the introduction of electronic tax is influenced significantly by digital competence. Similarly, Mascagni et al. (2018) postulated that digital reforms increase transparency, but also may result in increased inequality in case digital inclusion is a poorly considered issue.

As it has been stressed by international organizations like the International Monetary Fund (2021) and the World Bank (2020), any digital reforms in taxes should be supported by the investment in infrastructure, education of taxpayers, and the simplification of compliance processes to achieve fair results.

In general, the literature shows that despite the positive effects of digital tax administration on efficiency and transparency in revenues, small taxpayers have their own set of problems associated with the virtual accessibility, literacy, and the compliance load. Nonetheless, there is a lack of empirical studies that directly combine the variables of digital inclusion with the result of compliance burden, which demonstrates a research gap.

III. RESEARCH GAP

Even though various studies have investigated the effect of digital tax reforms and compliance costs individually, there have been few studies that have directly identified the connection between the effect of digital inclusion and the compliance burden among small taxpayers. Current literature is more about tax efficiency, in an overall sense, or compliance in the large business sector, whereas the specifics of the issues of micro and small taxpayers have not been researched extensively. Additionally, the existing empirical data on the impact of digital literacy, the availability of infrastructure, and technological flexibility on the costs of compliance and stress among small taxpayers are also limited. This paper fills this gap by examining the relationship between the different degrees of digital inclusion and the burden of compliance in the case of digital taxation administration.

IV. OBJECTIVES

1. To determine the degree of the digital inclusion of small taxpayers.
2. To explore the compliance cost experienced in digital tax systems.
3. To examine the correlation between the burden of compliance and digital inclusion.

V. HYPOTHESIS DEVELOPMENT

Digital tax systems are introduced with the intention of simplifying procedures and reducing compliance costs. However, their effectiveness largely depends on the level of digital inclusion among taxpayers. Small taxpayers with adequate access to internet facilities, digital devices, and technological skills are more likely to navigate online tax platforms efficiently. In contrast, those with limited digital access and low digital literacy may experience higher compliance costs, increased dependency on tax professionals, and greater psychological stress.



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Based on this conceptual understanding, the following hypotheses are developed:

H1: There is a significant relationship between digital inclusion and the compliance burden of small taxpayers.

H2: Higher levels of digital inclusion are associated with lower compliance burden among small taxpayers.

H3: Limited digital literacy significantly increases the financial and time-related compliance burden of small taxpayers.

VI. RESEARCH METHODOLOGY

The research design that was used in this study was a quantitative research design aimed at investigating the relationship between digital inclusion and compliance burden among small taxpayers. Descriptive and analytical research design was chosen in order to evaluate the degree of digital access, digital literacy and perceived burden of compliance and to determine the impact of the digital inclusion factors on the compliance outcomes. The descriptive aspect helped the researcher to get insights about the current situation of digital interactions among the respondents, and the analytical part helped him test out the hypothesis based on a statistical test.

Small taxpayers, including sole proprietors and micro-enterprises and self-employed professionals working in digital tax systems, constituted the target population of the study. The number of respondents that took part in the study was 240. The sample size was also deemed to be sufficient to perform correlation and multiple regression analysis in the research of social sciences. To select the respondents, a convenience sampling method was employed in terms of availability and readiness to respond.

A structured questionnaire was used to obtain primary data, which was to measure the key constructs of the study. The instrument had 21 questions that were split into three variables, Digital Access (7 questions), Digital Literacy (7 questions), and Compliance Burden (7 questions). The measure used to measure responses was a five-point Likert scale with the end of one and five (strongly disagree and strongly agree), respectively. Secondary data were also acquired through academic journals, policy reports and institutional publications in order to assist the theoretical basis of the study.

Internal consistency of the measurement scales was done to guarantee reliability of the scales by carrying out Cronbach's alpha reliability analysis.

Every construct was found to have acceptable reliability, which proved that the instrument is appropriate to be further analyzed. Data analysis was done through descriptive statistics, Pearson correlation analysis, and multiple regression analysis.

These statistical methods were used to test the hypotheses put forward as well as analyzing the relationships between the variables.

The ethical considerations were upheld during the research. The process was voluntary, confidential, and the data collected were not used in any other way other than in an academic way.

VII. DATA ANALYSIS AND INTERPRETATION

It offers the discussion and analysis of the data gathered among 240 small taxpayers on Digital Access, Digital Literacy and Compliance Burden in digital tax systems. Statistical methods such as descriptive measurement, reliability analysis, correlation and regression analysis were used to analyze the data.

This analysis aims to explore how factors of digital inclusions are related to compliance burden among small taxpayers.

Reliability Analysis

Cronbach's Alpha was used to perform the analysis of reliability to test the internal consistency of the measurement scales.

Reliability Analysis (Cronbach's Alpha)		
Variable	Cronbach's Alpha	Interpretation
Digital Access	0.658	Acceptable (Moderate reliability)
Digital Literacy	0.896	Excellent reliability
Compliance Burden	0.842	Very good reliability

The Alpha of the Digital Literacy is 0.896 indicating that there is great internal consistency between the items. Reliability of Compliance Burden also (0.842) is high. The moderate level of reliability (0.658) of Digital Access shows, which is acceptable in social science research.

Therefore, the three constructs have been found to be valid and can be analyzed further.

Descriptive Statistics

The extent of understanding of the overall level of digital inclusion and compliance burden among the respondents was conducted by the use of descriptive statistics.

Descriptive Statistics			
Variable	Mean	Std. Deviation	Interpretation
Digital Access	3.17	0.89	Moderate level
Digital Literacy	3.19	0.86	Moderate level
Compliance Burden	3.11	0.9	Moderate level

The average outcome of all three variables is a little higher than 3 (Neutral), which means that the respondents are rather moderately satisfied with the statements connected with digital access, digital literacy, and compliance burden. This implies that the small taxpayers have fair access to digital infrastructure and moderate digital skills. Nonetheless, a moderate degree of compliance burden is also felt by them.

Correlation Analysis

The Pearson correlation was used to analyze the relationship between the variables.

Correlation Analysis		
Relationship	Correlation (r)	Strength
Digital Access ↔ Compliance Burden	0.668	Strong Positive
Digital Literacy ↔ Compliance Burden	0.753	Very Strong Positive
Digital Access ↔ Digital Literacy	0.824	Very Strong

Digital Access and Compliance Burden have a positive relationship (= 0.668). The relationship between Digital Literacy and Compliance Burden is very strong (r = 0.753). This implies that there is more perceived compliance burden with an increase in digital engagement. Digital Literacy relates more to Compliance Burden than it does to Digital Access.

Regression Analysis

The multiple regression analysis was conducted in order to identify the role of Digital Access and Digital Literacy in Compliance Burden.

The findings indicate that the total model is statistically significant (F = 159.3, p < 0.001), which means that the independent variables as a group that include them have an important effect on Compliance Burden. The digital Access and Digital Literacy explain about 57.3% of the variation in Compliance Burden, the model generated the R2 of 0.573, and the adjusted R2 of 0.570. This implies that the model is powerful in offering an explanation of the compliance issues of small taxpayers.

Coefficients:			
Predictor	Beta	p-value	Interpretation
Digital Access	0.15	0.05	Marginally Significant
Digital Literacy	0.66	0	Highly Significant

Digital Literacy has a significant impact on Compliance Burden (p < 0.001). There is a marginal effect of Digital Access (p = 0.050). Digital Literacy is the most important factor that influences Compliance Burden among the two predictors.

This indicates that although the taxpayers might be connected to digital infrastructure, their digital literacy is a more important factor in deciding the degree to which the digital compliance becomes a burden.

Hypothesis Testing

The outcome of the hypothesis testing means that Digital Access has a weakly significant effect on Compliance Burden. H1 is supported partly since the effect was found to be significant at the threshold level (p = 0.050). This implies that Digital Access is a contributor of Compliance Burden but its contribution is not as strong.

In addition, the outcome demonstrates that Digital Literacy is significantly and statistically related to Compliance Burden (p < 0.001). Thus, the H2 is accepted, which means that the impact of Digital Literacies on the degree of Compliance Burden among small taxpayers is significant.

VIII. FINDINGS

As in the study, a number of significant findings come about as far as digital inclusion and compliance burden among small taxpayers is concerned. First, there is an intermediate level of digital access of the respondents, which means that the majority of people have access to the basic internet connectivity along with the availability of their devices, but the quality and the dependability of such access differ greatly.



Second, the digital skills are moderate as well, indicating that a significant number of taxpayers have some fundamental operating knowledge but do not have more sophisticated skills that can enable them to effectively use digital tax systems. Third, compliance burden is rated as moderate with the issues associated with time consumption, extra expenditure, technical challenges, and mental pressure. Fourth, reliability analysis shows that the measurement scales in the study indicate fair to good internal consistency to the data credibility of the gathered data. Fifth, digital access and compliance burden have a strong positive correlation, which means that more digital access can also be associated with more compliance complexities to the taxpayers. Sixth, digital literacy shows a stronger positive relationship with compliance burden indicating that digital literacy has a significant impact on the perceived burden. Seventh, the regression analysis reveals that the predictor of the compliance burden is statistically significant with respect to digital literacy, but there is only a marginal impact of digital access. Lastly, the results suggest that simple access to digital infrastructure is not necessarily enough to mitigate compliance issues but instead the extent of digital capability is a more decisive factor that contributes to the compliance experience of small taxpayers.

IX. SUGGESTIONS

The research indicates that focus on digital literacy of small taxpayers should be prioritized to decrease the compliance burden. Taxpayers can be trained regularly, receive practical lessons and simplified instruction materials to gain confidence in using digital tax platforms. Another area of concern to the tax authorities is to streamline online tax systems and portals through the design of user interfaces, making the systems technical simplicity, and through multi-linguistic support to make online systems more user friendly. Creating special technical support centers and call centers would contribute to the rapid resolution of problems by taxpayers and reduce the level of stress caused by digital filing errors. There is a need to improve digital infrastructure especially in the rural and semi-urban regions so that there would be steady internet connectivity and the online tax services would be available without interruption. Phased introduction of new digital requirements can also be discussed as an option with policymakers to provide small taxpayers with enough time to align themselves with the changes in technologies without being subjected to excessive pressure as a result of compliance.

X. CONCLUSION

The study makes the conclusion that digital inclusion contributes to the compliance burden that small taxpayers face in digital tax systems. Although digital reforms are meant to increase efficiency, transparency and convenience, their effectiveness is directly related to how effective the taxpayers are in accessing and using digital platforms. The results reveal that compliance burden depends more on digital literacy than on online access, which implies that digital literacy and competency are crucial in addressing tax obligations online. Although small taxpayers show mediocre digital access and literacy, they still face significant time, financial, and psychological stresses related to digital compliance. The findings of the research indicate that the planned technological progress will not necessarily come with a decrease in compliance load unless accompanied by the inclusion policies, simplified systems, and capacity-building programs. As such, it is imperative to consider a middle ground whereby infrastructure development is combined with the development of skills and easy to use digital design to make digital tax administration effective and fair to the small taxpayers.

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