



e-Filing

Income Tax Return



Factors Influencing Income Tax E-filing: A Combined Theoretical Model Approach in Bangladesh

Dr. Kazi Abdul Mannan

Adjunct Professor

Faculty of Business Studies

Green University of Bangladesh

Email: drkaziabdulmannan@gmail.com

Dr. Khandaker Mursheda Farhana

Assistant Professor

Department of Sociology and Anthropology

Shanto-Mariam University of Creative Technology

Email: drfarhanamannan@gmail.com

G. M. Omar Faruque Chowdhury FCMA

CEO

GM Chowdhury & Co

Email: gmchowdhury.co@gmail.com

Abstract

E-filing of income tax return can be seen as an important means to enhance the value of services to the citizen. This paper investigates whether tax knowledge influences the level of intention of individual taxpayers to use E-filing after five years of its implementation in Bangladesh. The study examines factors that might influence taxpayers' level of intention for E-filing based upon the theoretical framework of combined models and the concept of general knowledge about tax. The survey was conducted on 384 respondents' individual taxpayers within the capital city of Dhaka in 2020. It shows that respondents have a high level of intention for E-filing (4.67 out of 5). Advanced statistical outputs show that perceived advantages, perceived comfortable to use and perceived subjective norms are positively associated, but perception on behavioral control and general knowledge about tax are not significantly associated with taxpayers' intention for E-filing. The results from this study suggest that E-filing is a computerized system, just like any other system, where taxpayers' intention to use it is also influenced by constructs within the technology acceptance model and the theory of planned behavior approach. Furthermore, the implementation of E-filing will be successful when it can provide a compulsory service delivery channel through the electronic platform. Since the National Board of Revenue (NBR) is currently promoting the use of E-filing, the results may assist the NBR to plan a more effective strategy of promoting E-filing usage among individual taxpayers in Bangladesh.

Keywords: Taxation, Taxpayers, E-filing, E-government, Digitization, Knowledge, Behavior, Intention

1.0 Introduction

Tax is a source of income for governments to ensure continuous economic development within the country. Being the entity that collects direct taxes for the government, the National Board of Revenue of Bangladesh (NBR) has the responsibility of maximizing the collection of taxes for the benefit of the country. In the era of third industrial revolution, technologies are using in all fields of the world. Bangladesh, as a developing country, is committed to increasing tax revenues and achieving fiscal discipline with a view to increasing self-reliance. For making Digital Bangladesh Vision 2021 a reality the National Board of Revenue, Bangladesh has initiated some administrative and policy reforms in the taxation system. E-filing or electronic filing of Income Tax Return via online is one of them. 'E-filing' or electronic filing is a process through which Income Tax Return can be submitted via online. It is considered as one of the most significant reforms of NBR, Bangladesh in recent times through which taxes department can accelerate its journey towards a paperless office.

Electronic tax filing is an important e-government application that has become increasingly ordinary throughout the world. As the use of e-filing of tax returns has spread from developed to developing countries, it has been clear that this kind of reform has some positive aspects in reducing errors and corruption. Also, it has been widely assumed that less time is spent in preparing tax return and taxpayer compliance costs would decrease with the use of e-filing. With a view to reducing the challenges and risks of manual filing of income tax return and to improve the efficiency in increasing the number of disposal, National Board of Revenue (NBR), Bangladesh introduced E-filing system (IFC 2013). The study intends to find out the critical factors that are acting as obstacles in the process of implementation of the 'E-filing' at field level that is at different territorial taxes zones. The main objective of enactment of 'E-filing' is to ensure people's accessibility to e-services. But due to some restrictions the system is going slowly to achieve its goal fully.

It is found that in the first year of implementation only 393 returns were submitted through online and in the second year the number of online submitted returns

was 40,750 out of total number of return 14,78,434 (NBR 2018). The rate of moving online submission of return from paper based return is very low, which is much lower than the target and reflects a tendency for rejection among taxpayers in Bangladesh. Similar problems were also faced by developed economies during the early implementation stage of E-filing, including Singapore (Thompson & Poh 2005), Taiwan (Fu et al 2006; Hung et al 2006; Wang 2002), and the US (Schaupp et al 2010). E-filing usage reached the expected level of above 80% among taxpayers in the US (IRS 2012) and Singapore (IRAS 2012) within very short period. Therefore, it should come as no surprise that the low E-filing usage rate among taxpayers is still an issue in developing economies such as Bangladesh. The problem with the relatively low level of acceptance of the E-filing system among taxpayers in Bangladesh needs to be addressed by the NBR to ensure that the huge investment in the information system is not wasted.

The present study proposes the possibility that general knowledge about tax may be an additional factor that influences. E-filing usage since general knowledge about tax has been found to influence tax compliance in many countries (Alm et al 2010; Nero & Amrizah 2005; Mohd-Rizal 2005). Since the implementation of E-filing is primarily to increase tax compliance, it is critical to understand whether general knowledge about tax influences E-filing usage among taxpayers and potential taxpayers. Unfortunately, prior studies have yet to provide concrete evidence on the issue of general knowledge about tax relationship with usage of E-filing as a media to increase tax compliance (Idawati 2012; Azmi & Bee 2010; Yusri 2008).

The aim of the present paper is to examine the level of intention for E-filing after five years of its implementation among individual taxpayers. Subsequently, investigates factors that influence taxpayers' intention to use E-filing, extending prior studies by adding the tax knowledge variable as an additional input. Therefore, the study combines the technology acceptance model; the theory of planned behavior approach; and a variable of general knowledge about tax in one framework to explain factors influencing taxpayers' intention for E-filing. The general knowledge about tax variable is used to explain other issues relating to taxes, but, to date,

not in relation to the issue of E-filing (Alm et al 2010; Nero & Amrizah 2005; Mohd-Rizal 2005; Eriksen & Fallan 1996; Yaniv 1999). Since the NBR is currently promoting the usage of E-filing, results from the present study may assist the NBR in planning for a more effective strategy to promote E-filing usage among individual taxpayers in Bangladesh.

The significance of this study is two-fold. Firstly, there are a limited number of literatures on this issue in Bangladesh since its inception in 2016. Therefore it is expected that the findings of this study may significantly contribute to the existing literature on tax reforms in general. Secondly, the findings of this research can generate questions for future studies.

1.1 Research Objectives

The key objective of this study is to investigate whether general knowledge about tax influences the level of intention of individual taxpayers to use E-filing after five years of its implementation in Bangladesh. In this respect, the intention of the study is to understand the factors that might influence taxpayers' level of intention for E-filing based upon the theoretical framework of technology acceptance model; the theory of planned behavior approach; and the concept of knowledge about tax in Bangladesh.

2.0 Literature Review

The main reason the NBR introduced the E-filing system is to reduce incomplete forms that rampantly occurred when manual tax returns are utilized (Habib 2018). Usually, every year the NBR receives a large number of income tax returns where either incomplete or various errors are observed (Rinaudo 2019). Incomplete tax forms results in an increase in the processing and management costs for tax refund activities at the NBR (Mannan et al 2020). As such, it is hoped that the E-filing system will result in taxpayers submitting tax returns that are correctly prepared since the E-filing system is designed to ensure taxpayers do not overlook mandatory information before they proceed to the next step in the tax filing system. Furthermore, E-filing provides an automatic calculation for the amount of tax to be paid, hence reducing the tendency of any miscalculations. However, the important features of the E-filing system do not guarantee that taxpayers will determine the correct and most beneficial tax payment if they do not have sufficient tax knowledge. Also, E-filing system

does not ensure that the taxpayers will voluntarily disclose all material facts of their income and wealth.

Recent study, Rahul (2015) conducted in India finds that the main challenge of E-filing is risk of security. Security includes confidentiality of data received through E-Return and Integrity of data maintained in proper manner so that no one can alter data received through E-return. The issue of security and confidentiality should be an important concern of tax authority in Bangladesh. The present study also tries to find out the other socio economic factors those have a vital role in the implementation process of E-filing in Bangladesh. Hwang (1999) identifies only the user satisfaction about different filing method but the present research also finds the challenges of the existing E-filing system. In addition, Liang and Lu (2012) shows that there are some individual factors and some environmental factors that have significant influence on adoption of E-filing in Taiwan. According to an exploratory analysis Lean et al (2009) in the e-government system of Malaysia shows that trust, perceived usefulness, perceived relative advantage and perceived image, respectively, has a direct positive significant relationship towards intention to use e-government service. Azmi and Bee (2010) analyses that in the 4th year of implementation nearly 1.25 million Malaysian taxpayers has filed their returns electronically and also shows that ease of use of the electronic filing system could possibly reduce the perceived risk factor (Azmi & Bee, 2010).

Perceived risk is included two risk facets, which are privacy risk and performance risk. Perceived risk is defined as taxpayers' perception on the reliability of the system's usefulness/functionality and the control of their personal data information in an online environment. Privacy risk refers to the safeguard of various types of data that are collected during taxpayers' interaction with the e-filing system. Under the e-filing system, taxpayers are concerned whether third parties could access their personal tax information without their knowledge or permission. Although this concern is also present in the physical world but this issue is important due to the special characteristics of the Internet (Hoffman et al. 1999; Friedman et al. 2000). While, performance risk refers to the possibility a system malfunctions or the system's failure to deliver the promised benefits. The risk factor that taxpayers' perceived to have towards the system, which promise to complete

their transaction securely and to maintain the privacy of their personal information, will affect their voluntary adoption of the e-filing system.

However, Chen et al (2015) conducted in the context of developing countries reveals that the government of Philippine has adopted a gradual implementation strategy for the implementation of online tax processing system. Moreover, a survey conducted in United States of America in 2008 (Schaupp et al 2010) performance expectancy, social influence, and perceived risk have a significant influence on intention to use of e-governance while reputation and perceived security control has influence on perceived risk. Furthermore, Carter et al (2011) conducted a survey to 304 US taxpayers to capture their perceptions of e-filing. The survey results show that three factors like performance expectancy, effort expectancy, and social influence play a significant role in predicting taxpayers' e-filing intentions.

E-filing is a comparatively new issue in the bureaucratic arena. As discussed earlier that the introduction of E-filing at NBR is a very new phenomena so lacking of literature is usual. But some research works have been done in the South Asian countries and also in the developed countries. All these works have touched the issue of implementation of E-filing but their context is different. However, the literature review helps to address the research gap and handle this study. Findings from prior studies show that the low acceptance of E-filing in its initial implementation throughout the world is not specific to any country or region (Azmi & Bee 2010; Schaupp et al. 2010; Thompson & Poh 2005; Hung et al. 2006). In the East Asian region, Singapore seems to show the highest level of usage of E-filing (IRAS 2012) in comparison to other countries. Indonesia only initiated an E-filing system in 2011, while Thailand only adopted the system in 2013. The phenomenon of relatively low acceptance of E-filing usage in the early years of implementation baffles tax regulators in Bangladesh. Thus, more studies need to be performed to continue searching for additional factors that may trigger low acceptance from taxpayers.

General knowledge about income tax

Whether taxpayers use manual or e-filing applications under the self-assessment method, taxpayers still need adequate general knowledge about taxes to help them filing their income tax returns (Mannan et

al 2021). Recent studies concerning E-filing issues only investigate factors related to the system itself, such as perceived advantages and perceived comfortable to use (Fu et al. 2006; Wang 2002). With a medium level of tax knowledge being the norm among taxpayers (Abdul-Latiff 2005; Nero & Amrizah 2005), a question arises concerning whether tax knowledge is an additional factor that can contribute towards the intention to use the E-filing. In the absence of clear evidence concerning this possibility (Idawati 2012; Azmi & Bee 2010; Yusri 2008), the present study aims to fill this gap in existing literature.

Knowledge on a specific issue can affect behavior related to that specific issue either positively or negatively depending upon the accuracy of the knowledge concerning the specific issue (Ajzen et al 2011). The change from the formal assessment system to the self-assessment procedure creates a new requirement on the part of taxpayers to have enough and appropriate knowledge of the tax law (Bhowmik & Bala 2015). This requirement ensures taxpayers are able to provide the correct information and calculate the correct amount of their taxable income in order to increase compliance voluntarily (Alm et al. 2010; Mohd-Rizal 2005, 2010). The self-assessment procedure indirectly emphasizes the aspect of knowledge to understand tax terminology used by the tax authority and the most basic knowledge includes the ability to know the right item for income tax' allowable deductions; exemptions; and claimable rebates (Mohd-Rizal 2010; Nero & Amrizah 2003). However, if there are changes in the tax law, taxpayers need to know about it in order to maintain their knowledge to complete tax forms ((Bhowmik & Bala 2015; Barjoiy 1992), especially in the case of self-assessment procedure (Loo & Ho 2005; Mohd-Rizal 2005). Thus, it can be expected that having knowledge concerning tax law becomes mandatory for taxpayers to increase their intention and behavior towards tax compliance. Recent studies find that the higher the knowledge about tax, the lower the tendency that a person will avoid tax and the higher the tendency for tax compliance (Mohd-Rizal 2010; Eriksen & Fallan 1996).

In addition, Yaniv (1999) finds a low level of knowledge about tax makes respondents avoid the complexity of calculating tax on their own and increases the tendency to hire advisors or tax practitioners to settle their tax forms. Tax complexity arises due to

too many laws that need to be complied with; the use of language that is hard to understand; vague terminologies; and multiple categories of income tax forms (Alm et al. 2010). Therefore, it can be expected that the more complicated is a tax system, the lower taxpayers' voluntary tax compliance will be. However, basic knowledge concerning tax can change depending upon available current policies. Thus, taxpayers must always be alert with and prepare themselves with the latest information relating to tax issues, for instance, changes in the rebate amount and changes in type of exemptions (Yaniv 1999). Tax function might fail if taxpayers do not update themselves (Barjoyai 1992). Few studies find individual differences can influence taxpayers' reactions toward technology acceptance (Lai & Siti-Normala 2004; Wang 2002; Agarwal & Prasad 1999) and individual differences regarding knowledge about tax are also found to be associated with tax compliance (Mohd-Rizal 2010).

Advantages

Advantages is defined as the level of taxpayers' perception of how far E-filing can increase their work performance (Davis 1989). Recent studies provide evidence that perceived advantages consistently shows a positive association with someone's intention for using an e-technology (Venkatesh et al. 2003; Chau & Hu 2002; Hu et al 1999). The existence of the perception of advantages itself can be influenced by other factors, such as satisfaction; experience; the time taken to use an application; the image on the computer screen; and other factors related to the use of the system (Saade & Bahli 2005; Agarwal & Prasad 1999). As Schaupp and Carter (2009) find that the US taxpayers' intention for E-filing is influenced by their perception of its advantages. In addition to Wang (2002) and Fu et al (2006) also present similar findings in the case of Taiwanese taxpayers with regards to E-filing usage. Moreover, several studies also find in Malaysia that perceived advantages is a significant factor influencing taxpayers' intention for E-filing (Azmi & Bee 2010; Yusri 2008; Lai et al 2005). Since E-filing is expected to assist taxpayers not only in terms of the application of tax filing, but also with regards to settling tax payment through the internet, perceived advantages is expected to influence taxpayers' intention for E-filing.

Comfortable to use

Comfortable to use is defined as the level at which

someone believes he or she can use e-technology with ease and without any problem (Venkatesh & Davis 2000). According to Davis (1989) the perceived comfortable to use has a small impact, but is still significant and can change over time in terms of its influence toward someone's intention to use a system. In addition, Hung et al. (2006) find perceived comfortable to use has a significant association with someone's intention to use e-technology. Moreover, other prior studies also find that perceived comfortable to use has a significant relationship with someone's intention to use e-technology, whether directly or indirectly through the factor of perceived advantages (Chau & Hu 2002; Venkatesh & Davis 2000; Agarwal & Prasad 1999). Extant studies generally find the intention for E-filing is associated with the perception of comfortable to use, such as in the case of Taiwan (Wang 2002), the US (Schaupp & Carter 2009) and Malaysia (Azmi & Bee 2010). However, other studies do not find that the perception of comfortable to use influences taxpayers' intention for E-filing (Yusri 2008; Fu et al. 2006). The contradictory finding could be due to taxpayers who are already comfortable with using the E-filing. On the other hand, taxpayers may still be too new to the E-filing system and unable to appreciate the comfortable to use aspect of the system.

Subjective norm

A perceived subjective norm is a situation where an action becomes a norm in a community to the extent that it becomes part of the culture and eventually influences others in that community to do the same (Taylor & Todd 1995; Ajzen 1991). Recent studies also find individual differences can influence taxpayers' reaction toward technology acceptance, such as cognitive, personality and demography (Lai & Siti-Normala 2004; Wang 2002; Agarwal & Prasad 1999). Even though the actual association between individual differences and e-technology usage is still not clear (Alm et al. 2012), the issue is not within the scope of this study. On the other hand, the influence of perceived subjective norms is clearer and found in other studies to be positively associated with the intention to use a system (Schaupp & Carter 2009; Wang 2002; Venkatesh & Davis 2000). Moreover, several studies find perceived subjective norms are positively associated with taxpayers' intention for E-filing (Schaupp & Carter 2009; Wang 2002). However other studies do not

find any significant association between perceived subjective norms and E-filing usage (Yusri 2008; Fu et al. 2006). Since E-filing has been implemented for almost years during the time period of the present study, it is expected that social norms could influence someone's intention for E-filing.

Behavioral control

Behavioral control is someone's belief of his or her self-ability in the existence or absence of sources or opportunities needed to implement a task or action (Ajzen 1991). According to Venkatesh and Davis (2000), both internal control and external control are strong factors affecting the perception of comfortable to use. Several studies find perceived behavioral control influences behavioral intention. Individuals who can fully control their ability when using an e-technology application will perceive the application to be comfortable to use (Yusri 2008; Hung et al 2006; Chau & Hu 2002). However, for those without experience handling an application may feel threatened and eventually avoid use the application; or continue to use the application, but with the help of experts (Pons 2004; Venkatesh & Davis 2000). In the context of E-filing, if someone believes that they are capable of handling E-filing on their own, the person is expected to perceive E-filing to be comfortable to use or difficult otherwise. Therefore, it can be expected that the same situation applies to the case of E-filing usage among taxpayers. If taxpayers are equipped with enough computers and internet service, there may be a higher tendency they will decide to use E-filing. Since, there were 47.61 million internet users, the number of internet users in increased by 7.7 million (+19%) between 2020 and 2021, and internet penetration in Bangladesh stood at 28.8% in January 2021. (Datareportal 2021) Therefore, it can be expected that Bangladeshis will have high perceived behavioral control in regards to the internet, which could positively influence the behavioral intention for E-filing.

2.1 Theoretical Perspectives

2.1.1 Technology Acceptance Model

In 1985, Fred Davis suggested the technology acceptance model. The Technology Acceptance Model intended to describe the motivational process that mediates between system characteristics and user behavior. This model suggests that when users

are offered a new technology, a number of factors influence their decision why they will use it. Especially the perceived usefulness and perceived ease of use constructs have received a great deal of attention in intention to use of any technology. Davis, in his study of perceived usefulness, proposed a six items measurement tool. The six items include the four items most commonly used: using increases productivity; using increases job performance; using enhances effectiveness on the job; and overall usefulness in job.

2.1.2 A Theory of Planned Behavior Approach

Theory of planned behavior is an important theory which presents within the scope of the social psychology and tries to explain human behaviors. This theory was developed by Ajzen (1991) and it is just the improved form of the Theory of Reason Action suggested by Ajzen and Fishbein (1970) in order to explain conscious behaviors. According to this theory, behaviors of the individuals within the society are under the influence of definite factors, originate from certain reasons and emerge in a planned way (Dubin & Wilde 1988)). Nevertheless, the ability to perform a particular behavior depends on the fact that the individual has a purpose towards that behavior. As for the factors determining the purpose towards the behavior, they are attitude towards behavior, subjective norms and perceived behavioral control (Dubin & Wilde 1988). Factors counted above are also under the influence of behavioral beliefs, normative beliefs and control beliefs (Ajzen 2002).

Intention is the basis of this theory and performance of a behavior or its transformation into a different behavior depend on the intention that the individual has generated towards the behavior. Ajzen, described intention as the factor indicating the degree of individual efforts in order to perform a certain behavior (Ajzen 1991). Intention is explained by attitudes towards behavior, individual norms and perceived behavior controls (Klee et al 2000). Attitude includes the evaluations made by the individual who will perform the behavior regarding the act of that behavior. Subjective norm refers to the opinions of the other individuals who are important for individuals that will perform the behavior or are taken as reference as regards to this behavior. Finally, the Theory of Planned Behavior posits that individuals' intentions, together with their perceived control over

the behavior determine whether or not they will actually engage in the behavior.

2.2 Research Ethics

The study asked for full consent from participants where we explained the motivation of study to the participated assesses. They had the freedom to leave the study at any time or may remain silent to specific questions if they were not comfortable. User data was anonymized. All our collected data are securely stored in a locked drive, and only researchers have access to it.

3.0 Research Methodology

This study is a cross sectional design with quantitative approach. The study approach is descriptive in nature, and primary data has been used in this study. First of all, the researcher assembles an overall idea about the processes and ground level scenario of E-filing services in the study areas through document review analysis. The sample for this study consists of individual taxpayers within the city of Dhaka, Bangladesh. Based upon NBR information. The main research area for the study is to examine the case of tax E-filing in Bangladesh. Therefore, the researchers decided to select the sample from Bangladesh.

The sample location was Dhaka, capital of Bangladesh. The reason for selecting Dhaka is that Bangladesh is a unitary Republic with central and local government. However, central government, based in Dhaka city, plays the key role in decision making and policy formulation processes. Most government organizations are located in Dhaka. In addition, the actual revenue collection target for the financial year 2017-2018 was set at BDT 87,190 crore and BDT 62,340.42 crore was collected, of which 44.51% was in fifteen zones of Dhaka and it has reached a total of 73.22% when the large taxpayers and the central survey zone were combined (NBR 2018). Moreover, Dhaka is the center of business and professional activities in Bangladesh. In this study, to examine the tax E-filing issue from the viewpoint of factors that might influence taxpayers' level of intention to use E-filing.

The sample is selected by following the method of proportional allocation under which the sizes of the samples from the different strata are kept proportional to the sizes of the strata. For the purpose of the study

sample size is determined by using formula (Krejcie & Morgan 1970):

$$s = \frac{X^2 NP(1-P)}{d^2 (N-1) + X^2 P(1-P)}$$

Where

s = required sample size

X² = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841)

N = the population size

P = the population proportion (assumed to be 0.50 since this would provide the maximum sample size)

d = the degree of accuracy expressed as a proportion (0.50)

Therefore sample size is determined to 384 taxpayers to which the questionnaire was distributed. This study has followed a convenience sampling method. This sampling method has also been conducted in the context of Malaysia (Ser 2013), the USA and Hong Kong (Chan et al 2000). Convenience sampling method has the advantage over reliability, time and budget constraint. The sample is allocated to each zone according to the population weight. The study has used primary data collected by using structured questionnaires. The survey was conducted during the period of 1st January 2020 to 31st March, 2020. The questionnaire is composed of closed ended questions designed on mostly a Likert scale. Questionnaires were delivered to people of various income levels. Questions were pre-coded during the survey questionnaire, data processing and analysis. The quantitative data were subsequently entered into STATA for analysis.

The questionnaire is designed based upon prior studies utilizing constructs under the technology acceptance model, specifically comfortable to use and advantages; and the theory of planned behavior, specifically behavioral control and subjective norm. The additional construct incorporated is general knowledge about income tax. A pilot study of the questionnaire is undertaken with 25 respondents who include academicians; postgraduate students; and employees of public and private sectors. The pilot study is performed to ensure the clarity of questions; and the reliability and internal validity of the items in the questionnaire.

As the index variable was developed, consistency

within all the items in the question matrix has to be ascertained by a reliability check using Cronbach's Alpha. As long as the value of Cronbach's Alpha is between 0.7 and 1.0, all of the statements in the question matrix can be used to create the index variable, while statements with a value below 0.7 are discarded. Once the exercise is satisfactorily completed, the maximum and minimum outputs are ascertained by sub-menu descriptive statistics together with their respective frequencies. The minimum scores are deducted from the maximum scores, and the residuals are divided by the number of categories in the index variable.

Finally, an econometric model was developed to assess the association between general knowledge about income tax and the exploratory variables. In this study, the cross-sectional data used for that purpose were analyzed using three main tests, the data normality test, multicollinearity and autocorrelation. This is because Gujarati (2003) suggests that it is not necessary to test all assumptions, while it should be applicable depending on the types of data. The complete model is following prior studies on tax issues (Schaupp & Carter 2009; Azmi & Bee 2010) and based upon the following model:

$$I_{fE_f} = \alpha_0 + \alpha_1 GK_{aIT} + \alpha_2 B_{Cont} + \alpha_3 S_{Nom} + \alpha_4 C_{Use} + \alpha_5 A_{dv} + e$$

where;

I_{fE_f} = Intention for E-filing,

GK_{aIT} = General knowledge about income tax

B_{Cont} = Behavioral control,

S_{Nom} = Subjective norm,

C_{Use} = Comfortable to use,

A_{dv} = Advantages, and

e = error in this regression

4.0 Results and Discussions

The distribution of the 384 respondents in Table 1.1 shows that 78.90 percent of them are male and 21.10 percent are female. The age of the respondents is quite evenly spread between 31 years and 60 years, with those above 31 years comprising 89.32 percent of the respondents. The academic levels of the respondents are also quite high, with respondents having graduate

level of education 48.72 78 percent of the sample. According to employment status (37.50%) respondents were engaged in business, followed by private service (34.11%), self-employee (25.52%) and public service (2.87%). Around one-third (29.17%) of the total respondents had yearly taxable income in between BDT 400,001 to BDT 5,00,000 followed by 27.90%, 22.91%, 14.84% and 5.99% of respondents whose income were in between respectively BDT 6,00,001 to 30,00,000, BDT 5,00,001 to 6,00,000, BDT 2,50,000 to 4,00,000 and BDT 30,00,000 and above.

Table-1.1: Respondents Profile (n=384)

Category	No. of respondents	Percentage (%)
Gender		
Male	303	78.90
Female	81	21.10
Age		
21-30	41	10.68
31-40	142	36.98
41-50	99	25.78
51-60	55	14.32
61-70	44	11.46
71 years and above	3	0.78
Marital Status		
Married	351	91.40
Single & Others	33	8.60
Level of education		
No any formal education	19	4.94
Secondary level	76	19.80
Higher secondary level	89	23.17
Graduation level	187	48.70
Post-graduation level	13	3.39
Employment status		
Public service	11	2.87
Private service	131	34.11
Self-employed	98	25.52
Business	144	37.50
Annual level of income		
2,50,000-4,00,000	57	14.84
4,00,001-5,00,000	112	29.17
5,00,001-6,00,000	88	22.91
6,00,001-30,00,000	104	27.09
30,00,000 and above	23	5.99

The internal consistency of constructs is tested using a factor analysis (Pallant 2007). Changes are made in regards to the perceived behavioral control variable and involve two questions being dropped from further

analysis because they create another sub component. Factor analysis concerning the general knowledge about income tax variable results in five components. However, all questions under this variable are utilized because the findings do not change even when any of the questions are included or excluded. Moreover, questions asked under this variable are taken from reliable sources. Table 1.2 shows that all variables have a Cronbach alpha of above 0.7, which is considered appropriate, except for variable general knowledge about income tax, which obtains a Cronbach alpha of 0.591 but is still acceptable for the present study (Sekaran 2003). The test for the normal distribution of data indicates that the data is normally distributed where mean and median of all variables are close to each other (Shannon & Davenport 2001). The skewness and kurtosis of variables also have values between +2 and -2, which also indicates normality of data (Garson 2010).

Table-1.2: Factor Analysis of Variables (n=384)

Variables	Cronbach Alpha
GKaIT	0.591
IfEf	0.824
BCont	0.726
SNom	0.846
CUse	0.991
Adv	0.847

Table 1.3 presents the descriptive statistics of the variables. The minimum value and maximum value of each variable is based upon the average Likert scale value assigned by respondents for all questions in each variable. As Such, the minimum and maximum values may not always be a pure Likert scale number. The mean score of variable intention for E-filing is 4.67 out of 5.00, indicating that respondents have a higher tendency to use E-filing. The mean score of variable advantage is 3.56 and indicates a lower tendency among respondents to perceive E-filing as being advantage. However, the comfortable to use variable is 3.11, which suggests respondents do not perceive E-filing to be an easy system to use. The subjective norm and behavioral control variables, which obtain mean values of 3.65 and 3.32, respectively, suggest respondents do not perceive that internal or external factors influence their actions or behaviors. Finally, the general knowledge about income tax variable is

6.78 out of 13.00, which suggests the respondents do not have high general knowledge about tax and is consistent with findings from prior studies (Nero & Amrizah 2005; Ern & Juan 2005).

Table-1.3: Descriptive Statistics of Variables (n=384)

Variables	Minimum	Maximum	Mean	Std.dev
GKaIT	0.00	13.00	6.78	2.95
IfEf	1.40	5.00	4.67	0.87
BCont	1.30	4.00	3.32	0.68
SNom	1.20	4.00	3.65	0.89
CUse	1.00	5.00	3.11	0.79
Adv	1.70	4.00	3.56	0.78

The potential existence of multicollinearity issues is tested based upon correlations between independent variables. Table 1.4 shows that the highest correlation (0.72) is between advantages and comfortable to use, which is lower than 0.8. Therefore, the results indicate that multicollinearity is not a problem (Cooper & Schindler 2003).

Table-1.4: Spearman Correlation among Variables (n=384)

Variables	(2)	(3)	(4)	(5)	(6)
IfEf	0.721	0.654	0.322	0.505	0.111
BCont		0.711	0.366	0.601	0.130
SNom			0.425	0.677	0.217
CUse				0.423	0.081
Adv					0.176
GKaIT					

Table 1.5 present the results from the multiple regression analysis. The results show that the advantage variable ($\beta = 0.612$, $p < 0.000$) that indicate perceived advantages is positively associated with the intention for E-filing and the comfortable to use variable ($\beta = 0.249$, $p < 0.000$) is positively associated with intention for E-filing that explore perceived comfortable of use is positively associated with the intention to use E-filing in the sample. Both findings are consistent with prior studies, such as Wang (2002), Hung et al (2006) and Fu et al (2006). The subjective norm variable ($\beta = 0.081$, $p < 0.05$) is also positively associated with intention for E-filing in the sample, which could be explained as perceived subjective norms are positively associated with the intention to use E-filing. The finding is consistent with prior studies, as for Hung et al (2006) and Schaupp and Carter (2009).

The behavioral control and general knowledge about income tax variables do not show any significant association with intention for E-filing in the sample. Hence, it can be assumed that perceived behavioral control is negatively associated with the intention to use E-filing. General knowledge about tax is negatively associated with the intention to use E-filing. Nevertheless, the findings are consistent with prior studies, for instance Fu et al (2006) and Suki and Ramayah (2010). One possible explanation concerning the lack of association between perceived behavioral control and intention to use E-filing is that the respondents in the sample do not need their self-ability in order to use E-filing. The use of computer and internet is already part of their daily life. It does not matter whether it is E-government, it is a fact that the use of electronic device and internet is already part of their daily life. It does not matter whether it is E-government, E-filing or E-commerce, they would be able to handle those systems if they wanted to use them. Notwithstanding, Yusri (2008) finds that perceived behavioral control is significant, the survey employed was undertaken a year after E-filing was implemented.

Table-1.5: Multiple Regression of Intention for E-filing on Independent Variables (n=384)

Variables	Coefficient	Std.error	t-statistics
Intercept	0.231	0.211	1.105
BCont	-0.023	0.051	-0.622
SNom	0.081	0.026	1.538
CUse	0.249	0.066	3.578
Adv	0.612	0.053	9.061
GKaIT	-0.016	0.157	-0.107
Adjusted R2		0.621	
F-statistics		92.607	
p-value		0.000	

In respect to the variable of general knowledge about income tax, the lack of association with intention to use E-filing could be due to the fact that the respondents in the sample have general knowledge about income tax, but only at a medium level that is 6.78 out of 13 maximum in above table 1.3. Thus, it may be concluded that tax knowledge may not be important to taxpayers in their decision to choose either E-filing or traditional of tax filing. Alternatively, with the latest E-filing system having many features to assist taxpayers, such as automatically providing individual mandatory self-deduction amounts without taxpayers having to remember the amount, E-filing is manageable for most people, even with minimum tax knowledge.

Nonetheless, the ability to use E-filing does not necessarily mean taxpayers have filed their tax returns correctly, especially those lacking appropriate tax knowledge. Since the NBR is currently focusing more on the issue of audit and investigation after the implementation of E-filing, it is expected that the number of audit and investigation cases may increase (Razilina et al 2012). The E-filing system could result in taxpayers taking advantage of the system if proper monitoring from the NBR is not in place. Thus, the promotion of E-filing use, on its own, would not solve issues of tax compliance faced by the NBR if taxpayers are not being equipped with appropriate knowledge about tax rules and regulations.

5.0 Conclusion


This study examines factors that may influence E-filing among individual taxpayers in Bangladesh between the implementation of the system in 2016 and 2020. This paper investigates whether general knowledge about income tax may influence taxpayers' intention for E-filing in light of the fact that tax knowledge is important to ensure that tax returns are completed correctly and reflect a correct tax liability figure. Empirical findings show that advantages, comfortable to use and subjective norms are positively associated, but perception on behavioral control and general knowledge about tax are not significantly associated with taxpayers' intention for E-filing. Even the findings concerning the insignificant effect of knowledge about tax on E-filing usage, caution should be taken with regards to the generalizability of the findings. It is a fact that, apart from the limited sample size and sampling frame, the questions on tax knowledge are designed based upon prior studies concerning tax compliance issues and not concerning knowledge about system usage is acknowledged. While prior studies find a positive association between knowledge about tax and tax compliance, this study finds an insignificant association between knowledge about tax and E-filing usage.

This study is important since issues concerning the comparatively low usage of E-filing, especially in Bangladesh remain contentious. Even though the NBR has invested a lot of time and effort to promote the use of E-filing in Bangladesh, it is still not widely used among taxpayers. Nevertheless, the findings suggest that the NBR should continue to attempt to increase taxpayers' intention for E-filing, especially by further

enhancing the management of their E-filing system overall.

Future studies may want to examine other factors that could influence E-filing or utilize other methodologies. There is a possibility involves using the experimental method to gauge respondents' intention for E-filing when they are given hands-on training on how to use E-filing; and subsequently conducting a survey to obtain responses from respondents. Another way to capture respondents perceptions concerning whether general knowledge about tax affects their E-filing usage could include asking them direct questions rather than testing the extent of their tax knowledge. Therefore, future studies could follow up on this suggestion to find further evidence on the issue of the effect of knowledge about tax on E-filing usage.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article. 

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Could you please tick mark on the following statement where you feel comfortable?

28.	Statements	Strongly Agree	Agree	Moderately Agree	Do Not Agree	Strongly Disagree
	Comfortable using E-filing on my own.					
	To use E-filing even when there is no one to assist me on how to use it.					
	It could prepare my income tax return using E-filing if there is someone to show me how to do it first.					
	It easy to handle equipments like computer and internet for E-filing if I wanted to do so					
	Computers and internet at work is not enough for my E-filing purposes.					
	Computers and internet at home is not enough for my E-filing purposes					
	It is easy for me to get help when I have problems using E-filing at work.					
	It is easy for me to get help when I have problems using E-filing at home.					
	It is easy for me to get help when I have problems using E-filing at computer shop.					
	E-filing an easy system to learn.					
	E-filing an easy system to use					
	It is not easy to become skillful in using E-filing.					
	It is easy for me to key in and make data corrections when using E-filing.					
	E-filing instructions are easy to follow.					
	Using E-filing will speed up my tax filing process.					
	Using E-filing will improve my understanding in preparing my income tax return.					
	Using E-filing would help me reduce errors in preparing my income tax return					
	Overall the advantages of E-filing will outweigh the disadvantages.					
	E-filing will give no benefit to me.					

