Do Incentives Matter in Persuading Companies to Embrace Advanced Reporting Standards Voluntarily?

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Abstract

Using the evidence from Malaysia this study aims to investigate how incentives for Extensible Business Reporting Language (XBRL) affect the relationship between the intention to use and user behavior when it comes to filing submissions. In this regard a survey was implemented among company employees who are involved in the preparation and submission of filings to Suruhanjaya Syarikat Malaysia (SSM). Results indicate that incentives strengthen the positive relationship between XBRL filing intention to use and usage behavior. The study also discovered that intent to use significantly impacts XBRL filing behavior. Compared to perceived usefulness, perceived ease of use was found to have a greater influence on XBRL filing intention. Perceived ease of use was also found to be a significant indicator of XBRL filing perceived usefulness. The result of this study provides guidelines for incorporating XBRL technology into the practices of government authorities and policymakers. The study's findings can also be used to develop strategies to encourage filers to submit voluntary filings using the XBRL platform.

Keywords: business reporting standards; technology acceptance model; usage behaviour; intention to use technology; incentives; XBRL; MBRS

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Introduction

Financial reporting is a written document that communicates the company's financial position. Financial fraud or misleading information in financial reporting has always been a major concern among users. To monitor this wrongdoing scenario, many countries have introduced standards for reporting to regulatory bodies have been introduced, guaranteeing transparency of companies and compliance with established rules (Christopher, Ong, 2019). A business report is traditionally prepared in an electronic format such as Microsoft Word or PDF (Ghani et al., 2014). Traditional electronic formats often have restricted functionality and will indicate copying and pasting errors. This issue can be remedied by utilizing the Extensible Business Reporting Language (XBRL) format, an open standard language (Hoffman, 2006; Uyob et al., 2022; Bai et al., 2014; Chong et al., 2017; Liu et al., 2017). Many countries such as the United Kingdom, the United States, Denmark, Germany, Peru, Japan, Spain, Singapore, South Korea, and Chile employ XBRL in their filing submission systems for business registration and attracting potential business investors and financial experts from around the world (XBRL International, 2021).

In Malaysia, XBRL reporting has been acknowledged in terms of implementation, but adoption has been difficult to gain traction. Only 3.6% of Malaysian audited companies use XBRL for online filing submission reports (SSM, 2019). The authorities have invested heavily in promoting the use of XBRL-based filing platforms by offering incentives such as free training, consulting, and technical support (SSM 2019). Therefore, it is critical to examine filers' usage behaviour in response to the incentives provided.

No empirical studies have yet been conducted (at least in Malaysia) to investigate the moderating effects of incentives, particularly in XBRL studies[1].

This study attempts to fill in the gap by investigating the moderating effects of incentives. To achieve the study's objective, XBRL filing in Malaysian settings was investigated. Different cultures influence acceptance or rejection of a new system (Huang et al., 2019), and as such, usage behaviour in Malaysia may differ from that of other countries[2]. Although prior XBRL studies have shed light on the factors influencing XBRL filing adoption, there are still many other factors that need to be explored given the uniqueness of the Malaysian environment. Understanding the current situation is important as the country works hard to strengthen its technologically advanced economy[3]. Besides, Malaysia has one of Asia's fastest economic growth rates; thus, an investigation of the Malaysian setting can serve as a model for other emerging countries adopting XBRL. Thus the study's findings are expected to provide useful information to authorities, particularly regarding incentives for XBRL, allowing authorities to plan and develop strategies to encourage filers to use XBRL for voluntary filing.

Literature review

XBRL in the Malaysian Business Reporting System (MBRS)

Previously, business registrar filings were frequently submitted over the counter via the manual handling system, where the company had to print all relevant documents. However, issues such as limited physical storage capacity, lengthy processes, human error, submission delays, and missing physical papers/documents have always arisen due to the limitations of this system (Uyob et al., 2019a). Electronic filing can potentially improve filing efficiency while addressing the issue with manual handling systems. Another issue is transferring and converting data to multiple digital platforms. The majority of basic electronic formats have limited functionality and will indicate a copying and pasting issue. Transferring and converting data to a new digital platform will require considerable clerical work, money, and time (Choi, 2016).

XBRL is tagged to financial and non-financial data relevant to business reporting and decision-making in an XML-based framework (Hoffman, 2006). Thus, the XBRL format is more user-friendly, popular, and unique (Dong et al., 2016). Financial reporting users can extract, use, and analyse financial information from organizations' in minutes, thanks to a technology known as "barcode for reporting" (Uyob et al., 2019b). It also improves the quality, precision, and trustworthiness of financial data, making the operating process more effective and efficient, particularly in the filing preparation and submission process (Ib et al., 2015).

Suruhanjaya Syarikat Malaysia (SSM) developed the MBRS platform for online XBRL filing submission to capitalise on the uniqueness of the XBRL format and improve the Malaysian business filing procedure[4]. Com-

[1] According to recent studies on the use of e-filing systems and food safety in Malaysia, there is no evidence that incentives affect moderate users (Aziz, Idris, 2016; Fernando et al., 2015)

[2] For example, the Malaysian Business Reporting System (MBRS) is voluntary in comparison to other countries such as Singapore.

[3] To achieve this goal, Malaysia Digital Economy Blueprint is implemented, and efforts to improve public services are undertaken (https://www.malaysia.gov.my/, accessed 14.02.2023).

[4] The SSMXT, the MTOOL, and the MPORTAL are the three key components of MBRS (SSM, 2021). SSMXT is an XBRL taxonomy-based dictionary of financial and non-financial reporting elements. The second version of the SSM taxonomy, i.e., SSMXT-2017, was utilised for the MBRS to comply with the new Malaysian Companies Act 2016 and Malaysia accounting standards. This component of XBRL used to generate XBRL file/document that meet MBRS criteria. MTOOL, on the other hand, is a Microsoft Excel-based application that allows filers to generate XBRL file/documents that already embedded in SSMXT. The MTOOL is a ready-to-use template for those without an XBRL that is integrated with SSMXT. MTOOL can also convert different reporting files types into XBRL file format, either online or offline. SSM offers a free download of MTOOL as an incentive to encourage the adoption of the XBRL platform. The third component is the MPORTAL, which is an online web portal where filers can submit and lodge all filing requirements with the SSM in the form of XBRL files. Filers can use MPORTAL to make inquiries, verify status, and make all necessary payments online (SSM, 2021). MBRS-related training session have been held on a constant basis to ensure the filers are ready to use MBRS. As of 2018, over 4,000 financial filers have received training to improve their understanding and skills in updating information and exchanging data via MBRS (https://www.nst.com.my/news/nation/2018/09/415468/mandatory-companies-submit-their-documents-ssm-new-platform-soon, accessed 12.02.2023).

panies in Malaysia can use MBRS to submit annual filings such as financial reporting statements (FS), annual returns (AR), and all exemption applications related to the FS and AR electronically (SSM, 2021).

Incentive as a Motivational Element

An incentive, according to Locke (1968), is "an event or object external to the individual which can incite action". It was intended to stimulate behavior by rewarding a specific behavior and was strongly tied to the individual's actions (Roumani et al., 2015). Skinner (1956) argued that human behavior is based on the principle of reinforcement. He further asserts that long-term behaviors occur as human actions and behaviors are reinforced by incentives. This is supported by the theory of expectancy, which states that "an individual will act or behave in a certain way because they are motivated to select a specific behavior over others due to what they expect the result of the selected behavior will be (Oliver, 1974; Deci, 1971; Kohn, 1997). By comparing subjects who received and did not receive financial performance incentives, Camerer and Hogarth (1999) predicted the effect of financial incentives on human behavior. Their study found that extrinsic incentives had a substantial effect on judgment tasks. This finding supports Milgrom and Robert's (1995) finding that incentives have a significant effect on behavior. In information systems studies, an incentive has also been used as a mechanism to enhance technology adoption. According to Ba et al. (2001), an incentive can influence user behavior and system communication. Furthermore, when incentives are employed, overall decision-makers have a more positive stance about the behavior of adopting new technologies (Roumani et al., 2015).

Prior studies have been conducted to examine the influence of incentives on technology adoption (Aziz et al., 2016; Fernando et al., 2015; Roumani et al., 2015). Not all studies on incentives provide positive outcomes, depending on the scope of the study (see Aziz et al., 2016; Fernando et al., 2015). For example, research on the effects of incentives yielded inconclusive or unfavourable results (Aziz et al., 2016; Ba et al., 2001). These investigations ensure that the incentives provided align with the users' interests and the system's characteristics and potential ability to achieve goals. In order to influence users' behavioural intentions to accept and use certain technologies, incentive alignment is important and should be considered (Aziz et al., 2016; Ba et al., 2001). This is also to ensure that users perceive the incentives that can persuade them to perform a behavior.

To encourage filers to utilize MBRS, SSM is also providing incentives. Filers who attend an MBRS course conducted by SSM or one of its training partners, receive continuing professional education (CPE) points (SSM, 2019). SSM also provides extra filing time if filers prefer to submit through MBRS, free consultation and support assistance, and free installation of MTOOL to facilitate MBRS use. Despite the aforementioned incentives, no study has empirically proven the interaction effect of incentives on the relationship between the intention to use and the usage behaviour of XBRL filing via MBRS.

Technology Acceptance Model (TAM) as Underpinning theory

Davis introduced TAM in 1989 to predict user behaviour when using a computer system. TAM, which evolved from the theory-reasoned action (TRA) concept, introduced perceived usefulness and perceived ease of use in predicting individual computer behaviour. According to TAM, three factors (attitude, perceived usefulness, and perceived ease of use) will significantly influence the intention to use, which is highly capable of translating into actual usage behaviour of actions (Davis, 1989). TAM, which has been empirically proven to predict individual behaviour toward technology acceptance, has been employed by several information systems researchers. This theory has now been widely used in a variety of disciplines, including psychology, sociology, and management, in predicting users' intentions to implement technologies (Agrebi, Jallais, 2015; Gangwar et al., 2015).

Since this study examines filers' voluntary usage of XBRL filing, which is more oriented to the perspective of individuals than organizations, TAM theory is the most appropriate underpinning theory.

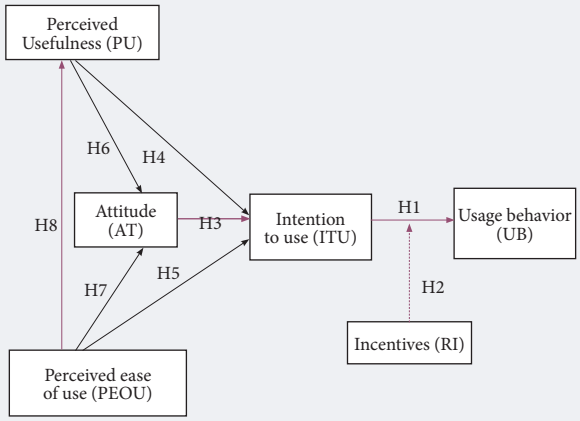
It should be noted, that the application of TAM has evolved throughout time, and has its extended version - the unified theory of acceptance and use of technology (UTAUT) that examines the similarities and differences of previous models, including TAM, TRA (Fishbein, Ajzen, 1980), and TPB (Ajzen, 1985). Among the main concepts discussed are expected performance, expected effort, social influence, and facilitating conditions, as well as four significant variables that predict technology use behavior, including gender, experience, age, and voluntariness of use (Venkatesh et al., 2003). Despite the fact that UTAUT has a simple structure and a high explanatory power, there is not always agreement on the nature of interactions between UTAUT components, particularly when used in different contexts (Alshammari, Rosli, 2020). Furthermore, due to issues of homogeneity and professionalism characteristics in this study's unit of analysis, some of the main constructs proposed in UTAUT, such as gender and social influence, do not appear to fit the context of this study. Thus, the original TAM construct, i.e. perceived ease of use, perceived usefulness, and attitude is utilized to determine the causal relationship between the intention to use XBRL for file submission.

Hypotheses Development and Justification

The hypotheses of our study regarding the use of XBRL for reporting through the MBRS system (Figure 1) are formulated as follows:

H_1: Intention to use (ITU) significantly influences usage behavior (UB) of XBRL filing through MBRS.

Figure 1. **Research model and hypothesis**



Source: authors.

H_2: Incentives (RI) moderate the relationship between intention to use (ITU) and usage behavior (UB) of XBRL filing through MBRS.

H_3: Attitude (AT) significantly influences intention to use (ITU) XBRL filing through MBRS.

H_4: Perceived usefulness (PU) significantly influences intention to use (ITU) XBRL filing through MBRS.

H_5: Perceived ease of use (PEOU) significantly influences intention to use (ITU) XBRL filing through MBRS.

H_6: Perceived usefulness (PU) has a significant influence on attitude (AT) of XBRL filing through MBRS.

H_7: Perceived ease of use (PEOU) has a significant influence on attitude (AT) of XBRL filing through MBRS.

H_8: Perceived ease of use (PEOU) significantly influences perceived usefulness (PU) of XBRL filing through MBRS.

Below is a brief review of the literature on the relevant factors that served as the basis for their formulation.*Intention to use (Hypothesis H1).* Ajzen (1991) defines intention as a mental image that expresses a person's level of readiness to engage in a particular behaviour, and acts as the behavior's immediate precursor. Many previous behaviour studies have concluded that intentions have strong positive relationship with actual behaviour and accurately predict various action tendencies. Popular psychological theories such as theory reasoned action (TRA) and theory of planned behaviour (TPB) supported this conclusion. TAM also proposed in the information system studies discipline that high user intention to use might lead to actual technology utilization. This is evidenced by studies in numerous domains of information systems, such as m-banking (Hjiyev, Chang, 2017) and e-banking services (Ahmad et al., 2020), which discovered that the intention to use certain technologies has a major influence on user behaviour. However, because the intention is not static and can change depending on specific circumstances such as new information, individual differences, or unforeseen factors, it is not an accurate proxy for defining usage behaviour. Furthermore, according to e-commerce studies, online customers/shoppers frequently decline purchases, even if they are strongly drawn to the product (Jung, Jae, 2015).*The incentives (Hypothesis H2).* A moderating variable affects or moderates the relationship between two other variables, resulting in an interaction effect. Incentives have been used by many organizations, including governments, to encourage or persuade people to embrace and use specific technologies. According to Roumani et al. (2015), incentives are an effective way to moderate and improve user's intentions to adopt new technologies. Nonetheless, Aziz and Idris (2016) and Fernando et al. (2015), found no evidence to support the moderating effect of incentives to accept e-filing tax and Malaysian food safety systems in their respective study on taxes and food safety. They also suggest that the major criteria for authorizing any new technological application should not be based solely on incentives. *The attitude to technology (Hypothesis H3).* The perceived degree of positive and negative sentiments about performing the target behaviour is described as "attitude" (Ajzen, 1991). Davis and Venkatesh found that perceived usefulness and ease of use directly influenced intention to use the final TAM model, thereby eliminating attitudes from the original TAM framework (Taherdoost, 2018). However, empirical studies in the area of information systems, such as e-learning (Yoon, 2016) m-commerce (Khoi et al., 2018) and m-banking (Muñoz-Leiva et al., 2017), have come to the conclusion that attitudes have a significant influence on technology use intention. In XBRL studies, the effect of attitude on intention to use has yielded inconclusive results. For example, (Chouhan, Goswami, 2015) discovered no effect on practitioners' attitude toward XBRL in North India. However, Ilias et al., (2020) found disparities in their study on 12 secretaries' practitioners in Malaysia. The study revealed that one of the primary hurdles for the organization's intention to adopt XBRL was the preparer's attitude, which reflects the conflicting findings of previous studies. This study is needed to confirm this hypothesis based on the disparities in results.*The perceived usefulness (Hypothesis 4).* According to TAM, perceived usefulness factors are one of the main indicators in technology usage studies. Perceived usefulness refers to individuals' perceptions of improving tasks completed when using the system in question (Davis, 1989). In addition, most studies have found that perceived usefulness is the most significant factor that influence the intention to use technology (Elkaseh et al., 2016; Yu et al., 2018). Elissavet et al. (2013) discovered that perceived usefulness was a crucial factor driving XBRL intention in their XBRL study. According to the study's findings, increasing the perceived usefulness factors by 1% increased the intention of European companies to embrace XBRL by 0.647%. Rawashdeh and Selamat, (2013), on the other hand, observed that perceived usefulness had no effect on the intention to implement XBRL in Saudi Arabia. This indicated that, despite their awareness of the benefits of XBRL, they do not express an interest in using it. However, the factors affecting the XBRL adoption in Saudi Arabia differ from those encouraging widespread XBRL adoption in developed

countries. *The perceived ease of use (Hypothesis H5).* TAM suggests that when deciding how to use technology, most users aim to reduce the amount of effort required to complete their tasks. Thus, the simpler the technology is to be used, the greater the intention to use the technology (Davis, 1989). The idea of "perceived ease of use" in TAM represents an assessment of the degree to which a user's interaction with a system or a specific information technology is free of mental effort. Most previous XBRL studies have shown that perceived ease of use factors positively influence the intention to use XBRL. This is supported by the findings of Elissavet et al. (2013), Rawashdeh and Selamat (2013) and Ogundeji et al., (2014), who demonstrated that perceptions of XBRL's ease of use and complexity reflect its intention to be used. However, since XBRL was introduced more than two decades ago and has grown in favour among organizations and regulators, the complexity of its application does not appear to be a major concern. This is because these organizations actively provide intensive training to users to improve their understanding of XBRL (XBRL international, 2021). *The influence of perceived usefulness (PU) and perceived ease of use (PEOU) on attitude (AT) (Hypotheses 6 and 7).* Chouhan and Goswami (2015) discovered that perceived usefulness and ease of use significantly positively impact attitudes for using XBRL in India. Furthermore, Chouhan and Goswami (2015) found that combined perceived usefulness and perceived ease of use factors explained 73% of the attitude factor to use XBRL. This is supported by Uyob et al. (2019a) which revealed that perceived usefulness and ease of use significantly positively influence attitude toward using MBRS. This study however, was conducted prior to the establishment of MBRS. Because of the different timeline, the findings may change after the official implementation of MBRS.

The influence of perceived ease of use (PEOU) on perceived usefulness (PU) (Hypothesis 8). Although preparers recognize that using XBRL will improve the quality of their job, the difficulties and lengthy process of matching financial data with a given set of taxonomies make the XBRL system less appealing to embrace, resulting in poor XBRL adoption in India. Therefore, Chouhan and Goswami (2015) contend that perceived ease of use is an important factor in determining XBRL's perceived usefulness. However, the complexities and taxonomies in India differ from those in XBRL filings under the MBRS scope. Nevertheless, this study posits that perceived ease of use influences the perceived usefulness of XBRL filing through MBRS.

Methodology

Target Respondent, Population and Sample Size

To analyse the scenario of XBRL filing through MBRS usage behaviour, the response from the filers was needed in this study. Filers in this study refer to the representative officer responsible for preparing and submitting company filing to SSM. To file a filing with the SSM in Malaysia, the individual must be a qualified professional secretary who is registered licenced by the SSM. Before submitting files via MBRS, secretaries must first register as a "LODGER" (only "LODGER" can submit filings to SSM). However, SSM approval is not required for the role of "MAKER". The "MAKER" is the person involved in preparing and filing the report, which the company's accountant normally does. The Malaysian Institute of Accountants (MIA) members are qualified to practise as both professional secretaries and accountants, which may reflect the overall scenario of MBRS. Thus, the MIA members who are involved in preparing and submitting financial reporting filings to SSM are the target respondents for this study.

MIA members are categorized into four sectors: commerce and industry, public practice, public sector, and academician (MIA, 2020). Only MIA members from commerce, industry, and public practises are active in real business activities. As a result, the population of this study is limited to MIA members from commerce and industry, as well as public practices. According to MIA website, there were 28,206 MIA members from commerce industry and public practise as of January 13, 2021. 379 respondents were suggested as the sample size based on Krejcie and Morgan's (1970) estimation table.

Data Collection Procedure

Since the MIA has a policy of not disclosing member details (which is also restricted under the Malaysian Personal Data Protection Act 2010), the probability sampling technique cannot be used (due to the lack of a sampling frame). As a result, the questionnaire was distributed using a convenience sampling method utilizing a non-probability sampling technique. Despite its limitations, the convenience sampling method has been employed in a variety of studies, including finance (Krische, 2019), science (Cooper, Farid, 2016), and marketing (Sanne, Wiese, 2018). However, this study adopted two strategies to increase the response rate and reduce response bias during the data collection process.

The first strategy was to identify accurate potential respondents, and the SSM website was used to download a list of registered business secretaries' names. These names on the list were filtered using information obtained from the MIA membership directory (only information regarding the status of membership and names can be viewed on the MIA website). Following the comparison and screening, Internet searches, like those on Google and social networks, are conducted to confirm potential respondents and obtain their contact details and email addresses so that the questionnaire link (the Google form link) can be sent to them to be completed. Before distributing the questionnaire link, the author obtained consent from the potential respondent. From January to June 2022, the data collection process for this strategy took around six months. Throughout the process, respondents were given friendly reminders to complete and submit the online survey.

The second strategy is for SSM to assist with the data collection process. SSM organises MBRS application training on a regular basis. The SSM assisted this study by distributing questionnaire links to training participants or practitioners during training sessions. Throughout six online MBRS training sessions from January to June 2022, participants are provided links and asked to fill out an online questionnaire.

A total of 261 questionnaires were successfully collected at the end of the data collection process. However, only 237 (62.3%) responses could be used for further analysis after screening and cleaning, which included removing outliers and incomplete responses. Although it is less than Krejcie and Morgan's (1970) suggested sample size, it is still considered adequate because the minimum sample size according to the rule of thumb is 60 (the total number of study variables multiplied by 10) (Roscoe, 1975). Nevertheless, other statistical scholars such as Hair et al., (2019), claimed that the minimum number of sample size required for multiple regression and structural equation modeling (SEM) analysis is at least 200 samples. Therefore, it is deemed adequate since a total response rate of 30% or above is considered satisfactory for social science researchers (Sekaran, Baougie, 2016).

Survey Instrument

To achieve the study's objective, a questionnaire was developed to elicit responses from the target respondents. There are two sections to the questionnaire. The first sections asked questions about the respondent's profile, such as age, gender, organizations, and years of working experience. This section also contains screening questions to ensure that respondents are MIA members involved in preparing and submitting SSM filings. Those who do not meet the study's eligibility requirements will be excluded. These sections were measured using a nominal scale and a ratio scale.

Following that, a questionnaire related to the construct measurement of the constructs was administered. Items and questions for each construct were adapted from previous studies using a 5-point Likert scale. Seven items adapted from Isaac et al., (2018) and Riskinanto et al., (2017) were used to assess the usage behaviour construct. Five items adapted from Yoon (2016) were used to assess construct intention to use. Six items adapted from Fernando et al., (2015) and SSM (2019) measured the incentives construct. Six items adapted from Uyob et al. (2019a) measured the attitude construct. Five items adapted from Chouhan and Goswami (2015) measure the perceived usefulness construct. Finally, six items adapted from Muñoz-Leiva et al. (2017) and Nagy (2018) measured perceived ease of use. Table 1 below shows the detailed questionnaire item used to measure each construct. To ensure the validity and reliability of the survey instruments, pre-test and pilot study analyses were performed prior to final distribution, and the findings validated the measurements' reliability and validity.

Results

Respondent Profile

The majority of the respondents (68.4%) were adults between the ages of 41 and 50, with more than half of them female (57.8%). Furthermore, the vast majority of respondents (71.7%) worked in small practices, as opposed to mid-tier (25%), and big four (2.5%). In terms of experience, more than half of the respondents (68.4%) had more than 16 years of work experience. The descriptive data for the respondent's profile are shown in Table 2 below.

Measurement Model Assessment

The purpose of assessing the measurement model is to confirm that the items measure the same construct as intended, reflecting the instrument's reliability and validity. The measurement model was evaluated using individual item reliability, internal consistency reliability, convergent validity, and discriminant validity, as indicated by Henseler et al. (2009) and Hair et al. (2017).

Individual Item Reliability Test. The reliability of each individual item is evaluated using the construct's outer loadings as the first criterion for measuring the measurement model (Duarte, Raposo, 2010; Hair et al., 2017). According to Chan (2003), item loading less than 0.3 is poor, 0.3–0.50 is fair, 0.51–0.60 is moderate, 0.61–0.80 is fairly strong, and more than 0.81 is very strong. Hair et al. (2017) advise that outer loadings between 0.40 and 0.70 should be carefully examined and should only be removed if doing so increases the values of composite reliability (CR) and average variance extracted (AVE). Based on Hair et al. (2017) recommendations, two items (PI1 and PI6) have been removed. The item loading for all construct outer loadings is between 0.715 and 0.969, which indicates strong item loading.

Internal Consistency Reliability. According to Bijttebier et al. (2000), "internal consistency reliability" refers to the extent to which all components are measuring the same notion. Hair et al. (2017) proposed Cronbach Alpha (CA) or composite reliability (CR) for assessing internal consistency dependability. In this study, the researcher determined the CR to assess internal consistency reliability because the CR has less estimation bias than Cronbach's alpha. Furthermore, the CA coefficient's dependability assumes that all components contribute equally to the construct without taking into account the actual contributions of each factor loading (Hair et al., 2019). To evaluate the CR coefficient, a value of 0.70 or above must be used (Hair et al., 2017). Table 3 showed that all of the investigation's components had CR values greater than 0.70, which denotes the presence of internal consistency.

Convergent Validity. Convergent validity refers to the extent to which two or more measurements of the construct developed are interrelated as proposed in the theory or research model (Hair et al., 2011). Chin (1998) proposed that in order to attain acceptable convergent

Table 1. **Details questionnaire item for each construct and underlying literature**

Usage behaviour (UB) (Isaac et al., 2018; Riskinanto et al., 2017)
"I use MBRS for submitting financial reporting filings as required by SSM"
"I use MBRS for the process of preparing of financial reporting filings to SSM"
"I use online submission to SSM to submit financial reporting filings"
"I regularly use MBRS to check the financial reporting filing status after submitting it to SSM"
"I use MBRS to make payments to SSM for financial reporting filings"
"I consider using MBRS every time I submit financial reporting filings to SSM"
"I would prefer to use MBRS to manage financial reporting filings for SSM"
Intention to use (ITU) (Yoon, 2016)
"I think I will use MBRS more often for submitting financial reporting filings to SSM"
"If I have a chance, I intend to use MBRS as much as possible"
"I chose to use MBRS for the process of preparing of financial reporting filings to SSM"
"I highly recommend using MBRS for financial reporting filings"
"In the future, I plan to use MBRS for submitting online financial reporting filings to SSM"
Incentives (RI) (Fernando et al., 2015; SSM, 2019)
"Receiving sufficient continuing professional education (CPE) hours on each training inspires me to use MBRS"
"SSM provided a free MTOOL download that persuade me to use MBRS"
"SSM provided a free MBRS template to generate XBRL files for MBRS submission, which convinced me to use MBRS"
"Extra extension time for submission of financial reporting filings using MBRS convinces me to use MBRS"
"SSM provides free consultation without charge, which motivates me to use MBRS"
"I felt the SSM incentive given to us to use MBRS aligned with my interest"
Attitude (AT) (Uyob et al., 2019a)
"I think using MBRS for submitting online financial reporting filings to SSM is such a wonderful idea"
"I have positive feelings toward MBRS in general"
"It is easier for me to use MBRS for the preparation of financial reporting filing submissions"
"It is better for me to use MBRS, for submitting online financial reporting filings to SSM"
"I think nowadays, a digital platform such as MBRS is a must"
"I am in favour of using MBRS for the process of submission of financial reporting filings to SSM"
Perceived usefulness (PU) (Chouhan, Goswami, 2015)
"Using MBRS can save my time when submitting financial reporting filings to SSM"
"Using MBRS allows me to manage my work more efficiently related to the preparation of financial reporting filings"
"Using MBRS improves the quality of the financial reporting filings I do"
"MBRS enables me to accomplish tasks related to the preparation of financial reporting filings more quickly"
"I think MBRS is useful for managing the submission of financial reporting filings to SSM"
Perceived ease of use (PEOU) (Muñoz-Leiva et al., 2017; Nagy, 2018)
"I believe that interacting with MBRS for the preparation of financial reporting filings does not require a lot of mental effort"
"I find it easy to access the MBRS platform to submit financial reporting filings when and where I want"
"My interaction with MBRS is clear"
"I find MBRS is not too complex to use it"
"I find the procedure of using MBRS for the submission of financial reporting filings understandable"
"I find MBRS easy to use"
Note: For usage behaviour, construct a Likert scale measurement range from 1 to 5, with 1 = "never" to 5 = "always." Whereas for other constructs, 1 to 5 Likert scale anchored by 1 = "strongly disagree" to 5 = "strongly agree".
Source: authors.

validity, the AVE for each variable should be at least 0.50 or higher. Based on Table III above, the value of the AVE for this study is above 0.5. Therefore, there is no convergent validity problem in this study.

Discriminant Validity. The goal of discriminant validity is to guarantee that the constructs in the measurement model are independent of one another and to check its validity. A construct's discriminant validity measures how truly different it is from other constructs by implying that each scale is more closely related to its construct than to other scales (Hair et al., 2019). Henseler et al. (2015) proposed an alternative method known as the Heterotrait-Monotrait Ratio (HTMT) approach, which is based on the multitrait-multimethod matrix to determine discriminant validity. When the HTMT results exceed the predetermined threshold level, the issue of discriminant validity arises. The threshold value of 0.90 was proposed by Henseler et al. (2015). However, Hair et al. (2019) recommended 0.85 as the highest acceptable value of HTMT. Based on the results shown in Table 4, the HTMT value for this study is within the acceptable range.

Structural Model Assessment.

Based on Kock (2015) suggestion, the full collinearity inflation factor variance test (VIF) was used to examine the common method bias problem. All VIF values (intention to use 1.240; incentives 1.201; attitude 1.390; perceived usefulness 1.587; and perceived ease of use 1.826; moderating effect (ITU*RI_UB) 1.046) were less than 3.3 indicated no issue on common method bias.

Table 2. **Descriptive statistics for respondent profiles**

Item	Number of respondents	Share (%)
Age		
20 - 30 years	1	0.4
31 - 40 years	41	17.3
41 - 50 years	162	68.4
Above 50 years	33	13.9
Gender		
Male	100	42.2
Female	137	57.8
Organization size		
Big Four	6	2.5
Mid-Tier practice	61	25.7
Small practice	170	71.7
Work experience		
Less than 5 years	1	0.4
5-10 years	15	6.3
10-15 years	59	24.9
More than 16 years	162	68.4
Source: authors.		

The evaluation of data in PLS-SEM using the structural model is the next step after establishing the validity and reliability of the measurement model. In PLS, the evaluation of the structural model informs the researcher how much the empirical data set supports the hypothesis or theory under consideration. Consequently, the structural model displays the directionality between the constructs as well as the t-values and route coefficients that are associated with them (Hair et al., 2019). To analyse the idea links in the research model, path coefficients in PLS are used. The bootstrapping approach with at least 5000 bootstrapping samples is advised to be used for testing the structural model (Hair et al., 2017). Therefore, the evaluation of the structural model for this study was tested by running a 5000-bootstrapping sample of 237 cases to obtain the significance of the path coefficients for the structural model. Figure II below shows the results of the bootstrap structural model for this study.

In regard to the statistical estimation of the hypothesis testing coefficient path model, the findings display the t-value and p-value. Hair et al. (2019) state that the two-tailed test's critical value for significance is 1.96 at a significance level of 5%. The results indicate that H1, H2, H4, and H5 were accepted, while H3 was rejected. Table 5 below shows the results of study hypothesis testing.

Evaluation of the Moderating effect strength

As stated in table V, the results of hypothesis testing for the moderating effect (H2) were empirically supported. Besides, the results of these study hypotheses are also proved by changing the R^2 value when it is measured with other study constructs. The R^2 value for the usage behaviour (UB) construct has been found to increase from 0.385 to 0.397. Table VI below shows the detailed results of the R^2 value for the usage behaviour (UB) construct with and without a moderating construct.

According to Cohen (1988), the moderating effect size (f^2) values are considered weak if 0.02, moderate if 0.15, and strong if above 0.35 (Henseler, Fassott, 2010). For this study, the value of the moderating effect is 0.009, which indicates a weak effect size. Even though the moderating effect strength has a weak impact size, it does not necessarily suggest that the effect is unimportant (Chin et al., 2003).

Assessment of Prediction Relevance (Q^2)

In Smart PLS software 3.2.9, the predictive relevance of a model can be estimated by using the blindfolding technique with an omission distance of 7. Hair et al. (2019) proposed three-level criteria for evaluating Q^2, with 0.35 regarded as big, 0.15 as medium, and 0.02 as small predictive importance for a specific endogenous construct. The Q^2 test result was 0.354, indicating that the model has a big predictive significance (Hair et al., 2019). Besides, the standardised root mean square residual (SRMR) value is 0.085, which is below 0.10, indicating the model has a good model fit (Hu, Bentler, 1998).

Table 3. **Cronbach Alpha and composite reliability (CR) results for this study**

Construct	Cronbach alpha (CA)	Composite reliability (CR)	Average variance extract (AVE)
AT	0.909	0.929	0.687
ITU	0.927	0.945	0.775
Moderating Effect (ITU*RI_UB)	1.000	1.000	1.000
PEOU	0.916	0.935	0.709
PU	0.972	0.978	0.899
RI	0.878	0.914	0.726
UB	0.983	0.985	0.906
Source: authors.			

Table 4. **Discriminant Validity by Heterotrait-Monotrait Ratio (HTMT)**

	AT	ITU	Mod	PEOU	PU	RI
ITU	0.497					
Moderating Effect (ITU*RI_UB)	0.113	0.184				
PEOU	0.550	0.749	0.198			
PU	0.408	0.649	0.184	0.630		
RI	0.601	0.437	0.035	0.249	0.263	
UB	0.192	0.638	0.173	0.463	0.405	0.334
Source: authors..						

Table 5. **Hypothesis testing results**

Hypothesis	Relation	Original Sample	Standard Deviation	T Statistics	P Values	Results
H1	ITU → UB	0.566	0.050	11.335	0.000	Accepted
H2	Moderating Effect (ITU*RI_UB) → UB	0.082	0.040	2.023	0.043	Accepted
H3	AT → ITU	0.111	0.062	1.778	0.075	Rejected
H4	PU → TU	0.293	0.071	4.132	0.000	Accepted
H5	PEOU → ITU	0.468	0.081	5.787	0.000	Accepted
H6	PU → AT	0.136	0.070	1.930	0.054	Rejected
H7	PEOU → AT	0.437	0.071	6.155	0.000	Accepted
H8	PEOU → PU	0.599	0.079	7.625	0.000	Accepted

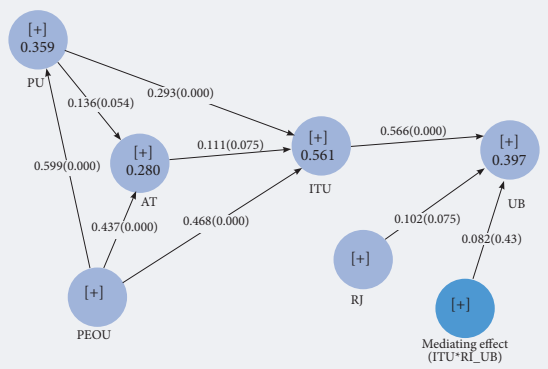
Source: authors.

Discussion

According to Ajzen (1985), intention alone cannot be directly translated into actual behavior in action; however, XBRL usage behaviour can be predicted based on the filer's intention to use XBRL filings. It has been empirically proven by the findings of this study, which found that intention to use has a significant influence on the behavior of using XBRL filing through MBRS and supporting H1. The data analysis also shows that changing the intention to use by 1% can increase 0.566% of the usage behaviour, indicating a strong influence. This is consistent with the TRA, TPB, and TAM theories, according to which intention is a strong predictor of behaviour.

Despite the fact that the results of the moderating effect for incentives indicate a small and too weak effect size (0.009), the importance of this factor in explaining the usage behaviour of XBRL filing cannot be ignored because the results according to H2 were statistically significant. The increased in R^2 value when the moderating variable is present suggest that incentives strengthen the positive relationship between XBRL filing through MBRS and usage behaviour. However, since the effect size was determined to be too weak, there may be other or additional factors, such as moderating or mediating factors, that can influence R^2, which are beyond the scope of this study. Consequently, it is proposed that future studies investigate these intervening factors. From the authority's responsibility, particularly SSM, it is proposed to implement a strengthening strategy to encourage XBRL filing by improving the current incentives.

Figure 2. **Bootstrap structural model results**



Source: authors.

Although Ilias et al.'s (2020a) studies suggest that one factor influencing intention to adopt XBRL is attitude, this study showed little indication that attitude has a significant influence on intention to file XBRL. According to the results of H3, while attitude was found to have a positive relationship with intention to use, it did not significantly influence intention to use XBRL filings via MBRS. Nonetheless, the outcomes of this study were in line with the finding of Chouhan and Goswami (2015), who discovered no effect of financial reporting preparers' attitudes on the intention to use XBRL in North India. The insignificant effect of attitude towards intention to use XBRL filings using MBRS in this study could be attributed to comfort factors. Since the majority of respondents in this study have more than ten years of experience, they are believed to be knowledgeable and at ease with previous systems. As a result, even though they recognize the benefits of XBRL filings, their intention to utilize them has not increased. For the effect of perceived usefulness and perceived ease of use on attitude, only the latter was found to have a significant influence, whereas perceived usefulness did not match the results of H6 and H7. This can be said that filers in Malaysia are skeptical about the usefulness and actual benefits of XBRL filing through MBRS usage. Thus, an effort must be made, notably by SSM, to prove that MBRS was a better system over the preceding system.

In terms of perceived usefulness, this study found that perceived usefulness significantly influences the intention to use XBRL filing through MBRS, hence supporting H4. According to data analysis, changing the perceived usefulness by 1% can increase the intention

Table 6. **R^2 size for ITU to UB path with and without moderator construct**

Path (ITU → UB)	R^2
Without moderator construct	0.385
With moderator construct	0.397

Source: authors.

to adopt XBRL filings by 0.293%. This is aligned with TAM theory, which claims that perceived usefulness has a major impact on intention to use. Nevertheless, the significant effect of perceived usefulness on intention to use in this study (29.3%) was lower than the study finding of Elissavet et al. (2013) (64.7%). This could be because developing countries, such as Malaysia, are less aware of the potential benefits of XBRL than developed countries, such as Europe.

Finally, the findings of this study revealed that perceived ease of use significantly influences the intention to use XBRL filing through MBRS, thus supporting H5. This fits with TAM theory and is supported by previous XBRL research (see Elissavet et al., 2013; Rawashdeh, Selamat, 2013; Ogundeji et al., 2014), which found that perceptions of ease of use and complexity describe XBRL intention. Moreover, this study also found that perceived ease of use considerably influences the intention to adopt XBRL filings. According to data analysis, changing the perceived ease of use by 1% can increase the intention to use XBRL filings by 0.468%. Thus, perceived ease of use was an important indicator of increased intention to use XBRL filings. Moreover, enhancing perceived ease of use will significantly improve the perceived usefulness of XBRL filings. As shown in H5, a 1% increase in perceived ease of use factor can increase the usefulness of XBRL filings via MBRS by 0.599%.

Conclusion

Conclusively, this study achieves its objective by empirically demonstrating the moderating effects of incentives on the relationship between intention and usage behaviour to use XBRL for filing purposes. According to the findings of this study, incentives strengthen the positive relationship between XBRL filing through MBRS, intention to use, and usage behaviour. The study also demonstrated that intention to use significantly influences XBRL filing through MBRS usage behaviour. Furthermore, only perceived usefulness and perceived ease of use significantly influence the XBRL filing intention, whereas attitude does not. Regarding the effect of perceived usefulness and perceived ease of use on attitude, only perceived ease of use has a significant influence, but not perceived usefulness. Finally, perceived ease of use was found to have a major influence on perceived usefulness of XBRL filing through MBRS.

The study's findings reveal a number of theoretical applications that contribute to the body of knowledge. This study provides implications by explaining filers' XBRL usage behavior from the user (individual) rather than business (organizational) perspectives. Even though there have been a few XBRL studies conducted on user viewpoints, they appear to be restricted compared to organizational perspectives. Moreover, to the best of the author's knowledge, this is the first study that examines the moderating effect of incentives in XBRL adoption studies. Second, in contrast to previous research that focused solely on intention behaviour, this study, on the other hand, improves understanding by providing empirical evidence to explain usage behaviour for XBRL filings. Third, since this study was conducted in Malaysian settings (XBRL through MBRS), this increases the overall understanding of XBRL adoption studies. Fourth, as far as the author is concerned, only a few XBRL studies have used TAM theory in XBRL adoption studies. This study improves understanding by conducting empirical investigations from the perspectives of filers who use XBRL and employing TAM theory.

Aside from adding to the existing body of knowledge, the findings of this study have policy implications for authorities seeking to develop effective plans. First, it was empirically proven in this study that the intention to use significantly influences the usage behaviour of XBRL filing through MBRS. Therefore, it is recommended that authorities develop an adequate plan to enhance filers' intentions to use XBRL, such as ensuring the system itself receives good and continuous system maintenance and providing outstanding support services. Second, despite the fact that the moderating effects of the incentives indicate a weak effect size, it has been empirically demonstrated that the incentives strengthen the positive relationship between XBRL filing through MBRS's intention to use it and usage behaviour. As a result, it provides a general idea for authorities and policymakers that want to integrate XBRL technology into their systems and provide incentives to persuade users to use it. In addition, incentives can also increase users' intentions to try out newly deployed technology (Roumani et al., 2015). Thus, providing incentives is a suitable strategy during the first installation of new XBRL systems. Nevertheless, the incentives must be linked with the users' interest and the features and capabilities of the potential system to accomplish the goal (Aziz, Idris, 2016; Ba et al., 2001). This is done to ensure that the users perceive the incentive and are motivated to engage in a behavior. Third, the study found that only perceived usefulness and perceived ease of use significantly influence the intention to use XBRL filings, whereas attitude does not. However, as compared to perceived usefulness, the perceived ease of use factor was found to have a greater influence on XBRL filing intention. Furthermore, perceived ease of use also has a significant influence on attitude and is a key predictor of the perceived usefulness of XBRL filings. Hence, boosting the perceived ease of use factor is crucial for growing the adoption of XBRL filings. Authorities should guarantee that the procedure for submitting XBRL filings is consistent and less com-

plex. Moreover, it is a good approach if different authorities can collaborate by offering single-stop submission using the same platform. This increases its perceived usefulness, which may attract filers to use XBRL for filing submissions.

This study has several limitations since the sample was selected using convenience sampling (due to restrictions in obtaining MIA members' detailed information). As a result, author judgment exists, which may involve bias in distributing questionnaires to respondents. It is suggested that future studies use the systematic probability sampling method to increase data collection if the information can be gathered. This study also focuses on XBRL research in developing countries (in Malaysian contexts). Therefore, future research should focus on other countries, including developed countries, to enhance the understanding of regulatory incentives in XBRL study contexts.

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