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XBRL Adoption Process in Malaysia Using Diffusion of Innovation Theory*

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Abstract

The study examined the XBRL adoption process of Malaysian Business Reporting System (MBRS) by utilizing Everett Rogers' Diffusion of Innovation (DOI) theory. The study focused on the three phases, namely, knowledge gathering and persuasion phase, decision-making phase, and implementation phase of XBRL adoption process gathered from a government agency in Malaysia. This study employs a qualitative case study that incorporates semi-structured interviews with four members of the regulator. The results reveal that the regulator has realized the advantages, management support, and need to skills development in phase one. On the other hand, in phase two, it finds the way the regulator makes decision related to XBRL taxonomy and submission template, platform, tools and software. Through phase three, the regulator is concerned with the complexity of XBRL taxonomy, resources, external support, promotion, stakeholder involvement, limited trading pressure, critical mass, and professional bodies. The factors from each phase suggest an in-depth understanding on the experience of XBRL through the development of MBRS that provides a success story to the other government agencies and regulators in Malaysia. This study provides several insights on the factors that could contribute to the adoption of XBRL and the Diffusion of Innovation theory adoption process.

Keywords: Qualitative Case Study, Adoption Process, XBRL, DOI, Malaysia

JEL Classification Code: M4, M41, M48, M49, O33

1. Introduction

An open standard that supports knowledge modeling and the expression of semantic meaning commonly needed in business reporting is defined as XBRL. XBRL is based on XML. The XML syntax and associated XML technologies

are used (Hoffman, 2006). Three nations, namely, the United States, Australia, and the Netherlands have successfully implemented XBRL, where their regulators have shown the advantages of data sharing between governments and regulators (Cordery, Fowler, & Mustafa, 2011). Malaysia is also heading toward the adoption of XBRL, similar to other countries.

In Malaysia, Suruhanjaya Syarikat Malaysia (SSM) have initiated the adoption of XBRL. The SSM is a regulatory body formed under an act of Parliament (Tong, 2017). The main function of SSM is to incorporate companies and register businesses and provide information to the public. Companies and register businesses incorporated in Malaysia need to comply with the Companies Act 2016 and approved accounting standards of MASB. Therefore, the filers of SSM are the companies in Malaysia. SSM attempted the XBRL adoption through the Malaysian Business Reporting System (MBRS). MBRS included the submission of Annual Return (AR), Financial Statements and Report (FS), and Exemption Applications (EA) related to the FS and AR. There are three important components from MBRS, which is SSM taxonomy,

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MBRS preparation tool (mTool) and MBRS portal (mPortal). SSM taxonomy includes the taxonomy that is comprised of financial and non-financial, which the reporting elements have been embedded in the MBRS preparation tool (mTool). While mTool will be used in preparing any annual return (AR), financial statements and report (FS), and exemption applications (EA) in XBRL format. At the end, the XBRL document for AR, FS and EA will be submitted through mPortal.

Understandably, SSM has taken great initiative towards adopting XBRL; it would be interesting to understand the drivers and challenges of the adoption process so that SSM can become a benchmark for other organizations with plans to adopt XBRL. Therefore, this study aimed to understand the drivers and challenges about the XBRL adoption process in the context of the Malaysian Business Reporting System (MBRS). This study's findings contribute to the XBRL and business reporting system that provide insights into the area of XBRL as a recent technology of SSM. Besides, this study could assist policymakers, professional bodies, and practitioners in implementing new business reporting submission in Malaysia. Section 2 reviews the related literature. Section 3 explains the methodology. Section 4 presents the findings and discussion, and Section 5 concludes this study.

2. Literature Review

Most of the literature on XBRL adoption had examined XBRL adoption based on Diffusion of Innovation (DOI). In addition to the technology adoption, Rogers (2003) stated that technology diffusion refers to a process that occurs over time and is necessary when examining technology adoption by applying the Diffusion of Innovation (DOI) theory. This theory uses adoption characteristics to explain the different adoption rates by any technology type (Jeyaraj, Rottman, & Lacity, 2006; Mousa, 2013; Oliveira & Martins, 2011). The time dimension should be incorporated to identify and explain the diffusion of adoption in the adoption-decision process that involves the knowledge phase of adoption through to the decision-making phase, whether there is adoption or rejection. In the area of XBRL, only Mousa (2013) had applied the XBRL adoption-decision process. Mousa (2013) had explored the factors throughout gathering knowledge until the confirmation phase for e-government (XBRL). Thus, the DOI theory could be considered suitable for this study in understanding the XBRL in the context of MBRS adoption process.

About XBRL adoption process, Mousa (2013) examined the factors throughout gathering knowledge on the confirmation of XBRL. Mousa (2013) then extended her study to examine XBRL adoption by two regulators in the

UK. Based on the discussion on the DOI theory, this study has applied the DOI theory on the adoption process on the basis that the theory is sufficient to investigate the adoption process of XBRL in the Malaysian context. The adoption process for SSM could be investigated through the three stages. The DOI theory is necessary to investigate how factors from technological, organizational, and environmental context could influence the regulators to initiate, make decisions, and implement the XBRL.

At the gathering of knowledge and persuasion phase, Mousa (2013) found that the relative advantage influenced the UK's XBRL adoption process. While in the US, Henderson, Sheetz, and Trinkle (2012) found that the relative advantage strongly influenced the internal decision to adopt XBRL. Contrary to the situation in New Zealand, there was no relative advantage in adopting XBRL (Cordery et al., 2011) since organizations disagreed that XBRL could reduce compliance cost. Doolin and Troshani (2007) and Steenkamp and Nel (2012) found a lack of relative advantage when adopting XBRL. David (2016) suggested that the government and private organizations did not seek to adopt XBRL because the costs were perceived to exceed the benefits. Similarly with Mousa (2013), there was a lack of expertise and lack of technical expertise in developing XBRL taxonomy.

During the decision-making process, the technological complexity is a common factor since the challenge posed by information technology is found throughout the XBRL adoption process. According to Mousa (2013), the lack of internal resources is not a challenge since the organization had outsourced the majority of its IT tasks. According to Mousa (2013), there was no financial support provided when HMRC and top government bodies tried to secure government financial support for XBRL projects as they realized the opportunities in adopting XBRL. Similarly, David (2016) found providers with limited funding for financing XBRL initiatives among groups that struggled to compete with other institutes or government agencies when deciding not to adopt XBRL. The role of enforcement is considered important, according to Mousa (2013), during the decision-making process. This is because the government support and XBRL mandate were required to urge corporate users and tax agents to comply with the law and change their accounting systems to file the accounts and computations. This was also to ensure the success of XBRL as claimed by Troshani and Doolin (2005). The finding was consistent with Mousa's (2013) findings showing that external support played an influential role throughout the XBRL adoption process. The lack of available support for XBRL in the form of taxonomy, standards and software tools were important factors influencing negatively XBRL adoption in Australia (Doolin & Troshani, 2007). Based on Mousa (2013), this

lack of technical expertise has made regulators realized that it should seek external technical support from XBRL project team members and collaborate with major software providers to explore outsourcing options.

Mousa (2013) suggests that the top government support was an important environmental factor on the XBRL adoption process during the implementation process. The role of government and regulators was important to mandate the use of the XBRL (Cordery et al., 2011). In the UK scenario, the critical mass has become a driver (Mousa, 2013) and this has been a challenge in studies done in New Zealand (David, 2016) and Australia (Doolin & Troshani, 2007). HMRC and CH were making the XBRL business case for the stakeholders during the implementation and confirmation stage. Both HMRC and CH were initially faced with community's skepticism towards XBRL (Mousa, 2013).

3. Methodology

3.1. The Qualitative Case Study

This study had chosen the qualitative case study design to understand the subjective evidence on the XBRL adoption phases. Hoang, Nguyen, and George (2020) suggested qualitative research will provide in-depth understanding of the organization. This paper focused on a single case study that was based on three different phases of the XBRL adoption process and factors that influenced the adoption process for over a period of time. Data were gathered from key informants comprising SSM involved in XBRL adoption in Malaysia with a different timeline. It also considers the single case study based on XBRL adoption issues in Malaysia from a regulatory context. It focuses on specific cases from a Malaysian perspective.

3.2. Data Collection and Analysis

This study relied on a semi-structured interview done directly with four respondents. The questions were prepared or adapted when necessary, and changed if problematic, adapted based on the adoption process of XBRL. The semi-structured interview also has been used in information technology study such as those of Hamundu, Husin, Baharudin, and Khaleel (2020), and Ngan and Khoi (2020). This study involved the executives from the XBRL team in SSM as the participants. The participants were well versed in accounting matters and had attended XBRL training sessions throughout the world, gaining vast knowledge in the XBRL field that was identified by S1, MI4, I1 and O1.

3.3. Data Analysis

For analysis of data, researchers' understanding and perception were developed as suggested by Miles, Huberman,

and Saldana (2014), based on descriptive coding. The second cycle of coding was conducted by utilizing pattern coding, which is to group the summaries into smaller number of themes. The pattern codes are explanatory or inferential codes that identify an emergent theme (Miles et al., 2014). The second cycle code is therefore based on the pre-determined and undetermined codes. The themes are developed from the pattern codes for 26 themes based on past studies related to XBRL (Cordery et al., 2011; David, 2016; DePietro et al., 1990; Doolin & Troshani, 2007; Mousa, 2013).

4. Findings and Discussion

4.1. Drivers and Challenges of XBRL adoption based on Phases

4.1.1. Knowledge and Persuasion Phase

SSM was somewhat persuaded to learn about XBRL due to past financial reporting practices, particularly managing databases and submitting documents. In this phase, regulators acquired awareness and knowledge from international entities on how XBRL can be adopted in Malaysia. In addition, SSM undertook some initiatives in early 2010 by learning from various jurisdictions, such as Companies House (UK), National Bank of Belgium (Belgium), Logius (Netherlands), and ACRA (Singapore). There is evidence that SSM had taken the initiative to learn about XBRL from various jurisdictions prior to adopting XBRL. SSM had actively learned about XBRL and found suitable ways to adopt XBRL. In addition to the knowledge gained from XBRL jurisdictions, the XBRL team from SSM also visited several countries to learn about XBRL, especially understanding XBRL adoption. During this phase, SSM has realized the advantages of XBRL adoption when they have gained the understanding of XBRL. They believed on the advantage looking at the countries that had adopted XBRL. Malaysian regulators had made efforts to learn and actively identify the relative advantages of XBRL adoption. Based on the feedback by Officer O1, this study found that Malaysian regulators realized the need to adopt XBRL: "SSM and other regulatory bodies see the numerous needs and benefits of XBRL to the country such as bringing in more foreign investors, provide deep insights into the financial health of businesses, provide critical business data to the government for policy decisions and so on".

4.1.2. Decision-Making Phase

SSM has focused on the development of XBRL taxonomy, XBRL template, and submission platform. There is decision that need to be made to ensure the compatibility

and stability of XBRL taxonomy will be embedded with the XBRL template. They are also concerned with the development of tools that can be used by filers in order to produce XBRL Instant Document and how to submit documents through the submission platform. SSM has to ensure that the elements they had developed were sufficient for preparing financial statements based on comments by the accounting professional body. The taxonomy must be developed according to suggestions given by IFRS, since MFRS in Malaysia is under the auspices of IFRS. However, issues were raised when there are too many elements in XBRL taxonomy. This was mentioned by Officer S1 as follows: “The taxonomy is referred as consultative taxonomy. Taxonomy is a language and not an application. The Malaysian Accounting Professional Bodies has provided numerous comments and they have informed us that the line item is not enough. But if looking to IFRS, 3000 elements of XBRL taxonomy, too many and do we think that filers will comply”.

In ensuring a high-quality taxonomy, it is necessary to obtain the comments of international experts. Evaluation of the taxonomy can be provided by participants who attended training on XBRL, comprising mostly international experts. Participants who are able to provide comments on XBRL taxonomy consists mainly of organizations that have adopted XBRL. The comments are important as they indicate that the XBRL taxonomy is consistent with international standards. Malaysian publicly-listed companies are required to follow MFRS, which is consistent with IFRS. XBRL taxonomy requirements cater to local companies and are relevant at the international level as it concerns SSM, while the XBRL taxonomy would be accepted at the international level. Officer S1 had emphasized the need to ensure the quality of XBRL taxonomy as at 2015; the interviewee has proved that the representative from SSM had attended international training, then has shared the experiences. This is because the participants in that training have experience in developing XBRL Taxonomy. SSM also needs to ensure the XBRL Taxonomy will fit the requirements in submitting financial report and annual return by companies. They give consultative course and share the knowledge. The experts have provided comments on SSM taxonomy: “Remember that in Malaysia, the XBRL taxonomy must go into international level, if it is to be international, but not at up to par, as people will dismiss it, because there is a need to in line with IFRS. The international experts will evaluate the program or language”.

In making decision on the XBRL Taxonomy development, there was a concern on XBRL preparation and submission using different XBRL Taxonomies. This is because regulators could have different XBRL taxonomies due to different rules and requirements for preparing XBRL. Regulators might investigate the standardization from internal and

inter-organizational using the common taxonomy. The SSM is expected to produce a common XBRL taxonomy extended by other government agencies and this common XBRL taxonomy is not compulsory for every regulator. This decision indicates that the sharing of common taxonomy will reduce the redundancy of data submission among regulators and filers. The standardization could involve a common XBRL taxonomy and an extension of the XBRL taxonomy, as mentioned by Officer S1: “SSM will share the link of XBRL taxonomy for XBRL with any regulator who has interest on that. As at now, the interest for the purpose to ease the tax agent”. Furthermore, the common taxonomy could be extended to the XBRL taxonomy for other regulators to implement XBRL. This helps to avoid redundancy of data submission by filers. Thus, regulators should decide how the common taxonomy can be implemented together with the extended XBRL taxonomy.

Besides that, SSM found several methods for producing the XBRL report with template. Regulators had selected a method following the objectives of each regulator. Regulators might have their own reason for selecting a method as it fits both the regulator’s needs and filers’ capability. Based on the interview, SSM also decided to use the developed template to replace the submission using the portable document format (pdf). SSM realized that there was a need to change the filers’ focus from the existing version to XBRL. There are various methods for preparing XBRL. As mentioned earlier, SSM use the template, which is a manual approach known as copy and paste of the data. The data is keyed into the prepared template. The filers can also directly key into the Excel template or peruse the accounting software for a solution to prepare the submission report using XBRL. Officer S1 from SSM mentioned that: “SSM will use the template for the filers. The filers only use pdf and papers, so when XBRL is related to the technology, there is a little bit late because there is a need to change the filers’ mind set.”

This study also shows that the regulators are considering standardizing XBRL submission. This is related to the aim of having a single submission by each filer when regulators are sharing a single method of XBRL submission. The submission platform’s sharing could be related to XBRL adoption through inter-organizational efforts that involve adopters, who are also filers and regulators. Moreover, XBRL can also be standardized for internal purposes, such as among regulators or filers; the single submission platform can be viable if regulators are interested in XBRL reporting requirements. Regulators who intend to have standardized reporting need to examine the requirements and data demand that interest them when sharing the submission platform. According to Officer S1, SSM sees a need to join the submission by other regulator: “SSM can share with

regulator that have interest as we can see the interest. This method that can make the task of tax agent will be easier”.

Another matter related to filers is the company’s size, in which case the issue is about small- and medium-sized enterprises (SMEs). The capability to prepare reports by SMEs differs from that of big companies and various industries established in Malaysia. Thus, SSM had carried out studies to determine a suitable way for producing the XBRL by big companies and SMEs since both these entities have different capabilities. This is one of the reasons why SSM had prepared an Excel template for producing XBRL. Officer S1 mentioned that: “We do not have any information about which IT company software package has really the XBRL. So, no accounting software package can manage all. So, what the companies do now is using Excel, which the accountant is only using in preparing the ledger up to the balance sheet”. Together with this, cost is also one of the issue raised by regulators that impact the filers.

SSM was also thinking about costs associated with the process of converting financial statements to XBRL. These costs involved a system capable of facilitating the conversion process. Some filers were worried about costs involved in preparing financial statements using XBRL. Officer S1 noted that: “Companies have also begun to ask about this XBRL, when it will begin to be implemented? For filers, it will provide business opportunity, but it will affect us, as some companies are already worried because they have heard about the cost of converting system, fearing it will be high, thus, making it very expensive”. This cost would add to the cost of adoption during the early stages by filers, if there is a need to automate XBRL. This charge is a cost that is chargeable to filers if XBRL data are audited. Concerning the assurance of data quality through auditing, it could incur additional costs, such as the auditing costs. In addition, regulators need to study how auditing costs are incurred and borne by filers when preparing high-quality data. This study has also found that the issue of additional costs was related to auditing work on XBRL. As noted by Officer S1: “I have thought about the audit for XBRL data, but they will have some extra cost which the auditor will charge a little bit higher for audit the XBRL data and it will be too much. For audit, they need to involve additional works, additional fees, and additional costs to the companies (filers)”. This is because the audit cost involved are related to the responsibility to ensure the assurance of data produce by XBRL could be achieved in future. SSM also targeted the production of high-quality data by using XBRL. Officer I1 has also provided information on data validation related to the role of the auditor in XBRL implementation. The issue of assurance of data quality is also relevant to future XBRL implementation in Malaysia, such as examples in other countries. Officer I1 noted: “Auditors, like in several

countries, are getting involved in the process and supporting the adoption. Work is being done to adopt XBRL and to automate some of the audit processes”.

SSM was concerned about the readiness of the software and submission platform to be observed. The status of XBRL development is still not clear as the interview was carried out in 2015. XBRL readiness can be achieved if the preparation technology related to the XBRL taxonomy and submission platform is ready and mTool for XBRL implementation since 2017. XBRL observability does not only relate to technology readiness, but also regulators’ experience in electronic submission and expertise in XBRL. This is due to the statement regarding SSM’s role in enforcing XBRL in the future. Officer S1 also mentioned that: “XBRL may take some time in order to ensure the software and system can be ready. We are happy if XBRL can be by jurisdiction, but I do not know how Malaysian electronic system works. Are they (regulators and agencies) ready for XBRL because there are many agencies that have started the electronic submission, but do not know how their (regulators and agencies) expertise, do they (regulators and agencies) really have expertise in XBRL”. This could be a challenge to SSM because there is a lack of readiness in observing the XBRL prior to the implementation of XBRL. The limited XBRL to be observed in Malaysia will impact on the confidence to adopt XBRL by SSM and other government agencies.

SSM has highlighted issue of voluntarily and subsequently mandatory requirements that can be carry out effectively. The effort to adopt XBRL also depends on the availability of XBRL and the role of the regulators. The process of execution needs to be carefully planned before adopting XBRL. This is to ensure that XBRL adoption would not generate wastage in the future. In other words, the transfer of XBRL technology from the regulators to filers can only exist with mandatory requirements. The filers were mostly concerned by the mandatory requirements. Their willingness to accept XBRL relate to whether XBRL would be mandatory or voluntary. This study found that the XBRL market was not ready for the slow adoption in Malaysia. The delay in adoption could be attributed to the development and regulatory changes affecting regulators, practitioners and filers. As highlighted by Officer S1 from SSM: “What they said this technology will come with will need to start with regulators. There is a need to cooperate, encourage and adopt XBRL. Then, at once bind in and promote. Start with voluntarily and then mandatory requirement. When XBRL is mandatory, the company (filers) has no choice, thus, there will be technology transfer. Naturally, when it comes to technology, who will invest?”

SSM has also shown the engagement with international members in the XBRL committee. This serves as a platform for discussion regarding XBRL-related formats, for example

the XBRL taxonomy, experience and addressing issues that may arise from the implementation of the XBRL. This can help the regulators to apply to their organizations. This study found the need to establish connection at the early stage of adoption since the regulators needed to study and understand the adoption process of XBRL. The XBRL steering committee has collaborated with the accounting professional bodies in order to contribute to the development of the XBRL taxonomy. The auditors and accountants have also highlighted that the local XBRL committee would play an important role in the adoption of the XBRL. As reported by Officer S1: “For XBRL international, members will talk about XBRL, this is a platform to discuss, and will share the problem that has ever been experienced, as XBRL international has a working group for the development of XBRL taxonomy, guideline and best practice.

The XBRL committee’s existence was considered important throughout the decision-making process in finding the right and suitable external support that came from local and international experts. However, this has changed due to the change of leadership. In addition, MASB has also stated that the chairman of the board would play the role of chairman of the XBRL committee and thus, monitor the adoption process of XBRL of the regulators. Other involvement such as accounting professional bodies and audit firms were also included in the adoption process of XBRL adopted by regulators. The efforts undertaken by third parties focused on how they have played a role in assisting the regulators in realizing their efforts for XBRL adoption. As explained by Officer M1: “The involvement of professional bodies and big firm, there are actually involved like Malaysian Institute of Accountants and Malaysian Accounting Standard Board, have greatly involved from the beginning on the adoption of XBRL on promoting the XBRL. There are people that organize workshop between the regulators”.

Even though XBRL committee members’ involvement can be seen in terms of sharing information on XBRL taxonomy and submission, the objectives of XBRL adoption among the regulators were different. Thus, the committee members’ communication was important to standardize XBRL, which was a challenge to the regulators. Besides, the issue of a standardized XBRL taxonomy among the regulators was also raised. Officer M1 explained: “Silo in communication approaches by regulators is a bigger challenge when each regulator takes their own approach without talking to each other. We called it the silo approach when no coordination. Like having their own data set, regulators should talk to each other about the architecture, how they collect data and sometimes process them, which can be similar”. The finding indicates that the regulators’ communication culture would be important in order to decide how they identify the way to develop XBRL taxonomy, template and submission methods.

4.1.3. Implementation Phase

SSM has learned to develop XBRL taxonomy and believes that XBRL taxonomy’s complexity should be of concern when extracting data from XBRL. This is because XBRL aims to have more data and effective data collection through the submission of annual returns using XBRL. This study also found that there were concerns about the complexity of the software. In this way the burden stays with regulators. Regulators are responsible for developing the taxonomy and system when adopting XBRL so that the complexity does not confuse filers. Officer O1 explained: “If the taxonomy is too complex, then the reporting burden for filers will be huge. Lack of qualities of XBRL taxonomy will indicate in the taxonomy will lead to incomplete or incorrect implementation which in turn will result in failure to be adopted by industry”. Based on findings, the complexity of XBRL taxonomy is an important issue to ensure the implementation of XBRL for SSM in the future.

SSM was concerned about developing its team members’ skills and knowledge. Many programs were conducted to ensure that the team members were equipped with sufficient knowledge and skills. The technical training comprised both the concept and practical lessons for members of SSM’s XBRL team. SSM believes that the ability of its organizational members can be developed. It has an XBRL working group and relies on external expertise. SSM also has the strength to build skills among its employees involved in the XBRL group. SSM has the initiative to ensure its staff has sufficient skills and knowledge prior to developing the XBRL taxonomy. They have also seen that SSM has considered the maintenance process that could change the XBRL taxonomy that the staff can use to carry out maintenance. SSM selected and nominated officers or staff who have been equipped with XBRL knowledge in order to maintain, extend or implement changes, if necessary. Moreover, the resources need to support of international experts for a successful XBRL adoption. International experts must support resources that are developed to assist the XBRL adoption. This study found in early 2015 there was an indication that SSM would develop the internal capability together with the reliance from outside expertise. Officer S1 explained that: “Again, when you talk about recruit, the recruitment of the team is made internally, and will be from SSM itself. There will a group that will handle the development of XBRL. We will develop on our own but we need outside IT vendor or consultant to evaluate our XBRL taxonomy”. There are views on the capability of team members involved in XBRL development projects. Officer O1 noted the need to equip team members with knowledge: “It is very critical that the project team is knowledgeable in all aspects of XBRL implementation”. This concern indicates that there is a need to ensure the capable resources in handling XBRL for future.

This study also found the need to conduct XBRL training as it is a key factor for filers' decision to adopt XBRL. As recently as 2018, SSM had actively conducted training for filers to teach them the preparation of XBRL and the submission process using mTool and MBRS. Officer O1 explained that: "Availability of sufficient training, subsidies for attending training, and outreach are key factors in encouraging a successful XBRL adoption by filers". SSM also educates filers in how XBRL is working on MBRS through the training to ensure readiness. A level of organizational readiness is necessary for regulators to attract filers. Thus, regulators need to educate filers so that the former are ready to use XBRL in future. Officer M1 explained: "We could also ensure the readiness of filers also through continuous education and communication". The finding indicates that there is still need to educate and promote filers in order to ensure they could be ready to accept the MBRS. This study found that SSM has appointed an XBRL consultant to assist in developing XBRL taxonomy. In 2017, SSM has appointed a big and huge IT vendor to provide their expertise in helping SSM to develop the Malaysian corporate landscape and to transform the role of SSM to a regulatory authority. SSM has joined two partnerships in IT expertise from Malaysia and India who were well known experts in XBRL, which indicates SSM has managed to access external support in order to start the development of the XBRL. This study also found other involvements from the accounting professional bodies and audit firms in the regulators' XBRL adoption process. Based on his knowledge, Officer M1 said: "The involvement of professional bodies and big firms, they are actually involved like greatly involved from the beginning on the adoption of the XBRL and promoting the XBRL. There are people that have organized workshop sessions with the regulators". This finding reveals that SSM could rely on the external support since there are limited skills and expertise in developing XBRL.

The government of Malaysia has an interest in XBRL due to the realization of the benefits to the government. The support was in the form of financial and incentive provisions. However, the support from the government was a bit slow and SSM has made an effort to prove to the government on the benefits of XBRL. As noted by Officer S1: "XBRL is supposed to be big a attempt to have the XBRL for the government. The government will need to see the effectiveness of the XBRL that has been noted by all regulators. Our government is slow, then later will be mandated. Actually, XBRL development has shown big attempts, showing the XBRL requirements for the government, but the government wants to see the XBRL concept. They want to see the effectiveness of the XBRL by all regulators whether or not regulators can get the desired data with the existing system. Our government will look first

from far". This finding has indicates that SSM has faced issue of the government support to have mass adoption for XBRL since there is a need to prove the achievement of XBRL among any of regulator in Malaysia. The limitation of support from government will be limited since XBRL is not for the mass adoption.

The market can be ready once the agencies and regulators have adopted XBRL and observed the impact of XBRL adoption. The steering committee, that was also the XBRL committee, played a role in sharing interests and views to determine the best method to adopt the XBRL and accelerate its implementation among the trading partners. The network among regulators ensures effective adoption of XBRL. Officer S1 said: "If all agencies have started the XBRL and there is a consequence then the government will follow. If you see, there is member in the steering committee. We have talked to them to encourage companies (filers) to subscribe to the XBRL as by having the XBRL, which will make a loan application faster because we have ranking analysis. The banking institutions eagerly need the data from us instead of the agencies only has statistical analysis". This finding indicates a need for XBRL among the trading partners and there is limited pressure at the earlier phase of implementation.

Critical mass could also be related to the readiness of all parties in Malaysia. Other regulators have raised the level of readiness of all parties involved in the development and adoption of XBRL. The parties involved in the adoption of XBRL were classified in XBRL stakeholders. Their willingness to adopt XBRL also contributed to successful adoption. The critical mass pressures can also influence the filers' readiness. This mass did not come only from Malaysia, but also from other countries that have adopted XBRL. Officer S1 highlighted that: "Company from Johor district maybe aware about XBRL because they know the XBRL from ACRA, which the related company that situated in Johor has to filing at ACRA. XBRL is a bit slow in Malaysia. I know since two years ago when Singapore started the implementation of XBRL. Eventually, it will come to Malaysia. Something new will come to Malaysia". This finding indicates that there is still limited critical mass among users who need to use XBRL to prepare financial statements. SSM would also need to ensure the pressure to use XBRL among filers could be achieved in order to ensure filers could be ready on the usage of MBRS. However, the readiness of filers could also need the courage from professional bodies.

Pressure from the professional bodies was also the factor influencing XBRL adoption. This has involved the practitioners as one of the important role in encouraging the use of XBRL through the financial reporting value chain. However, the pressure did not really affect XBRL

adoption due to a lack of understanding, lack of demand, and lack of training. In addition, this study found that the practitioners influenced the growth of the XBRL ecosystem in Malaysia despite the challenges in ensuring the success of the ecosystem. This study found that the market needs to be ready and the demand depends on the market. However, practitioners that have adopted XBRL claimed that the lack of demand for XBRL has caused them not to prepare financial reports via XBRL. Officer S1 explained: “This is because the practitioner has seen that XBRL is not quite well known in the companies (filers) in Malaysia. There is challenges to understand the concept of XBRL. Some practitioner used it, but now they are no longer using it. Last time, they used to do it, but now there is not much more demand for XBRL. Nobody is asking for XBRL”. This study also found that the practitioners can assist the filers to provide reports in XBRL. As such, the practitioners need to be aware and understand XBRL. Initiatives by the professional bodies were taken such as the accountancy body to educate the practitioners with the concept of XBRL. However, such initiative was delayed due to slow XBRL adoption by the regulators. As noted by Officer MI4: “XBRL will be used by the practitioners from the members of Malaysian Accounting Professional Bodies. The role of the body is to help and provide awareness to the members. At the beginning, the members were really interested to attend the XBRL training, but the SSM has defer the implementation. When the XBRL technology is not ready, the members also are not aware and do not understand”. The findings indicate that professional bodies should play their role to ensure understanding and support the use XBRL among filers. This is because practitioners can be considered filers since they are responsible for preparing the XBRL instant document for annual return and financial report through MBRS. However, there is limited pressure from professional bodies at the phase of implementation.

5. Conclusion

This study aimed to understand the drivers and challenges about the XBRL adoption process in the context of MBRS. This paper focused on a single case study over three phases of the XBRL adoption process: knowledge gathering and persuasion phase, decision-making, and implementation. This study’s findings show that SSM has experienced the development of MBRS from beginning in developing knowledge in XBRL. In this earlier stage (Phase 1), SSM was able to gather knowledge and pursue the intention to adopt XBRL since SSM was seen to have support from the management. However, SSM realized the limited number of persons who gained the expertise that could contribute to XBRL taxonomy and submission development. This challenge of the skills, knowledge and expertise could provide challenges on how SSM makes

decisions during Phase 2. In the knowledge and persuasion phase, Mousa (2013) found that technological context factors that influenced the XBRL adoption process were relative advantage, compatibility, complexity, information technology challenge, organization’s need, and motivation.

In Phase 2, the local XBRL committee network could be considered important since this will help SSM in discussing the need to ensure the XBRL taxonomy could be compatible with the current rules and regulations in Malaysia. However, this could be challenging to the SSM and filers since XBRL could be limited in terms of observation. This could also challenge the taxonomy’s stability and standardization since companies registered under SSM could be of various sizes and types. Beside the taxonomy issue, SSM is also concerned with the submission platform, which SSM assists the future filers in using ready template due to Malaysia still limited in tools and software that could generate XBRL document. However, SSM could not ensure the standardization of XBRL submission platform, on which filers could submit financial reports for every regulators that need financial data. Furthermore, SSM is also planning the cost to develop taxonomy and submission platform together with the cost that could be borne by filers. That is one of the reason why SSM also decided to have ready template of XBRL, however, SSM still is unsure about the quality of data produced. The scenario of how SSM decision-making could also attract filers for the first submission of AR and later with FS with the voluntarily and continue with mandatory. Since the XBRL is still new in Malaysia scenario at the time this study is conducted, SSM is needed to ensure the complexity of XBRL taxonomy does prevent the implementation of MBRS. During this phase, Mousa (2013) found several factors that were similar to the current study, such as of “IT skills”, “management support” and “expertise in XBRL”.

In Phase 3, SSM has experienced accessing external support from international experts due to limited resources and stakeholder involvement. As mentioned earlier, the regulatory pressure that started with voluntarily requirement may encourage more adoption in the future, which will later bring more support from government. The voluntarily requirement could be improved if filers have been educated and promote the benefits of MBRS given by SSM and professional bodies. With this understanding, filers will have more courage to continue with the submission of FS with XBRL. In the other hand, the courage to submit with XBRL could be limited due to the small number of trading partners and critical mass. During this phase, “success stories” were an important factor in this current study, while Mousa (2013) found that “access to external support and information” was also important. During the decision-making phase, Mousa (2013) found that “complexity of technology” and “access to the external support and information”, which was in contrast

with the current study that found seven factors, should be considered when developing XBRL. In addition, Mousa (2013) also agreed that factors such as “skills and expertise”, “access to external support and information” as well as “government pressure” played a role.

This study is not without limitations. This study focuses on Malaysia’s limited geographical landscape where XBRL is not widely adopted. The study only involved SSM that represented Malaysia in the case study. However, it might be difficult to generalize this study’s findings to other contexts since the Malaysian perspective might differ with other contexts. Therefore, future studies should focus on comparative case studies between regulators and stakeholders. Such comparisons are useful for acquiring a deep understanding of responses to XBRL adoption. The study has shown a wide understanding of the adoption process for SSM, which provides a thorough understanding and highlights some issues that can be used by other government agencies, IT vendors, professional accounting bodies, and practitioners when planning XBRL adoption. This study is unique as it focuses on the adoption process and its impact on SSM. Furthermore, this study was a case study involving regulators who had transformed previous practices for preparing financial statements and other statements related to XBRL.

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