Trend research in XBRL impact and current study in Malaysia

Roslee Bin Uyob[1]

[1]Department of Commerce, Politeknik Sultan Abdul Halim Muadzam Shah, Jitra Kedah, Malaysia

Abstract: Nowadays, many companies publish their financial information in such interactive ways especially in internet. However, problem is arising because the information might not easily be integrated into other analysis software or spread sheet. XBRL as an electronic tool with acceptable global standard for electronic language can overcome this problem. The purpose of this study is to identify the research trends patterns and other related issue to the XBRL impact and XBRL current study in Malaysia. 135 Articles related to the XBRL impact and 8 articles related to the XBRL study in Malaysia was extracted from Scopus and Google Scholar database used to conduct this study. The result from the study shows that a study regarding the XBRL impact has shown significantly increase from time to time. The impact to capital market (forecast behaviour) and impact to the behaviour of user financial reporting is the most focusing area on XBRL impact study. However, the study focusing to the Malaysia environment is still low on XBRL. We only found 8 article which related to the XBRL in Malaysia, even though XBRL has been introduce more than 10 years ago by XBRL Consortium. By conducting this study, we hope it will give a general picture of a research trend, future gaps and direction of the research related to the XBRL impact and XBRL in Malaysia environment in the future.

Key words: *XBRL in Malaysia, XBRL impact, XBRL literature, XBRL.*

1.0 INTRODUCTION

Financial reporting is the information of financial information communicating the financial position of the company through several medium to inform various users for their decision-making process. Nowadays, in rapid changing technology and development era, most especially internet, the language of the financial reporting has become digitalized. Through the World Wide Web, the financial information is progressively being provided on the internet. These enhance the efficiency and timely transmission of the financial information between the preparation of the financial reporting and the user of financial statement.

According to rogers and white (2005), despite of increasing amount of access to financial information using the internet medium, such information is might not easily been integrated into other analysis software and spreadsheet and it requires an expensive, tedious work to extract the financial data from this medium and can give an error cutting and pasting transaction due to different format. This will make difficult to the users to required data from financial report. However, extensible business reporting language (XBRL) an electronic language tools can overcome this problem by encoding and decoding the information system. This tool can give consistent information, more accurate, and become a machine-readable format.

Many empirical research has been conducted by several researcher regarding XBRL impact and the result shows that adoption of XBRL in preparation of financial report has improve the integrity of the data especially in the data transferring process. The impact of Adoption of XBRL as a machine readable report has play a significant role in transferring the report data into different format and this role can increase data integrity, promote cost saving, increase the efficiency, accuracy and reliability of the data for the user of the information to their decision making proses (Ib, Jide, & Zik-Rullahi, 2015). Now XBRL international consortium state that, there are more than 600 companies and government agencies comprised of 27 local

jurisdictions relating with the progress of XBRL standard. (Avallone, Ramassa, & Roncagliolo, 2016)

Even though XBRL give so many good impacts to the reliability and accuracy of financial report, the implementation by companies to use XBRL to produce financial report in XBRL format is still low in Malaysia (Azleen Ilias, Abd Razak, & Abd Razak, 2014). Besides that, towards author knowledge they only 8 articles have been found in XBRL study in Malaysia. Therefore, by conducting this study, we hope it will give a general picture of a research in XBRL impact and XBRL study in Malaysia, which is very useful in identifying the main trends, future gaps and direction of the research in the area of XBRL especially in Malaysia.

The objective of this paper is to identify the research trends patterns and other related issue related to the XBRL impact and XBRL in Malaysia. To achieve this objective, we examine article published in various publications from academic journal, practitioner and other source which related to the XBRL impact and XBRL study in Malaysia. After analysing and identify the research trends, we then identify the issue and research gap and suggested for future research. Through this analysis, it will provide a complete overview of the current trends in the XBRL especially in Malaysia perspective.

This study comprises of several phase. For the first phase, this study will explain about the background of the study, objective of the study and the potential contribution of the study. The second phase will provide the literature review regarding the general overview of financial reporting and the emergence of XBRL, impacts of XBRL and XBRL in Malaysia. The next phase of this study will outline the methodology of this study including scope of the study review analysis and the classification of information about each paper that become part of the analysis. The next phase will present the results of our analysis including number of publications by year and publisher, classification according to the research type, approach and analysis based on subject area of articles. Lastly, this study will identify gap and conclude the paper with a summary of major findings and suggestions about the possible future research directions of XBRL impact and XBRL in Malaysia.

2.0 LITERATURE REVIEWS

2.1 General overview of the financial reporting and the emergence of XBRL.

Financial reporting is the financial result prepared by the accountant of the companies which contained financial information that disclose the financial status of the company. This financial reporting will be used by user of financial statement to make a decision-making purpose. In recent years, the reporting of the financial information become interactive since many companies publish their financial reporting into website.

Since 1999, the using of XBRL was being promoting and supporting by world leading accounting and financial reporting firms as an open standard language for the electronic communication. XBRL is now use in more than 30 countries around the world and approximately 18 in Europe either on voluntary basis or mandatory basis and the numbers is

keep growing from years to years. Now XBRL international consortium of more than 600 companies and government agencies comprised of 27 local jurisdictions relating with the progress of XBRL standard. (Avallone, Ramassa, & Roncagliolo, 2016)

XBRL is an electronic language used for the communication of business and financial information. XBRL is an encoding and decoding information system, a global acceptable standard that has been a ground-breaking technology for corporate financial reporting. XBRL is the standard for financial and business reporting that provides a consistent, accurate, machine-readable format**.**

As a tool of communicating and exchanging financial and non-financial information, XBRL throughout the business reporting value chain provides a universal definition for accounting terms that could be understood by various reporting and analytical software. (Azleen Ilias, Ghani, & Azhar, 2017)

Many scholars of XBRL defined XBRL as a meta-language which based on XML which communicate the business information in electronic communication. Tagging unique structure in XBRL allowed inter-operability even though with different format which that improve the disclosure, analysis of management or corporate data. (Bonsón, Cortijo, & Escobar, 2009a)

2.2 General impact of the XBRL.

Prior research have proven that XBRL has given a good impact to the reliability and the integrity of the data especially in the data transferring process. The research conducted by (Ib et al., 2015) has shown that the integrity and transparency of the financial and business information prepared by prepares are positively influence by using of XBRL. XBRL allowing screening the information, easy access and processing the information that provide by the organization irrespective of diversity in language presentation of such reports or the application of different regulations.

Besides that, XBRL as an internet based language in web based reporting and disclosure technology, has enables the users of financial reporting including government, financial analyst, investors and others user of financial information to easily extract, use and analyse firms financial information in a minutes. (Choi, 2016a)

In japan, an empirical research conducted by (Bai, Sakaue, & Takeda, 2014) found that adoption of XBRL in Japanese improves the information environment in Japanese market and have a potential to reduce information asymmetry. The result show that it has highly significant and negative associations between XBRL adoption and event returns volatility, absolute cumulative abnormal returns, changes in the standard deviation of returns, and abnormal bid-ask to spread after controlling for firm-specific characteristics.

The study conducted on 165 US firms who participated on the SEC voluntarily filer program using the PEG ratio model also show that the cost of equity is significantly and negatively associated with the XBRL adoption. The magnitude of the coefficient on XBRL suggests that

firms voluntarily adopting XBRL are associated with an average reduction in cost of equity capital by 17-20 basis points (conditional on different cost of capital measures).(El-Sherbini, Wahaab, & Deyab, 2005).

Besides that, the study on voluntarily programmed report using XBRL issued by security exchange commission SEC in north –America also shows that the factors that companies decide to join the voluntarily programme is to gain deeper knowledge of XBRL and acquire image as a pioneer in technology reporting. They feel that with participation in this voluntarily programme it can contribute to increase of the image of the company. (Bonsón, Cortijo, & Escobar, 2009b).

2.3 Impact of XBRL to the external user perspective.

External user can be describe as an entities or individuals who do not participate in running or managing the business but are interested in the financial information of the company. Example of external user is external auditor, financial analyst, investor, creditor and government agency.

The study conducted by (Avallone et al., 2016) has shown that using XBRL, the auditor can easily gather the financial information data and able to make an analysis in large data pools for anomalies and Fraud.

According to research done by Hodge, there is an impact of XBRL in analyst forecast behaviour. The study found that the adoption of XBRL by the companies was positively associated with the number of analyst followings and analyst forecast accuracy. It shows that XBRL can give a better view for the decision making especially in making investment decision.

China is the first country that adopt XBRL in their reporting. The theories information technologies paradox has indicated that it will takes time for IT innovation such as XBRL to realize business value. The empirical study to the early adoption of new semantic standard for online business reporting in Chinese firm between 2001 and 2006 indicate that analyst forecast accuracy has decrease during the early adoption with little public information on listed firms. (Liu, Yao, Sia, & Wei, 2014b)

Survey conducted by Harris and Mortsfield (2012) find that respondent from investors and analyst express a negative view of the usability and quality of XBRL formatted data. Nevertheless, the study shows that the mandatory adoption of XBRL has shown it improved the accessibility and usability of financial reporting information beside give the quality of information in the information environment which help the analyst make a forecast decision. The empirical study also shows that the mandatory adoption of XBRL is positively associated with the number of analyst followings and analyst forecast accuracy. (Liu, Wang, & Yao, 2014a)

The adoption of XBRL also affects the trading behaviour of investors especially for foreign investor. Foreign investors trading turnover ratio significantly increase after the adoption of

XBRL by the Korean public listed company. Besides that, the foreign investor's trading turnover ratio in a small firm is significantly greater than in a large firm. (Choi, 2015)

A study conducted to the 554 US bank loan contract, was found that borrowers who adopt the XBRL will enjoy more favourable price and non-price terms of bank loan contract compare with non XBRL adoption. This indicates that the adoption of XBRL is an important indicator of borrower's risks and values. It shows that adoption of technology advancement reporting such as XBRL reduce the cost of bank loans by decreasing the information asymmetry between lenders and borrowers.(Chong, Shi, Fu, Ji, & Yan, 2017a)

Information processing cost is a major driving factor for the reduction in stock return synchronicity. An adoption of XBRL significantly reduces adopter's stock return synchronicity. The reduction in synchronicity mainly applies to filings under the mandatory program as opposed to the voluntary program. Furthermore, such an effect is more pronounced for opaque and complex firms. Besides that the research finds that XBRL adoption also reduces price delay. (Dong, Li, Lin, & Ni, 2016).

2.4 Impact of XBRL to the internal user perspective.

Internal user can be describe as a person inside or an organization that helps run its operations and uses the company's financial information to make decisions. In other words, an internal user is a manager or someone else inside a company who has access to private, internal knowledge about the company and can use this knowledge to make financial decisions about the business.

Particularly, XBRL could potentially enable preparers to save costs in producing and distributing financial information, removing manual data re-entry and reducing errors. It could additionally allow easier regulatory compliance and increase the efficiency in business decision-making and the use of information systems as for preparers of the financial information, using XBRL can potentially save cost, removing manual data re-entry and reducing error in producing and distributing the financial information. XBRL also additionally allow easier in regulatory compliance and can give more reliable business information for decision making purposes. (Avallone et al., 2016)

According to Pinsker and Li in (Avallone et al., 2016) study, by asking business managers through phone, email and interview in Canada, Germany, South Africa and the US find that, larger benefits mainly in terms of cost savings related to a decrease in data redundancy as well as lower costs of bookkeeping.

Korea as a highly advanced technologies and penetration rates mandated the adoption of XBRL in the listed company in Korea Exchange (KRX) on October 2007, The empirical study done by (Choi, 2016a) found that adoption of XBRL by Korean public firms mitigates the information asymmetry between managers and investors. Beside that the study also indicates that adoption of XBRL by the Korean public firms is decreasing the dividend pay by the company, this is consistent with the dividend signal theory. The dividend signalling theory

suggests that, in a situation of information asymmetry, firms pay dividends to convey their private information about their true values.

2.5 XBRL in Malaysia.

According to company commissioner of Malaysia (CCM), Malaysia will be introducing a submission platform based on the XBRL format in 2018. The platform known as "Malaysian Business Reporting System (MBRS) allow the company to submit their annual submission filing of financial statement and reports (FS) annual return (AR) and exemption application (EA) which related to the financial statement and annual return applications in XBRL format.

The started plan to adopt XBRL format submission is on 2010 and the first financial statement taxonomy has been released on 2014 known as SSM Taxonomy (SSMT). According to Nor Azimah (2013), it is expecting to implement XBRL financial reporting format on a voluntarily basis with involving two phase adoptions. First phase involving listed companies, subsidiaries and non-listed companies. The second phase will continue with XBRL implementation for private limited companies.

A Study conducted on 2015 to the Malaysia public companies with good performance and high liquidity of shares found that from 67 companies, none of the companies have adopted XBRL as their financial reporting from December 2014 to January 2015. Beside that the study also found that only 24 companies have prepared financial reporting with HTML and online interactive. Most of the companies still in traditional way of reporting format with the PDF downloaded version. Beside that none of the companies have an information regarding XBRL in their companies' website. (Azleen Ilias & Ghani, 2015)

A study conducted by (Azleen Ilias, Razak, & Rahman, 2015) shows that the potential stakeholders are still lack of knowledge regarding the XBRL. The research conducted to the representative of the Malaysian Institute of Accountant (MIA), Malaysia Yellow Pages and attendees of MIA courses and conference in Kuala Lumpur and Selangor area found that only few respondents are fully aware of XBRL. 54.85% from 350 respondents did not know the concept of XBRL, 72.9% did not know and did not have any idea pertaining to adoption of XBRL, 9.4% respondents had attended any related course on XBRL and only 18.9% respondent believed that their organization should adopt XBRL in the future.

The research conducted to 350 potential users of XBRL in Malaysia, which consist of 42% auditors, 23.1% accountants and 10.3% tax practitioners in Kuala Lumpur and Selangor shows that they were mixed findings on the difference's perception towards relative advantage from 21 items related to the auditing, users and preparation of financial and corporate compliance. The study also found that intention to use for the future also associated with this every item regarding relative advantage. (Azleen Ilias, Zulkeflee, Razak, & Rahman Abd, 2015).

3.0 METHODOLOGY

In this study, all publication regarding the impact of using XBRL and all article regarding XBRL study in Malaysia has been taken to identify the current trend. To identify the relevant article for this paper, the searching method was being conducted from Google Scholar and Scopus database to find articles with keyword "XBRL impact" and "XBRL Malaysia" in the title or in the abstract. From the search findings, For XBRL impact 66 articles were found in Scopus database and 69 articles was found in Google Scholar database while for XBRL Malaysia, 1 article was found in Scopus database and 7 articles was found in Google Scholar database. The table 1 below show the detail search results.

After the search process, all article in both databases has been download and exported to the Mendelay software for further actions. Two database names as XBRL impact and XBRL in Malaysia has been created in Mendelay software to conduct the analysis. By using Mendelay, all article has been checked first to see their accuracy of the article information and filter for duplicate article. After filter for duplicate article and numerous info modification and recheck, 46 articles have been selected for XBRL impacts and all 8 articles have been selected for XBRL in Malaysia. The basis for selection of article was we take only publish article from journal, conference paper and review paper that related to XBRL impact and XBRL study in Malaysia. Based on selected articles, all related information then be extracted and classified by author, title, journal name, year, objective and findings. The relevant information was table up into Excel to facilitate detailed analysis. The detail step and detail article selected are shown below:

Table 1: Search article result

Keyword Search	Scopus Database	Google Scholar Database	Total Article	Final article selected
XBRL impact	69 articles	66 articles	135 articles	46 articles
XBRL Malaysia	1 article	7 articles	8 articles	7 articles

Flow Chart 1: Methodology Step

Table 2: Article selected for XBRL impact

S/No.	Author(s)	Title
1.	(Li & Nwaeze, 2018)	Impact of extensions in XBRL disclosure on analysts' forecast behavior
2.	(Du & Wu, 2018)	XBRL mandate and timeliness of financial reporting: Do XBRL filings take longer?

3.	(Chong, Shi, Fu, Ji, & Yan, 2017b)	The impact of XBRL on information asymmetry: evidence from loan contracting
4.	(Chen, Guo, & Tong, 2017)	XBRL Implementation and Post-Earnings-Announcement Drift: The Impact of State Ownership in China
5.	(Shanmuganathan, 2017)	Influences of XBRL & IFRS on Business Reporting - Canada
6.	(Liu, Luo, & Wang, 2017)	An empirical investigation on the impact of XBRL adoption on information asymmetry: Evidence from Europe
7.	(Suwardi & Tohang, 2017)	An Analysis of XBRL Adoption Towards Systemic Risk of Financial Institutions Listed in NYSE
8.	(Beelitz, 2017)	The dilemma of XBRL-XML versus XBRL-JSON regarding linkage of financial information
9.	(Oswari & Januarianto, 2017)	Extensible business report language (XBRL) implementation of financial reporting standard in Indonesian banking industry
10.	(Fradeani, Panizzolo, & Metushi, 2016)	Financial reporting in XBRL: First evidence on financial statement notes of italian unlisted companies
11.	(Kaya & Pronobis, 2016)	The benefits of structured data across the information supply chain: Initial evidence on XBRL adoption and loan contracting of private firms
12.	(Choi, 2016b)	The impact of XBRL adoption on corporate dividend policy: Evidence from Korean firms
13.	(Lim & Wang, 2016)	The impact of service provider switches on XBRL quality
14.	(Yang & Liu, 2016)	Impact of XBRL on Financial Statement Structural Comparability
15.	(Shan & Troshani, 2016)	The effect of mandatory XBRL and IFRS adoption and audit fees: Evidence from the Shanghai Stock Exchange
16.	(Hu & Hu, 2015)	The impact of XBRL classification criteria on accounting conservatism—an example of the wholesale and retail trade
17.	(Perdana, Robb, & Rohde, 2015)	An Integrative Review and Synthesis of XBRL Research in Academic Journals
18.	(Liu, Luo, Sia, O'Farrell, & Teo, 2014a)	The impact of XBRL adoption in PR China
19.	(Liu, Wang, & Yao, 2014b)	XBRL's impact on analyst forecast behavior: An empirical study
20.	(Peng, Shon, & Tan, 2014)	Market Reactions to XBRL-Formatted Financial Information: Empirical Evidence from China
21.	(Shan & Troshani, 2014)	Does XBRL benefit financial statement auditing?
22.	(Wang, Wen, & Seng, 2014)	The association between the mandatory adoption of XBRL and the performance of listed state-owned enterprises and non-state-owned enterprises in China

23.	(Zhu & Wu, 2014)	Assessing the quality of large-scale data standards: {A} case of {XBRL} {GAAP} Taxonomy
24	(Liu, Yao, Sia, & Wei, 2014c)	The impact of early XBRL adoption on analysts' forecast accuracy - Empirical evidence from China
25.	(Blankespoor, Miller, & White, 2014)	Initial evidence on the market impact of the XBRL mandate
26.	(Hao & Kohlbeck, 2013)	The Market Impact of Mandatory Interactive Data: Evidence from Bank Regulatory XBRL Filings
27.	(Liu, O', & Farrell, 2013)	The impact of XBRL on forecast accuracy across nations
28.	(Pathak, 2013)	Extensible Business Reporting Language (XBRL): Potential of Research in XBRL as a Social Artifact- An Essay
29.	(Perdana, 2013)	The Impact of Data Information Quality of XBRL-based Financial St
30.	(Valentinetti & Rea, 2013)	XBRL for Financial Reporting: Evidence on Italian GAAP versus IFRS
31.	(Yao, Xiao, & Li, 2013)	XBRL and corporate governance
32.	(Arnold, Bedard, Phillips, & Sutton, 2012)	The impact of tagging qualitative financial information on investor decision making: Implications for XBRL
33.	(Borges & Silva, 2012)	A framework for processing business financial rules
34.	(Steenkamp & Nel, 2012)	The adoption of XBRL in South Africa: An empirical study
35.	(Baldwin & Trinkle, 2011)	The impact of XBRL: A Delphi investigation
36.	(Carsten Felden, 2011)	Characteristics of XBRL adoption in Germany
37.	(Garsva & Danenas, 2011)	XBRL integration into intelligent system for credit risk evaluation
38.	(Jackson & Kwansa, 2011)	Digitizing financial reporting: A profile of early hospitality industry xbrl adopters and implications for the industry
39.	(Qin, 2011)	XBRL, semantic web and web services
40.	(Indrit Troshani & Lymer, 2011)	Institutionalizing XBLR in the UK: An Organizing Vision Perspective
41.	(Satoh, 2011)	XBRL Taxonomy for Estimating the Effects of Greenhouse Gas Emissions on Corporate Financial Positions
42.	(Callaghan & Nehmer, 2009)	Financial and governance characteristics of voluntary XBRL adopters in the United States
43.	(C Felden, Piechocki, & Piechocki, 2009)	Business semantics in consolidation of financial statements
44.	(Indrit Troshani & Doolin, 2007)	Innovation diffusion: A stakeholder and social network view
45.	(I.a Troshani & Doolin, 2006)	Diffusion of a networked innovation: A stakeholder and social network view
46.	(Pinsker, 2003)	XBRL awareness in auditing: A sleeping giant?

Table 3: Article selected for XBRL in Malaysia

S/No.	Author(s)	Title
1.	(Azleen Ilias, 2017)	The Practitioner's Expectation of Real-Time Reporting: Case of the eXtensible Business Reporting Language (XBRL).
2.	(Azleen Ilias et al., 2017)	XBRL Adoption in Malaysia : Perception of the Accountants and Auditors
3.	(Azleen Ilias, 2015)	The Existence of the Extensible Business Reporting Language (XBRL) In Malaysia : From A Stakeholders ' Perspective
4.	(A Ilias, Razak, Areas, & 2015, n.d.)	The expectation of perceived benefit of extensible business reporting language (XBRL): a case in Malaysia
5.	(Azleen Ilias, Zulkeflee, Razak, & Rahman, 2015)	The Familiarity and Preferences for Reporting Format among Stakeholders
6.	(Azleen Ilias, Zulkeflee, Razak, & Rahman Abd, 2015)	How potential adopters in Malaysia perceive the relative advantage of extensible business reporting language (XBRL)?
7.	(Mohamad, Building, & Ismail, 2010)	The Awareness of the Extensible Business Reporting Language (XBRL) In Malaysia

4.0 DATA ANALYSIS

4.1 Number of Publications by Year

Table 4 presents the distribution of articles by year. There were 46 articles in total published related to XBRL impact and 7 article related to XBRL Malaysia starting from the year 2003 until 2018. The most article published on XBRL impact are on 2014 while for XBRL Malaysia are on 2015. The result also show that there is no article being publish on the year 2008, 2005 and 2004. Details of the number of article publish according to year are shown at the table 4 below.

Table 4: Number of publications by year

Year	XBRL Impact		XBRL in Malaysia	
	No. of articles	Percentage	No. of articles	Percentage
2018	2	4%		
2017	7	16%	2	29%
2016	6	13%		
2015	2	4%	4	57%
2014	8	17%		
2013	6	13%		
2012	3	7%		
2011	7	16%		
2010	-	-	1	14%
2009	2	4%		
2008	-	-		
2007	1	2%		

2006	1	2%		
2005	-	-		
2004	-	-		
2003	1	2%		
Total	46	100%	7	100%

4.2 Numbers of article published by publisher.

Table 5 presents the distribution of articles publish by the publisher. For the purpose of this study, the author has divided into 4 categories of publisher which is international journal publisher, journal publisher, proceeding and conference publisher, and others. Currently, 10 International journal publishers (13 articles), 13 journal publishers (16 articles), 13 conference and proceedings publisher (14 articles) and 8 from other publisher (10 articles) publish the article in XBRL impact and XBRL Malaysia. The most article are publish from journal publisher 16 articles. Details are shown below:

Table 5: Numbers of article published by publisher.

Publisher	Number of articles	
International Journal of Economic Research	1	10 publisher / 13 articles
International Journal of Digital Accounting Research	2	
International Journal of Managerial Finance	1	
International Journal of E-Business Research	2	
International Journal of Services and Standards	1	
International Journal of Enterprise Information Systems	1	
International Journal of Accounting Information Systems	1	
International Journal of Disclosure and Governance	1	
International Journal of Business and Systems Research	1	
Global Business and Management Research: An International Journal	2	
Journal of Emerging Technologies in Accounting	2	13 publisher / 16 articles
Journal of Management Analytics	1	
Journal of Information Systems	2	
Journal of Accounting and Public Policy	2	
Journal of Computer Information Systems	1	
Journal of Management Control	1	
Journal of Hospitality Financial Management	1	
Journal of Internet Banking and Commerce	1	
The Journal of Developing Areas	1	
Managerial Auditing Journal	1	
Australasian Accounting, Business and Finance Journal	1	
Indian Journal of Science and Technology	1	
European Journal of Innovation Management	1	
International Conference on Accounting Studies (ICAS)	2	

International Conference on Industrial Engineering and Engineering Management: Management System Innovation	1	13 publisher / 14 articles
International Conference on Information Systems, ICIS 2016	1	
Proceedings of the 14th European Conference on Information Systems, ECIS 2006	1	
Proceedings of Future Technologies Conference	1	
CEUR Workshop Proceedings	1	
Pacific Asia Conference on Information Systems, PACIS 2016 - Proceedings	1	
Network Security and Communication Engineering - Proceedings of the 2014 International Conference on Network Security and Communication Engineering, NSCE 2014	1	
Proceedings - Pacific Asia Conference on Information Systems, PACIS 2013	1	
WebMedia'12 - Proceedings of the 2012 Brazilian Symposium on Multimedia and the Web	1	
European Conference on Information Systems, ECIS 2011	1	
Americas Conference on Information Systems 2009, AMCIS 2009	1	
SIBR 2014 Conference (Kuala Lumpur) on Interdisciplinary Business and Economics Research, 7th-8th February 2014, Kuala Lumpur.	1	
Accounting Horizons	1	8 publisher / 10 articles
Accounting Perspectives	1	
Decision Support Systems	3	
Information and Management	1	
Electronic Markets	1	
Review of Accounting Studies	1	
Transformations in Business and Economics	1	
Electronic Library	1	

4.3 Type of document publish

Table 6 present the number of documents according to type. The most document in XBRL impact publish in the Scopus and Goggle Scholar database is article (29 documents, 63%), the second type of document is conference paper (14 documents, 30%), the third type of document is review paper (3 documents, 14%). For XBRL Malaysia the most is article (4 documents, 57%) and conference paper (3 documents, 43%).

Table 6: Type of document publish

	XBRL Impact		XBRL in Malaysia	
Type of document	No. of doc.	Percentage	No. of doc.	Percentage
Article	29	63%	4	57%
Review paper	3	7%	-	-
Conference paper	14	30%	3	43%
Total	46	100%	7	100%

4.4 Research Types of Each Publication

Table 6 shows the types of research used for every article. Basically, there are four types of research design which is analytical, descriptive, empirical and exploratory research (Sekaran & Bougie, 2016). In analytical research, the research attempts to establish why and how it came to be. It is usually concerning with cause-effect relationships. Meanwhile, in descriptive research it attempts to identify, describe, or examine what it is. In descriptive research it will use description, classification, measurement, and comparison to describe certain phenomena. An empirical research method is a type of research methods in which the empirical observations or data are collected in order to answer certain particular research questions. Lastly, in exploratory research method they are few or no previous studies exist, and predictive research is to speculate on future possibilities after further study of available proof of cause and effect. Most publications contained all of four above-mentioned research types. Findings show that for XBRL impact most articles (15 articles) are empirical type in nature, followed by descriptive and exploratory (13 article), and lastly analytical (5 articles). For XBRL Malaysia all article are in area of exploratory only (7 article).

Table 6: Research Types of Each Publication

Year	Research Type							
	Analytical		Descriptive		Empirical		Exploratory	
	XBRL Impact	XBRL in Malaysia	XBRL Impact	XBRL in Malaysia	XBRL Impact	XBRL in Malaysia	XBRL Impact	XBRL in Malaysia
2018	1				1			
2017	1		3		2		1	2
2016	1		2		2		1	
2015			1		1			4
2014	1		3		4			
2013	1				1		4	
2012			1		1		1	
2011			2		2		3	
2010								1
2009			1				1	
2008								
2007					1			
2006							1	
2005								
2004								
2003							1	
Total	5	-	13	-	15	-	13	7

4.5 Research Approaches of Each Publication

Punch & Oancea, (2014) stated that, there are three different approaches in research which is qualitative (subjective approach), quantitative (numerical analysis) and mixed method

(combine both approaches). Table 7 shows the methods of research used for every article published in this study. For XBRL impact most of the articles are quantitative methods (36 articles), followed by the qualitative methods (10 articles) and lastly no researcher used mixed methods (0 articles). For XBRL Malaysia all article is in quantitative approach.

Table 7: Research Approaches of Each Publication

Year	Research Approach					
	Quantitative		Qualitative		Mixed mode	
	XBRL Impact	XBRL in Malaysia	XBRL Impact	XBRL in Malaysia	XBRL Impact	XBRL in Malaysia
2018	2					
2017	5	2	2			
2016	6					
2015	2	4				
2014	8					
2013	4		2			
2012	2		1			
2011	6		1			
2010		1				
2009	1		1			
2008						
2007			1			
2006			1			
2005						
2004						
2003			1			
Total	36	7	10			

4.6 List by Subject Area of Articles

Table 8 shows the number of study focus on the different group. For the purposes of this study the author decide to divide into 3 major group which is focus on internal user, external user, government and XBRL taxonomy improvement. Only 31 article from 2014 until 2018 are selected for this analysis. Recent 5 years study selected to see the latest current study focus. The most focus is on external user 12 study, filings to government 8 study, taxonomy 6 study and the last is on the preparer 5 study.

Table 8: List by Subject Area of Articles

Study focus on		No of study	Total
External user	Financial Analyst perspective	2	12
	Investor perspective	3	
	Creditor perspective	4	
	Auditor Perspective	3	
Internal user	Accountant and Management perspective	5	5
Government	Company Filings annual report to government agency Perspective	8	8
XBRL taxonomy improvement	XBRL Taxonomy perspective	6	6
	Total	31	31

4.7 List by Country

Table 9 below shows the study conducted according to the country. From the analysis, the two top countries conducted study on XBRL impact is United State of America (14 article) and China (9 article) while for any topic related to XBRL study conducted in Malaysia only 7 articles. The details are shown below.

Table 9: No of Article by Country

Total	9	14	4	4	1	4	1	1	2	7	2	1	2	1	53
2018		2													2
2017	1	2	1	1		1		1		2					9
2016	1	1	1			1					1	1			6
2015	1									4			1		6
2014	5	3													8
2013	1		2			1					1		1		6
2012		1		1										1	3
2011		3		2		1	1								7
2010										1					1

Year	China	US	Canada	Europe	South Africa	German	japan	Indonesia	New Zealand	Malaysia	Italy	Korea	Australia	Brazil	Total
2009		1		1											2
2008															
2007									1						1
2006									1						1
2005															
2004															
2003		1													1

From the above analysis we found that:

XBRL impact

- 46 articles in total published related to XBRL impact starting from the year 2003 until 2018. The most article published on XBRL impact are on 2014.
- Currently, 10 International journal publishers (13 articles), 13 journal publishers (16 articles), 13 conference and proceedings publisher (14 articles) and 8 from other publisher (10 articles) publish the article in XBRL impact and XBRL Malaysia. The most article are publishing from journal publisher 16 articles.
- The most document in XBRL impact publish in the Scopus and Goggle Scholar database is article (29 documents, 63%), the second type of document is conference paper (14 documents, 30%), the third type of document is review paper (3 documents, 14%).
- XBRL impact most articles (15 articles) are empirical type in nature, followed by descriptive and exploratory (13 article), and lastly analytical (5 articles).
- For XBRL impact most of the articles are quantitative methods (36 articles), followed by the qualitative methods (10 articles) and lastly no researcher used mixed methods (0 articles).
- Recent 5 years study selected to see the latest current study focus. The most focus is on external user 12 study, filings to government 8 study, taxonomy 6 study and the last is on the preparer 5 study.
- From the analysis, the two top countries conducted study on XBRL impact is United State of America (14 article) and China (9 article)

XBRL Malaysia

- ➢ Only 7 article has been found in area of XBRL in Malaysia
- ➢ Azleen ilias (6 article publish) is the most publish author that has been publish article related to the XBRL in Malaysia.
- ➢ The most article publish is on year 2015 (4 article), 2017 (2 articles) and 2010 (1 articles)
- ➢ For XBRL Malaysia the most is article (4 documents, 57%) and conference paper (3 documents, 43%).
- ➢ For XBRL Malaysia all article are in area of exploratory only (7 article).
- ➢ For XBRL Malaysia all article is in quantitative approach.
- ➢ Most of the article is related to the awareness and perception of the user to the XBRL system.

5.0 DISCUSSION AND CONCLUSION

According to (Webster & Watson, 2002), Reviewing prior and relevant literature is only effective if only its creates a firm foundation for advancing knowledge, closes the outdated research areas, identifying the possible research gaps while uncovering areas where future research is needed. From the trend analysis conducted, we also outlined certain areas of research where future research should be aiming at.

Many researchers found that, the impact of XBRL has improved the efficiency and reliability of the financial report information. XBRL as a language readable tools can easily integrate the information into other software as a result it can give consistent information, more accurate and reduce clerical works. Besides that, an empirical research also found that the adoption of XBRL will improved market efficiency by reducing the information asymmetries.

However, based on our observation from article regarding the impact of XBRL, we found that many research conducted are mainly on the time on voluntarily adoption if compared to the mandatory era. Only few researchers are being conducted in the time of mandatory adoption. Voluntary adoption of XBRL can be self-biasness if compare to the mandatory adoption.

Besides that, most of the studies regarding XBRL impact and XBRL Malaysia are quantitative in nature. However, from the observation on randomly selected article it has been observed that the data is either very limited. Hence to improve the quality and applicability of the studies, researchers are expected to use better quality data to validate their research since the availability of resources has now increased from time to time. Case studies and experimental studies also can be conducted in the methodologies to improve future research especially related to XBRL impact and XBRL Malaysia.

From our observation, we also found that many researchers conducted to the XBRL impact is only focusing to the advanced country if compare to develop country. In Malaysia for example only 8 article has been found related to XBRL even though XBRL has been introduced more than 10 years ago. It shows that there are still lack of conducted research to the adoption of

XBRL into the development country. Future research are suggested to be conducted more focus on development country in the future to see the comparison since the impact of XBRL for advanced country maybe differ to the development country.

Beside that from our observation, we also notice that many research conducted, focusing to the high-level companies, which not many researchers are conducted to the impact of XBRL to the small medium companies. The impact of XBRL towards small medium companies maybe differ if compare to the high-level companies.

Over the years, the adoption of XBRL in many countries has been increased from time to time. Submission report in XBRL format is now use in more than 30 countries by government agency around the world and approximately 18 in Europe either on voluntary or mandatory basis and the numbers is keep growing from time to time. Now XBRL international consortium stated that, they are more than 600 companies and government agencies comprised of 27 local jurisdictions relating with the progress of XBRL standard. (Avallone et al., 2016)
From the analysis conducted, it shows that a study regarding the XBRL impact has shown significantly increase from time to time. The impact to capital market (forecast behaviour) and impact to the behaviour of user financial reporting is the most focusing area in XBRL impact. However, the study which focusing to the Malaysia environment is still low on XBRL.

Overall the area of research in XBRL is seem promising. Many researches tend to improve the study related to the XBRL especially related to the capital market and the area that have not been studied before. It is understandable that due to privacy, and lack of data availability remained a big challenge to researcher but a collaborative effort from government, academicians and practitioners could overcome it in future. We hope by conducting this study it will give some direction of the future research, gap identification and current trend regarding the XBRL.

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