ASIAN JOURNAL OF INTERDISCIPLINARY RESEARCH

Enhancing Company Financial Transparency for Contractor Selection Process through XBRL: A Conceptual Framework

Zulkarnain Abd Wahab [a, *], Kamran Shavarebi [b]

[a] Faculty of Technology, Engineering & Mathematics (FSTEM), International University of Malaya-Wales, Kuala Lumpur, Malaysia.
[b] Associate Professor, Faculty of Science, Technology, Engineering & Mathematics (FSTEM), International University of Malaya-Wales, Kuala Lumpur, Malaysia.
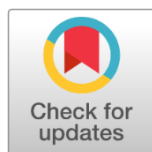*Corresponding author email: 201800182@student.iumw.edu.my
DOI: https://doi.org/10.34256/ajir2123

Abstract: Amongst the predicament in selecting a contractor for project implementation is to identify a resilient partner who can withstand the financial impact posed by project risks and constraints. For that matter, decision-makers require full transparency of financial information of the candidates for an effective contractor selection process. In the context of Malaysia, authorities are adopting Extensible Business Reporting Language (XBRL) to convey information about companies financial standing. This study is aimed to develop a conceptual framework in utilising the increase of information brought along by XBRL implementation to facilitate transparency as required by decision-makers during the contractor selection process. This article is also articulating on factors to promote adoption of online business reporting to increase information integrity, recency and contextually to increase the transparency.

Keywords: Contractor Selection Process, XBRL, Financial Standing, Transparency, Project Management

Introduction

Contractor selection process plays a vital role in ensuring the success of a project as most of the resources, services and materials are commonly sourced through third parties. As pointed out by Jafari (2013), that many successful projects are associated with the successful selection of competent contractors. Plebankiewicz (2009), identified five main criteria in the contractor selection process that diverge from the conventional scope, cost and time prequalification measures, and apparently, Financial Standing (FS) is one of the prominent criteria. This claim was supported by Acheamfour, Kissi, & Adjei-Kumi, (2019) and Rashvand, Majid, & Pinto, (2015). Expressively,

these researches establish that selecting a financially sound contractor increases the prospect of project success. Correspondingly to good contractor selection, decision-makers require full transparency of FS to make a well-informed judgement in selecting reliable contractors. In Malaysia, the companies financial statements are kept under the stewardship of Companies Commission of Malaysia (SSM) which undertake the role of National Companies and Business information custodian (Companies Act 777, 2016). Hence, SSM is accountable to provide an efficient channel to promote better FS transparency by the government. The latest initiative to promote efficient handling of Companies FS by SSM is the introduction of XBRL technology

base system called Malaysian Business Reporting System (MBRS)(Yahaya, 2018). On XBRL research area conversely, academic debates are still slowly but actively prospering (Erkus & Chiu, 2014). Although Henderson, Sheetz, & Trinkle (2012) and Perdana, Robb, & Rohde (2015) has illustrated that trend of XBRL discussion has recently settled gradually as compared to between 2009 and 2013, an in-depth study of the impact of XBRL to secondarily impacted areas is still much needed. Given all the facts mentioned, and due to lack of research studying on the impact of XBRL on procurement management process, this paper explores the correlation of XBRL implementation towards a success contractor selection, particularly in the context of improving FS transparency. With the understanding of the relationship, project decision-makers are expected to be able to forecast the risk level of each candidate before contractual engagement is signed-off.

Background

The demand for transparent financial standing become more prominent in the wake of the Enron scandalous historical event that marked the collapse of a giant conglomerate due to deliberate misinterpretation of income of an organisation (Hubbell, 2019). Hubbell (2019), also mentioned that the pressure for companies to demonstrate their financial worthiness is motivated by the need to gain the trust of stakeholders. Contextually, Procurement function that supports projects sourcing is among main stakeholders to be impressed upon by the contractors (Thomson, 2011), for a better chance of gaining business opportunity and as a means to ensure business profitability. This situation has prompted accountants and related societies around the world to retrospect on the reporting standards. Studies like Ilias, Abd Razak, & Abd Razak, (2014) and Shanmuganathan, (2017) mentioned that, in the middle of this significant reform, Hoffman (2017), has introduced XBRL,

an evolved version of extensible markup language (XML) technology which initial inception was to standardise websites developments (Mousa, 2016). As XBRL is hoped to fill the gap mentioned above, studies describe the features that can sufficiently explain the context of each information in FS. XBRL allows descriptive information and relationship about data to be tagged along with the instances (as the actual information consists in FS), (Mousa, 2016). This descriptive information is called metadata, which is organised in taxonomies (La Torre, Valentinetti, Dumay, & Rea, 2018). The metadata is also flexibly extensible to represent an actual context and attributes of the instance (O'Riain, Curry, & Harth, 2012).

Ever since the establishment of XBRL, the business communities and authorities around the world has shown great enthusiasm in adopting this technology to promote efficient information exchange between stakeholders (Ilias, Ghani, & Azhar, 2017). Similarly, in Malaysia, although the excitement was triggered as early as 2014 (Ilias et al., 2014), XBRL has only been adopted recently by SSM (New Straits Times, Sept 27, 2018). The move is expected to facilitate the statutory requirement for all companies to reveal its FS. This is because Financial Reporting Act 1997 (Accounting, Act 558, Parliament, 1997), says that it is mandatory for a company to disclose its financial position, management, and operations to enable stakeholders and investors to assess its performance for the fiscal period (Amran, Manaf Rosli Bin, & Che Haat Mohd Hassan, 2008; Abdullah, Almsafir, & Al-Smadi, 2015).

In contrary to the optimist findings by researches mentioned above, there are also doubts about whether XBRL provides additional values due to possible data quality, integrity and mathematical error issues. (Debreceny, Farewell, Piechocki, Felden, & Gräning, 2010; Doolin & Troshani, 2004; Hsieh, Wang, & Abdolmohammadi, 2019; Pinsker, 2003). This ambiguous condition raised an

inquisitive future research opportunity to understand specific consequences of XBRL implementation on affected areas (Doolin & Troshani, 2004; Erkus & Chiu, 2014; Henderson et al., 2012; Perdana et al., 2015).

Janssen, van der Voort, & van Veenstra, (2014) maintain that XBRL could be a solution to complex project dynamics which allow fast data exchange between stakeholders based on a case study conducted in the Netherlands. Further study should be conducted on project management areas to understand the effect of efficient data exchange by the implementation of XBRL.

Preliminary studies conducted by researchers as listed in Table 1 shows that the interest to understand the impact of XBRL implementation in Malaysia were noteworthy in the business and accounting world. However, most of the studies were carried out years before the first implementation of XBRL with the focus on implementation success factors.

This paper, on the other hand, is aiming to pursue the effect of XBRL towards and efficient contractor selection process explicitly in the Project Management realm. Extending from the need to study on XBRL and Contractor Selection (CS) correlation, this article is proposing a conceptual framework based on models proposed by prior researches conceptualising prominent theories related to online transparency which improves the contractor selection process.

Financial Transparency in Contractor Selection Process

Contractor selection process conventionally focused so much on the deliverables of the contractor. Mohammed, Harris, & Dukyil (2019), identified that traditional criteria (TC) for contractor selection are typical via performance based on cost and quality (please see Figure 1).

Table 1 Articles on Malaysian XBRL Initiatives

| No	Literature and Author	Research Area
1	Ilias, et al. (2019) "Factors Influencing Knowledge and Persuasion of Financial Regulators in the XBRL Adoption Process: The Technological Perspective"	Finance
2	Ilias (2017) "The Practitioner's Expectation of Real-Time Reporting: Case of the eXtensible Business Reporting Language"	Business
3	Ilias, et al. (2017) "XBRL Adoption in Malaysia: Perception of the Accountants and Auditors"	Accounting
4	Ilias & Abdul (2016) "Real-Time Reporting: What Do You Expect ?"	
5	Ilias & Ghani (2015) "Examining the Adoption of Extensible Business Reporting Language among Public Listed Companies in Malaysia"	Business
6	Ilias, et al. (2015) "How potential adopters in Malaysia perceive the relative advantage of eXtensible business reporting language (XBRL)"	Business
7	Ilias et al. (2015) "The Expectation of Perceived Benefit of Extensible Business Reporting Language (XBRL): A Case in Malaysia"	Business
8	Abdullah, et al. (2015) "Transparency and Reliability in Financial Statement: Do They Exist? Evidence from Malaysia"	Accounting
9	Ghani, Said, & Muhammad (2014) "Enhancing Corporate Governance via XBRL: Preparers' Perception on Compatibility Expectation"	Accounting
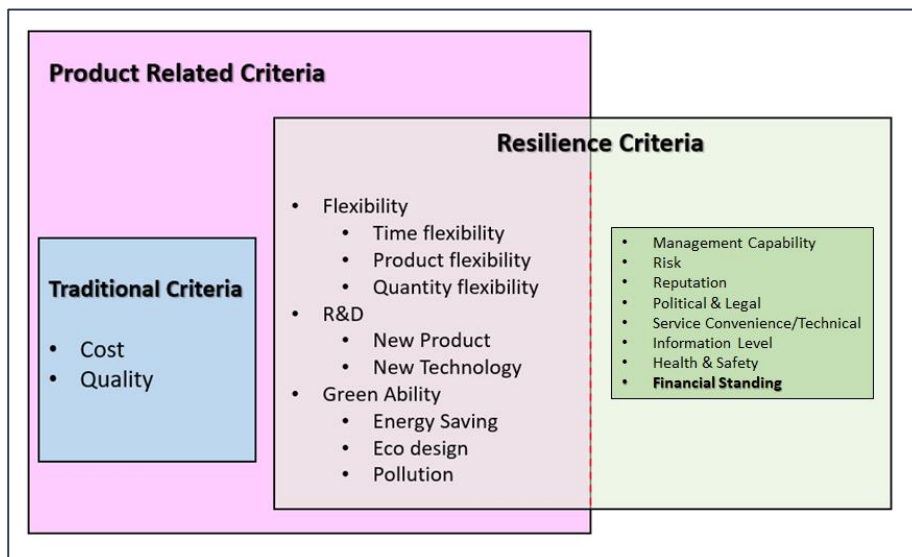
Figure 1. Contractor Selection Criteria adopted from Muhammad (2019) and Plebankiewicz (2009)

Table 2 Prequalification Criteria by Plebankiewicz (2009)

Criteria	Example Subcriteria
Financial standing	1. Financial stability
	2. Turnover, profit, obligations, amount due
	3. Owned financial funds
Technical ability	1. Experience
	2. Plant and equipment
	3. Personal
Management capability	1. Past performance and quality
	2. Quality control policy
	3. Quality management system
	4. Project management system
	5. Experience of technical personal
	6. Management knowledge
Health and safty	1. Accidents
	2. Health and safety management system
	3. Insurance policy
Reputation	1. Past failures in completed projects
	2. Number of years in construction
	3. Past client relationships
	4. Cooperation with contactors

<div align="center">**Table 3** Top five (RC) Selection Criteria mentioned by scholars</div>

No	Author	Year	Financial Standing	Technology, Technical, Ability	Management Capability	Green, Health &Safety	Reputation
1	Dennis	1993	✓	✓	✓	✓	✓
2	Hatush & Skitmore	1997	✓	✓	✓		
3	Mbachu	2008	✓	✓	✓	✓	✓
4	Watt, Kayis, & Willey	2010	*	✓	✓		✓
5	Rashvand, Majid, & Pinto	2015	✓	✓	✓	✓	
6	Faisal & Raza	2016	✓	✓	✓		✓
7	Kog & Yaman	2016	✓	✓	✓	✓	✓
8	Mohammed, Harris, & Dukyil	2019		✓	✓		✓
9	Acheamfour et al.	2019	✓	✓	✓	✓	✓
* Financial Standing is defined in this research as Company Standing and is grouped under Reputation.							

That study proposed CS to also, take Resilience Criteria (RC) as a critical consideration. This consideration will view the agility and the flexibility of contractors to deliver project objectives as critical measurement. Further supported by Plebankiewicz (2009), RC can be divided into Financial Standing, Technical Ability, Management Capability, Health and Safety and Reputation. See Table 2 describing Plebankiewicz (2009) contractor prequalification selection criteria.

The Table 2 - Criteria listed by Plebankiewicz (2009) was supported by researches in Table 3 indicating that five most identified criteria during contractor selection are 1) Financial Standing; 2) Technology & Technical ability; 3) Management Capability; 4) Health & Safety; and 5) Reputation.

Although Table 3, has not exhaustively listed out the whole criteria as discussed in the literature; however, the tabulation explains the similarity of criteria by most of the study about prequalification or selection criteria of contractors. Graphically, the criteria can be illustrated as in Figure 2, below;

Since this study is centring on the value brought along by XBRL (used in reporting companies' financial statements), thus FS is the single criterion set to be the focal point of this paper. The focus on FS, however, does not discount the criticality of other evaluation criteria. Instead, it is meant to refine the FS evaluation method based on the XBRL capability complementing the data for the whole Multi-Criteria Decision Method (MCDM) used for overall evaluation purposes.

FS can be further detailed into elements that represent the stature of a company financially. Based on Endovitskii, Lyubushin, Babicheva, & Kupryushina (2017) on specific research pertaining to the evaluation of Organisational Financial Standing, there are several ways to evaluate the good standing of a company. It ranges from internal factors such as resources, creditworthiness, insolvency, profitability, cash flow, assets, and liabilities external factors such as economic

sustainability, financial risk, the effect of the foreign exchange rate, effect to inflation and taxation. These factors are as illustrated in Figure 3 below;
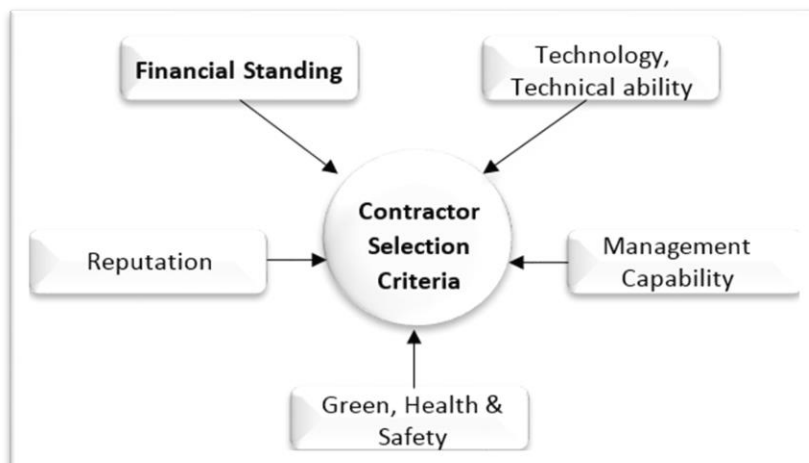
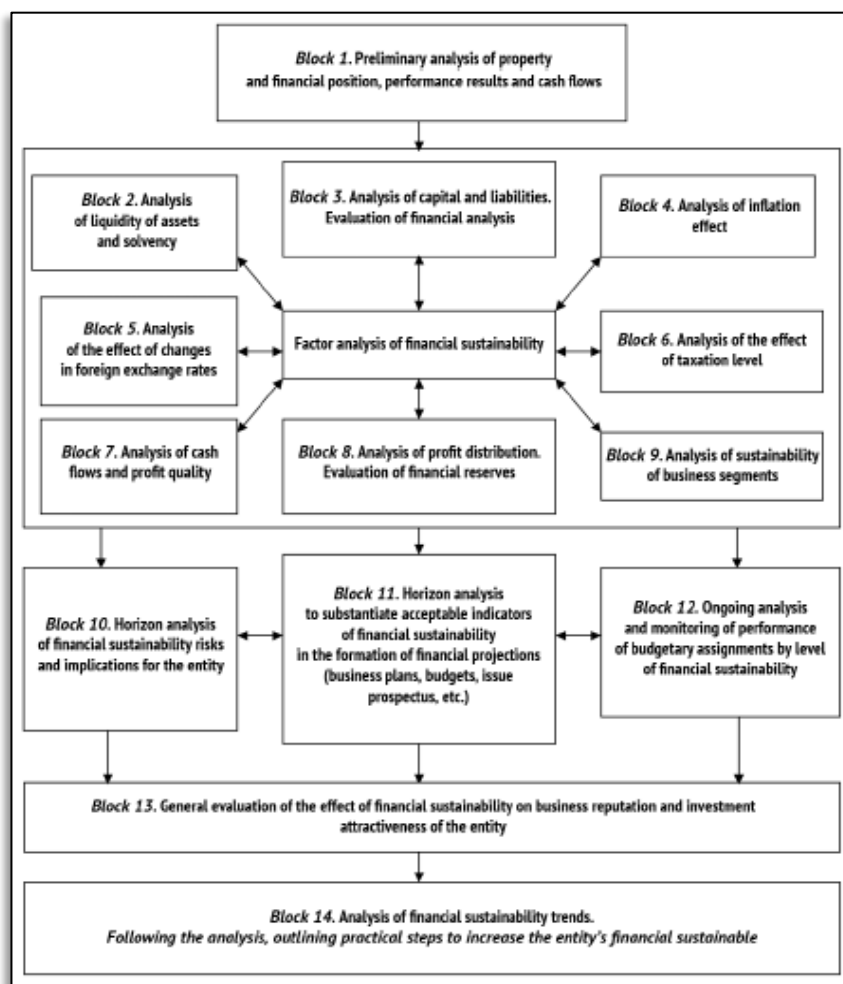

Figure 2. Contractor Selection Criteria

Figure 3. Complex analysis of financial sustainability of an organisation

Source: Endovitskii et al., (2017) as adopted from Endovitskii D.A., Endovitskaya A.V. [A systems approach to the analysis of financial sustainability of commercial organisations]. Ekonomicheskii analiz: teoriya i praktika = Economic Analysis: Theory and Practice, 2005, no. 6, pp. 2–7. (In Russ.)
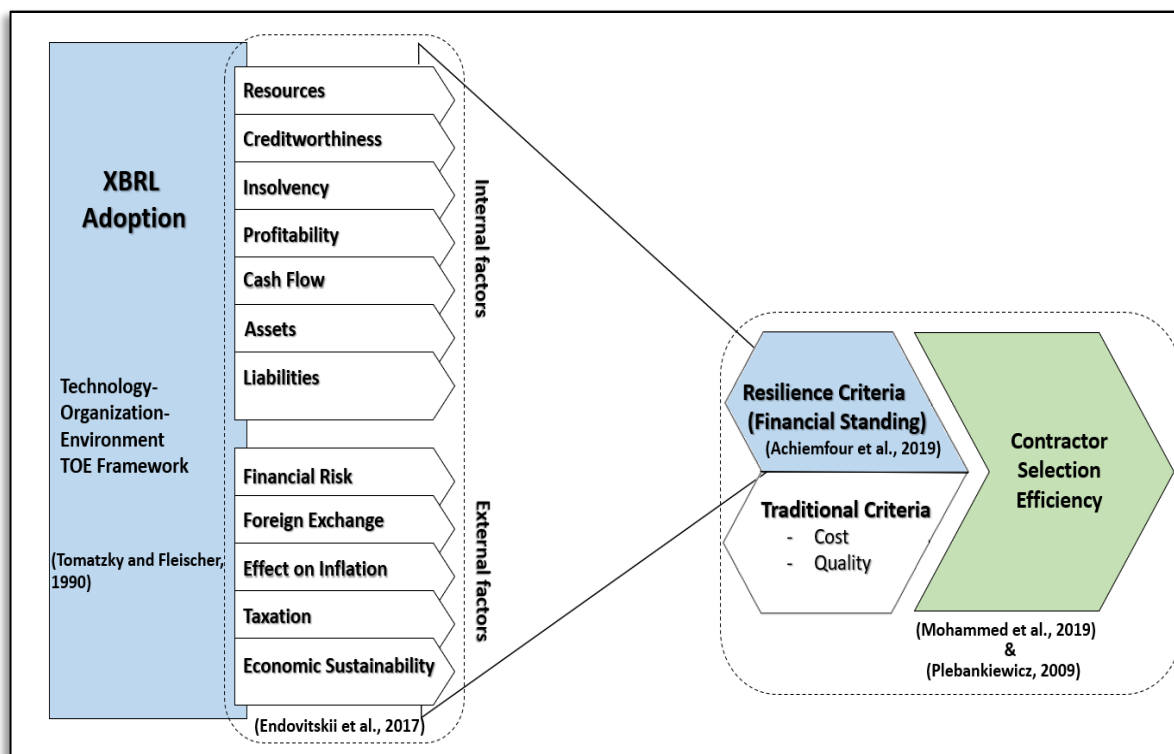
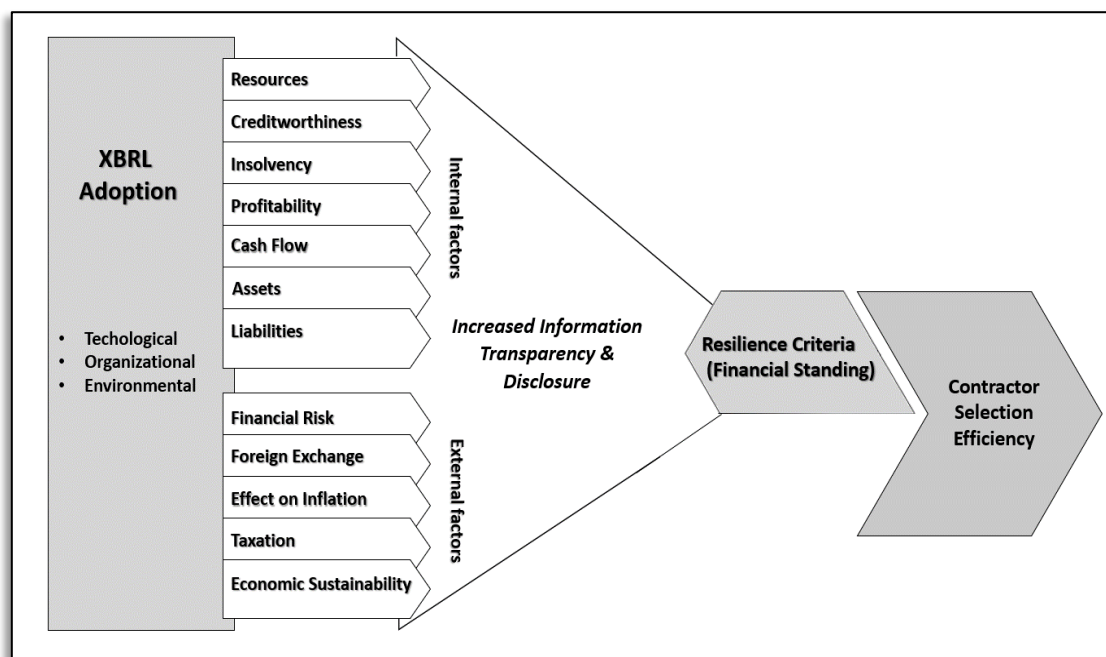**Figure 4** XBRL framework adoption effect on Criteria of Contractor selection

Figure 5 Proposed Conceptual Framework

XBRL Adoption in Malaysia

XBRL adoption in Malaysia gained its traction recently through the implementation of the Malaysian Business Reporting System (MBRS), a Malaysian XBRL initiative by Suruhanjaya Syarikat Malaysia in 2018 (New Straits Times & Radhi, 2018). Many studies conducted around the world to understand the success factors for XBRL implementation with several model adoption (Erkus & Chiu, 2014). Recent trend shows that XBRL adoption is best presented by Tornatzky, Fleischer, & Chakrabarti, (1990) Technology-Organization-Environment (TOE) framework (Ahmad, Abu Bakar, Faziharudean, & Mohamad Zaki, 2015). This framework covers internal and external

factors which are in line with the scope of this paper, that addresses projects internal and external stakeholders.

XBRL to Increase Transparency of Financial Standing (FS)

Cross-Validation between proposed criteria by Endovitskii et al., (2017) and elements of XBRL introduced in Malaysia by SSM, (2018) shows that all internal factors are available in the SSMxT taxonomies, while external factors may require additional data massaging from XBRL and other available sources to device the indicators. (SSMxT is Malaysian standard XBRL taxonomy, or a dictionary of elements developed by SSM for Companies document online lodgement to SSM) (Yahaya, 2018). Based on this observation, an opportunity to propose a model for XBRL effect on Contractor Selection Process seemingly established.

As described by Pinsker, (2007) and Tarmidi & Roni, (2015), the value proposition of XBRL implementation among others are; efficiency, interoperability, timeliness and full disclosure of information. Tarmidi also further indicates that the values of XBRL implementation increase the transparency in FS reporting. This is also supported by Contract Theory and Principal-Agent Theory which prescribe asymmetric information in decision making requires full disclosure and transparency for better judgement (Bovis & Sanchez Graells, 2016; Li, Mishra, & Netessine, 2017). Thus, the increase of information disclosure by XBRL is expected to improve judgement in the contractor selection process. This correlation and conceptual framework can be described as graphically represented in Figure 5.

Conclusion

Technology advancement is a double edge sword to humankind. The invention of XBRL from the evolution of the Internet has shown both enthusiasm and resentful position by stakeholders. The value creation from the disclosure regime subscribed to XBRL is expected to increase transparency to stakeholders. This is more pertinent to project decision-makers as selecting the right contracting partner will increase the chance for successful project implementation. Studies from around the globe are struggling to understand the social behaviour towards the unprecedented innovation era, as the life-cycle speed of innovation may exceed human comprehension. Although XBRL was introduced more than two decades ago and considered amid its lifespan, this paper is developing a view on how to take advantage of benefits that created by disclosure-based inter-organisational interaction to cater for complicated project-contractor relationship. Thus, the significant of the study is to establish a financial standing assessment criteria framework for a good contractor selection process within the Project Management discipline. This study has also offered a new research opportunity to understand the outcome of the FS contractor selection framework and the influence of external factors on the success of contractor selection. This article is also a part of Doctoral Research for understanding the impact of XBRL on areas mentioned earlier.

References

Abdullah, Z.I.B., Almsafir, M.K., Al-Smadi, A.A.-M., (2015) Transparency and Reliability in Financial Statement: Do They Exist? Evidence from Malaysia, Open Journal of Accounting, 04(04), 29–43. https://doi.org/10.4236/ojacct.2015.44004

Accounting, T.H.E.M., Board, S., (1997) ACT 558 Financial Reporting Act 1997 Malaysian Parliament. Retrieved from https://www.masb.org.my/pdf.php?pdf=2013jan-financial%20reporting%20act%201997%20act%20558.pdf&file_path=pdf

Acheamfour, V.K., Kissi, E., Adjei-Kumi, T., (2019). Ascertaining the impact of contractor's pre-qualification criteria on project success criteria. Engineering. Construction and Architectural Management, 26(4). https://doi.org/10.1108/ECAM-03-2018-0110

Ahmad, S.Z., Abu Bakar, A.R., Faziharudean, T.M., Mohamad Zaki, K.A., (2015) An Empirical Study of Factors Affecting E-Commerce Adoption among Small- and Medium-Sized Enterprises in a Developing Country: Evidence from Malaysia. Information Technology for Development, 21(4), 555–572. https://doi.org/10.1080/02681102.2014.899961

Amran, A., Manaf Rosli Bin, A., Che Haat Mohd Hassan, B., (2008). Risk reporting. Managerial Auditing Journal, 24(1), 39–57. https://doi.org/10.1108/02686900910919893

Bovis, C., Sanchez Graells, A., (2016) Public procurement and competition: some challenges arising from recent developments in EU public procurement law. In Research Handbook on EU Public Procurement Law, 423–451. https://doi.org/10.4337/9781781953266.00025

Companies Act 777 (2016) Suruhanjaya Syarikat Malaysia. Retrieved from https://www.ssm.com.my/acts/fscommand/CompaniesAct.htm

Debreceny, R., Farewell, S., Piechocki, M., Felden, C., Gräning, A., (2010) Does it add up? Early evidence on the data quality of XBRL filings to the SEC. Journal of Accounting and Public Policy, 29(3), 296–306. https://doi.org/10.1016/j.jaccpubpol.2010.04.001

Dennis, L., (1993) Handbook of Engineering Management. (L. Dennis, Ed.) (2nd Editio). Butterworth-Heinemann Ltd, Oxford.

Doolin, B., Troshani, I., (2004) XBRL: a research note. Qualitative Research in Accounting and Management, 1(2), 93–104. https://doi.org/10.1108/11766090410813373

Endovitskii, D.A., Lyubushin, N.P., Babicheva, N.E., Kupryushina, O.M., (2017) From Assessment of Organization's Financial Standing to Integrated Methodology for Analysis of Sustainable Development. Digest Finance, 22(2), 123–143. https://doi.org/10.24891/el.22.2.123

Erkus, H., Chiu, V., (2014) On the Research Contribution of XBRL Literature - A Bibliometrics Analysis. Eurasian Journal of Business and Economics, 7(13), 173–188.

Faisal, M.N., Raza, S.A., (2016). IT outsourcing intent in academic institutions in GCC countries: An empirical investigation and multi-criteria decision model for vendor selection, Journal of Enterprise Information Management, 29(3), 432–453. https://doi.org/10.1108/JEIM-05-2015-0042

Hatush, Z., Skitmore, M., (1997). Criteria for contractor selection. Construction Management and Economics, 15(1), 19–38. https://doi.org/10.1080/014461997373088

Henderson, D., Sheetz, S. D., Trinkle, B. S., (2012). The determinants of inter-organisational and internal in-house adoption of XBRL: A structural equation model, International Journal of

Accounting   Information   Systems,   13(2),   109–140. https://doi.org/10.1016/j.accinf.2012.02.001

Hoffman, C., van Egmond, R., (2017) Intelligent Digital Financial Reporting. In Intelligent Digital Financial   Reporting   (p.2).   Public   Domain   Dedication.   Retrieved   from https://creativecommons.org/publicdomain/zero/1.0/

Hsieh, T. S., Wang, Z., Abdolmohammadi, M., (2019). Does XBRL disclosure management solution influence earnings release efficiency and earnings management? International Journal of Accounting and Information Management, 27(1), 74-95. https://doi.org/10.1108/IJAIM-06-2017-0079

Hubbell, A.P. (2019). Organizational Deception: Lies at Work. The Palgrave Handbook of Deceptive Communication, Palgrave Macmillan, Cham. 625-645.

Ilias, A., Abd Razak, Z.M., Abd Razak, S.F.F., (2014). The Awareness of the Extensible Business Reporting Language (XBRL) In Malaysia, Journal of Internet Banking and Commerce, 19(2), 1–26.

Ilias, A., Ghani, E.K., & Azhar, Z. (2017). XBRL Adoption in Malaysia: Perception of the Accountants and Auditors, International Conference on Accounting Studies, 18-20.

Jafari, A., (2013) A contractor pre-qualification model based on the quality function deployment method.   Construction   Management   and   Economics,   31(7),   746–760. https://doi.org/10.1080/01446193.2013.825045

Janssen, M., van der Voort, H., van Veenstra, A.F., (2014). Failure of large transformation projects from the viewpoint of complex adaptive systems: Management principles for dealing with project dynamics. Information Systems Frontiers, 17(1), 15–29. https://doi.org/10.1007/s10796-014-9511-8

Kog, F., Yaman, H., (2016). A multi-agent systems-based contractor pre-qualification model. Engineering,   Construction   and   Architectural   Management,   23(6),   709–726. https://doi.org/10.1108/ECAM-01-2016-0013

La Torre, M., Valentinetti, D., Dumay, J., Rea, M. A., (2018). Improving corporate disclosure through XBRL: An evidence-based taxonomy structure for integrated reporting, Journal of Intellectual Capital, 19(2), 338–366. https://doi.org/10.1108/JIC-03-2016-0030

Li, D., Mishra, N., Netessine, S., (2017). Contracting for Product Support Under Information Asymmetry. SSRN Electronic Journal, 66. https://doi.org/10.2139/ssrn.2881356

Mbachu, J., (2008). Conceptual framework for the assessment of subcontractors' eligibility and performance in the construction industry. Construction Management and Economics, 26(5), 471–484. https://doi.org/10.1080/01446190801918730

Mohammed, A., Harris, I., Dukyil, A., (2019). A trasilient decision making tool for vendor selection: a hybrid-MCDM   algorithm,   Management   Decision,   57(2),   372–395. https://doi.org/10.1108/MD-04-2018-0478

Mousa, R., (2016). The evolution of electronic filing process at the UK's HM Revenue and Customs: The case of XBRL adoption, EJournal of Tax Research, 14(1), 206–234.

New Straits Times, Radhi, N. A. M., (2018). Mandatory for companies to submit their documents to SSM   via   new   platform   soon.

https://www.nst.com.my/News/Nation/2018/09/415468/Mandatory-Companies-Submit-Their-Documents-Ssm-New-Platform-Soon, 9–12.

O'Riain, S., Curry, E., Harth, A., (2012). XBRL and open data for global financial ecosystems: A linked data approach, International Journal of Accounting Information Systems, 13(2), 141–162. https://doi.org/10.1016/j.accinf.2012.02.002

Perdana, A., Robb, A., Rohde, F., (2015). An Integrative Review and Synthesis of XBRL Research in Academic Journals, Journal of Information Systems, 29(1), 115–153. https://doi.org/10.2308/isys-50884

Pinsker, R., (2003). XBRL awareness in auditing: A sleeping giant?. Managerial Auditing Journal, 18(9), 732–736. https://doi.org/10.1108/02686900310500497

Pinsker, R., (2007). A theoretical framework for examining the corporate adoption decision involving XBRL as a continuous disclosure reporting technology, New Dimensions of Business Reporting and XBRL, 73–98. https://doi.org/10.1007/978-3-8350-9633-2_4

Plebankiewicz, E., (2009). Contractor Prequalification Model Using Fuzzy Sets, Journal of Civil Engineering and Management, 15(4), 377–385. https://doi.org/10.3846/1392-3730.2009.15.377-385

Rashvand, P., Majid, M. Z. A., Pinto, J. K., (2015). Contractor management performance evaluation model at prequalification stage, Expert Systems with Applications, 42(12), 5087–5101. https://doi.org/10.1016/j.eswa.2015.02.043

Shanmuganathan, M., (2017). Influences of XBRL & IFRS on Business Reporting - Canada. In FTC 2016 - Proceedings of Future Technologies Conference, IEEE, USA. https://doi.org/10.1109/FTC.2016.7821743

Suruhanjaya Syarikat Malaysia (SSM). (2018). Malaysia Business Reporting System SSM Taxonomy (SSMxT) Financial Statements and Key Financial Indicators, Available at: https://www.ssm.com.my/Pages/Services/Other-Services/mbrs_pdf/MBRS_SSM_Taxonomy_SSMxT_v1.0_05Sept2018.pdf

Tarmidi, M., Roni, R. A., (2015). An International Comparison of the Determinants and Financial Information Quality in XBRL Reporting Environment, Procedia - Social and Behavioral Sciences, 164(August), 135–140. https://doi.org/10.1016/j.sbspro.2014.11.061

Thomson, D., (2011). A pilot study of client complexity, emergent requirements and stakeholder perceptions of project success, Construction Management and Economics, 29(1), 69–82. https://doi.org/10.1080/01446193.2010.519399

Tornatzky, L. G., Fleischer, M., Chakrabarti, A. K., (1990). The processes of technological innovation (Issues in), Lexington Books, Lexington, Mass.

Watt, D. J., Kayis, B., Willey, K., (2010). The relative importance of tender evaluation and contractor selection criteria, International Journal of Project Management, 28(1), 51–60. https://doi.org/10.1016/j.ijproman.2009.04.003

Yahaya, K. (2018). Session 6 Reporting in the age of Disruption : XBRL Adoption in Malaysia and around the World, In SSM National Conference 2018, Selenger.