

Research Article

Impact of integrated thinking and reporting on organisational decision making: a case study of public sector enterprises in Jordan

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Abstract

Purpose: The key purpose of this study was to examine the impact of integrated thinking and reporting on organisational decision making in the context of public sector enterprises in Jordan

Methodology/Design: The primary quantitative data have been collected in this study through a survey questionnaire. The collected data has been analysed through SEM technique, in which the tests of Confirmatory Factor Analysis (CFA) and path assessment are conducted.

Findings: The findings of this study reveal the significant impact of connectivity, effective governance, external focus, and integrated communication on organisational decision making. The variable of external financing is found to have a significant moderating impact on the association between connectivity and organisational decision making, and also between effective governance and organisational decision making.

Research Limitations: The absence of qualitative data has been one of the major limitations of this study. Apart from that, the limited scope of this study on the public sector enterprises in Jordan has been another major research limitation.

Key Words: *Integrated Thinking, Integrated Reporting, Connectivity, Effective Governance, External Focus, Integrated Communication, External Financing, Organisational Decision Making*

1.0 Introduction

The modern organisations are operating in a complex business environment, which is characterised by a combination of both external and internal drivers, trade-offs and interdependencies that affects the overall decision-making process, the assurances that decisions entail, and the anticipations of several demanding stakeholders (Tlili, Othman and Hussainey, 2019). Therefore, leaders in the corporate world are in a high need of navigating through these complications by applying an extensive approach reporting, measurement and planning. In this regard, the trends in the format of corporate reporting have started to change and developed into an integrated reporting that syndicates both non-financial and financial reports

in one document (Feng, Cummings and Tweedie, 2017). Since the emergence of integrated reporting concept in the corporate world, many organisations have recognised the advantages of integrated thinking to be transformational. The field of making coordinated and deliberate efforts to align organisation's governance, strategies, prospects and performance unleash the durable and compelling external and in external and internal benefits of integrated reporting (Adams, 2017). Hence, the implication of integrated thinking promises to make integrated reporting more than just the output of a process, but a crucial landmark in the constant journey of enhancement in communication, accountability and decision making.

The integrated thinking is commonly recognised as a useful organisational approach of associating purpose with performance, as it involves recognising, implementing and assessing business strategies and decisions to attain long-term value-creation (La Torre et al., 2019). The need for integrated thinking is based on reconciling sustainable growth and competitiveness in the context of inclusive business models to exploit opportunities while avoiding challenges that are presented in the market. The significance of integrated thinking and reporting for organisation performance has been recognised in the previous literature (Guthrie, Manes-Rossi and Orelli, 2017; Di Vaio et al., 2020; El-Deeb, 2019); however, there is found to be a lack of clarity on how exactly integrated thinking and reporting can influence the decision-making process of any organisation. Particularly, in the context of developing countries like Jordan, there is a lack of evidence regarding the association between integrated thinking and organisational decision making. Therefore, the key aim of this study is to examine the impact of integrated thinking and reporting on organisational decision making in the context of public sector companies in Jordan.

2.0 Literature Review

The concept of integrated thinking and reporting has been extensively discussed in the previous literature. According to Guthrie, Manes-Rossi and Orelli (2017), integrated reporting can be explained as a precise communication regarding how an organisation's strategy, prospects, performance and governance concerning its external environment can lead towards creating value over the long, medium and short-term. Moreover, integrated reporting is intended to explain the suppliers of financial capital regarding how an organisation creates value over time. In this regard, integrated reporting emerged as one of the important tools that are used to enhance the information quality that is communicated to the capital providers. This also enhances the ability of organisations to achieve their strategic goals (Knauer and Serafeim 2014). The study conducted by Moolman, Oberholzer and Steyn (2016), argues that the effectiveness of integrated reporting is highly dependent on integrated thinking, as it allows the connectivity of all the information to be circulated, and also enhances the decision making of managers and readers. Furthermore, it also leads towards improving corporate communication and transparency.

As per the study of Vesty et al. (2016), the concept of integrated thinking is commonly regarded as active attention towards an association between different factors that affects the value creation process of any organisation. In this context, integrated thinking involves reflecting on the interrelationship among multiple resources and capitals that is used by organisations or that influence the business model. According to McGuigan et al. (2020), integrated thinking offers a conclusive and holistic picture of the organisation, which is crucial to recognise the key sources of value creation as it helps in decision making and for assessing the prospect of the organisation. The study carried out by Tirado-Valencia et al. (2020), identifies some important factors of integrated thinking, which include effective governance, connectivity, external focus, and integrated communication. As per the same study, all these factors determine the effectiveness

of integrated thinking, which can also make a significant impact on organisation decision making. According to Massingham, Massingham and Dumay (2019), connectivity is the foremost principle of integrated thinking, as the lack of process integration and connected information creates problems in company's reporting that adopts integrated reporting. On the other hand, integrated communication includes the holistic coordination of various communication activities, which is considered to be crucial for integrated thinking.

The external focus is also recognised as another important determinant of integrated thinking, which enables the organisations to understand the external environment in which it operates about its main products, and the association between value and creation and multiple capitals (Del Baldo, 2017). The same study explains effective governance as the extent to which organisation activities meets its intended function or purpose. Similarly, having effective governance in place is considered as highly crucial for achieving the goals of integrated thinking. Moreover, the study conducted by Nurkumalasari, Restuningdiah and Sidharta (2019), has identified external financing as one of the most important factors that can moderate the association between integrated thinking and reporting on organisation decision making. The same study also argues that organisations with high need for external financing can reduce information irregularities by offering quality company disclosures.

3.0 Theoretical Framework

Stakeholder theory is one of the most common theories of business ethics and organisational management that addresses on multiple electorates influenced by businesses like creditors, local communities, suppliers, employees and others (Freudenreich, Lüdeke-Freund and Schaltegger, 2020). This theory argues that it is a responsibility of organisation to must disclose all the information to meet the valid interests of various stakeholders who hold some expectations from organisation. Therefore, this theory signifies the importance of integrated thinking and reporting for organisations. As mentioned in the study of Devalle et al. (2020), stakeholder theory suggests that integrated thinking should serve the important purpose of enhancing the information understanding of all the stakeholders.

4.0 Conceptual Framework

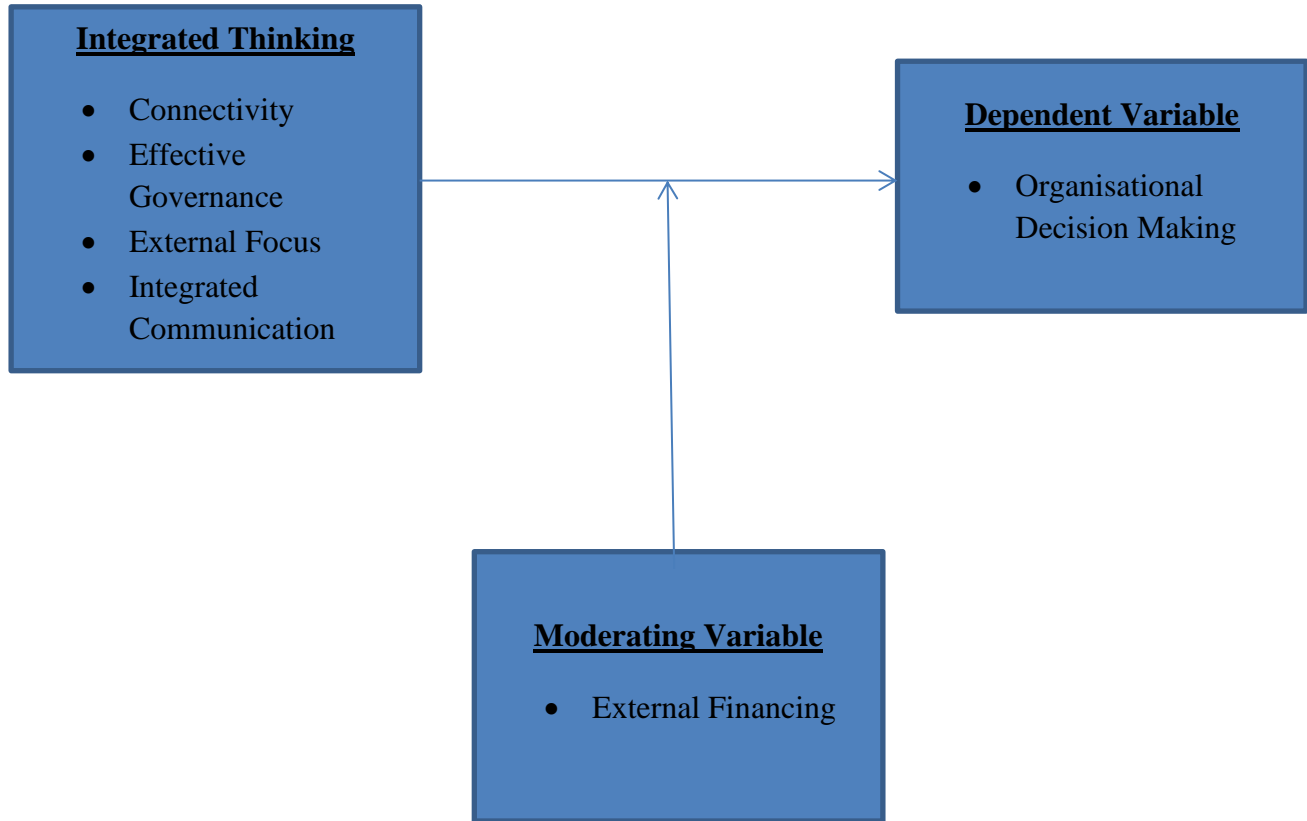


Figure 1 Conceptual Framework

The aforementioned figure presents the conceptual framework of this study, which outlines all the key variables that are identified through the comprehensive review of previous literature. As mentioned in figure 1, the factors of integrated thinking including connectivity, effective governance, external focus, and integrated communication are taken as the independent variables of this study. On the other hand, organisational decision making is considered as a dependent variable of this study. The conceptual framework also highlights external financing as a moderating variable, the impact of which has been examined on the association between integrated training and organisational decision making. Based on the conceptual framework, the following hypotheses are developed for this study:

H1: There is a significant impact of connectivity on organisational decision making.

H2: There is a significant impact of effective governance on organisational decision making.

H3: There is a significant impact of external focus on organisational decision making.

H4: There is a significant impact of integrated communication on organisational decision making.

H5: There is a significant impact on external financing on organisational decision making.

H6: External financing significantly moderates the association between connectivity and organisational decision making.

H7: External financing significantly moderates the association between effective governance and organisational decision making.

H8: External financing significantly moderates the association between external focus and organisational decision making.

H9: External financing significantly moderates the association between integrated communication and organisational decision making.

5.0 Method

The validity of research outcomes is highly dependent on the selection of research methods, as the wrong selection of methods can make the research outcomes invalid (Mohajan, 2018). Based on the nature of this study, the use of quantitative research design has been made in this study. Since this study requires more factual data to gain a better understanding about the influence of integrated thinking and reporting on organisational decision making, therefore the use of quantitative research design was considered as more appropriate for this study. On the other hand, concerning the data collection methods, the researcher has used primary sources to collect relevant data and to make a new contribution to the existing literature. In this regard, the primary quantitative data has been collected the survey questionnaire from the organisations operating in the public sector of Jordan.

The sampling technique that has been used in this study was convenience sampling. In this sampling technique, the study respondents are selected based on easy accessibility and convenience (Etikan, Musa and Alkassim, 2016). In this manner, the researcher has collected a total of 387 responses through a survey questionnaire from the top management of the public sector enterprises in Jordan. The 5 point-Likert scale questionnaire with several closed-ended questions was used in this study as a research instrument, in which the options ranging from strongly disagree to strongly agree was provided. On the other hand, concerning the data analysis technique, the use of Structural Equation Modeling (SEM) through SmartPls 3.0 has been made in this study. The SEM technique is considered as one of the most useful methods for testing complex models and identifying the association between different variables (Hair et al., 2019). To test the validity and reliability of the model, the confirmatory factor analysis has been used in which the tests of discriminant validity, Cronbach's alpha, composition reliability, average variance extracted (AVE), and factor loading have been conducted. On the other hand, path assessment test has been conducted to examine the association between independent and dependent variables of the study.

6.0 Results

6.1 Confirmatory Factor Analysis

CFA is one of the most important measurement tools of SEM, which is commonly used for assessing construct validity. Thus, the test of confirmatory factor analysis has been conducted in this study to ensure the validity and reliability of the model used in this study. To assess the reliability of all the variable, the measures of composite reliability and Cronbach's alpha have been used. Under the study of Orcan (2018), the standard value of Cronbach's alpha and composite reliability for ensuring the reliability

of all the variables is 0.7. Based on this criterion, all the values of composite reliability and Cronbach's alpha highlighted in table 1 are computed at more than the standard value of 0.7, thus it confirms the reliability of all the variables. On the other hand, the values of factor loadings are also presented in table 1 to show the validity of all the indicators. According to Cheung and Wang (2017), to the evaluate of the factor loading, anything above 0.6 confirms the validity of all the indicators. As mentioned in table 1 that al the values of factor loadings are figured at more than 0.6, which confirms the validity of all the constructs. Lastly, the values of AVE are also highlighted in table 1 to examine the convergent validity of all the variables. As per the study Cheung and Wang (2017), the acceptable value of AVE is a minimum of 0.5. All the values of AVE highlighted in table 1 are found to be over 0.5, which confirms the convergent validity of all the variables.

Table 1 Confirmatory Factor Analysis

Latent Constructs	Indicators	Outer Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Connectivity	CON1	0.875	0.879	0.925	0.806
	CON2	0.927			
	CON3	0.890			
Effective Governance	EG1	0.925	0.920	0.949	0.862
	EG2	0.939			
	EG3	0.921			
External Financing	EF1	0.913	0.906	0.941	0.842
	EF2	0.919			
	EF3	0.921			
External Focus	EFO1	0.897	0.816	0.891	0.733
	EFO2	0.869			
	EFO3	0.799			
Integrated Communication	IC1	0.921	0.914	0.946	0.853
	IC2	0.948			
	IC3	0.901			
Organisational Decision Making	ODM1		0.959	0.974	0.925

	0.957
ODM2	0.966
ODM3	0.962

***: significance at 1%

6.2 Discriminant Validity

Discriminant validity is another important measure of CFA, which is used to check whether the measurements or concepts that are supposed to be associated with each other are distinct (Ab Hamid, Sami and Sidek, 2017). According to Franke and Sarstedt (2019), discriminant validity is commonly examined through HTMT ratio, in which the acceptable value is considered as below 0.90. Based on this criterion, all the values presented in table 2 are below 0.90, thus it confirms the discriminant validity between the constructs.

Table 2 HTMT Ratio

	Connectivity	Effective Governance	External Financing	External Focus	Integrated Communication
Effective Governance	0.792				
External Financing	0.836	0.875			
External Focus	0.866	0.735	0.790		
Integrated Communication	0.777	0.641	0.726	0.819	
Organisational Decision-Making	0.760	0.702	0.736	0.773	0.770

6.3 Model Assessment

The value of R-square presented in table 3 shows that changes in all the independent variables including connectivity, external focus, effective governance, integrated communication and external financing explain 65% of the variance in organisational decision-making.

Table 3 Model's Quality

	R Square	R Square Adjusted
Organisational Decision-Making	0.650	0.641

6.4 Path Assessment

Under the outcomes of path assessment presented in table 4, the variable of connectivity is found to have a significant impact on organisational decision making [B=0.201; p-value=0.001]. Similarly, effective governance is also found to have a significant impact on organisational decision making [B=0.164; p-value=0.002]. On the other hand, the significant association has been found between external focus and

organisational decision making [B=0.141; p-value=0.012], while the impact of integrated communication on organisational decision making is also found to be significant [B=0.338; p-value=0.000]. In contrast, the variable of external financing is found to have no significant impact on organisational decision making. Furthermore, for moderating effects, the variable of external financing significantly moderates the association between connectivity and organisational decision making [B=0.148; p-value=0.003]. Similarly, the significant moderating effect of external financing has been found on the association between effective governance and organisational decision making.

Table 4 Path Assessment

Path	Path Coefficient	T Statistics	P Values
Connectivity -> Organisational Decision-Making	0.201***	3.393	0.001
EF*CON -> Organisational Decision-Making	0.148***	2.939	0.003
EF*EFO -> Organisational Decision-Making	-0.056	1.083	0.279
EF*EG -> Organisational Decision-Making	-0.094***	2.548	0.011
EF*IC -> Organisational Decision-Making	0.013	0.269	0.788
Effective Governance -> Organisational Decision-Making	0.164***	3.027	0.002
External Financing -> Organisational Decision-Making	0.078	1.316	0.188
External Focus -> Organisational Decision-Making	0.141***	2.506	0.012
Integrated Communication -> Organisational Decision-Making	0.338***	5.956	0.000

***: showing significance at 1%; **: showing significance at 5%; * significant at 10%

6.0 Discussion

The overall discussion presented in this study signifies the huge importance of integrated thinking and reporting for improving organisational decision-making. The outcomes of confirmatory factor analysis have confirmed the validity and reliability of all the variables and constructs. On the other hand, the results of path assessment have revealed the significant association between connectivity and organisational decision making. This result is also found to be validated from the study of Massingham, Massingham and Dumay (2019), according to which connectivity is one of the most important principles of integrated thinking that promises to make a significant impact on organisational decision making. Moreover, the primary outcomes of this study have also confirmed the significant impact of effective governance, external focus, and integrated communication on organisational decision making. These outcomes are also found to be consistent with the study of Tirado-Valencia et al. (2020), in which integrated communication, external focus and effective governance were identified as the most influential factors of organisational decision making. However, as per the primary findings of this study, the direct impact of external financing on organisational decision making is found to be insignificant. Moreover, the variable of external financing is

found to significantly moderate the association between connectivity and organisational decision making, whereas external financing makes a significant but negative moderating impact on the association between effective governance and organisational decision making. In contrast, the findings of this study reveal the insignificant moderating effect of external financing on the association between external focus and organisational decision making, and also between integrated communication and organisational decision making.

7.0 Conclusion

The primary goal of this research has been to examine the impact of integrated thinking and reporting on organisational decision making in the context of public sector enterprises in Jordan. For that purpose, the survey questionnaire has been conducted in this study to gather primary quantitative data, which was analysed through SEM technique. As per the overall findings of this study, all the independent variables including connectivity, integrated communication, effective governance, and external focus are found to have a significant impact on organisational decision making. On the other hand, the direct impact of external financing on organisational decision making was found to be insignificant. Moreover, the findings of this study confirm the significant moderating effect of external financing on the association between effective governance and organisational decision making, and also between connectivity and organisational decision making. Conclusively, based on the overall outcomes of this study, the H1, H2, H3, H4, H6, and H7 are accepted, whereas H5, H8, and H9 are rejected.

8.0 Recommendations

Based on the overall findings of this study, the following recommendations are proposed:

- The companies are recommended to base their business decision on unified and consistent information across several capitals including human, relationship and social, natural, intellectual and manufactured.
- The companies operating in the public sector of Jordan are advised to use more visual features in reporting like maps, tables, graphs and images that improve the understanding of the information by the stakeholders.
- The companies are also advised to make effective use of integrated communication tools to enhance integrating thinking and reporting, which will eventually make a positive impact on organisational decision making.

9.0 Future Research

The scope of this study has been limited to the public sector enterprises in Jordan, thus the findings of this study cannot be applied to any other context or region. Therefore, future researchers are advised to expand the scope of this study by including more developing countries into the research investigation. Apart from that, the absence of qualitative data has been another major limitation of this study. Hence, future researchers can consider carrying the same study with mixed research design to provide more conclusive results.

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