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INTEGRATED THINKING AND FIRM PERFORMANCE: EVIDENCE FROM SRI LANKAN LISTED COMPANIES

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ABSTRACT

In recent years, integrated reporting (IR) has gained increasing prominence among Sri Lankan listed companies, driven by growing stakeholder expectations for holistic value creation. While prior research has extensively examined the relationship between IR and firm performance, the role of integrated thinking in influencing firm performance remains underexplored, particularly within emerging economy contexts. Accordingly, this study examines the extent to which integrated thinking is embedded in integrated reports published by Sri Lankan listed companies and analyses the impact of integrated thinking on firm performance. Adopting a quantitative research approach, the study analyses a sample of 60 listed companies that consistently adopted IR over a three-year period. Firm performance was measured using return on assets (ROA). The findings revealed a statistically significant positive relationship between integrated thinking and firm performance, indicating that companies exhibiting higher levels of integrated thinking tend to achieve superior financial outcomes. This study contributes to the IR literature by providing empirical evidence on the performance implications of integrated thinking in an emerging economy setting. From a practical perspective, the findings highlight the importance of embedding integrated thinking within organisational processes to support sustainable value creation, offering valuable insights for corporate managers, regulators, and policymakers seeking to enhance the effectiveness of IR practices.

Keywords: Firm Performance, Integrated Reporting, Integrated Thinking, Return on Assets, Sri Lanka, Value Creation

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1 INTRODUCTION

The International Integrated Reporting Council (IIRC) (2021) states that the primary purpose of an integrated report is to explain to providers of financial capital how an organisation creates, preserves, or erodes value over time. Accordingly, integrated reporting (IR) is intended to support more efficient and informed capital allocation by improving the quality and connectivity of information available to stakeholders (IIRC 2021). Integrated thinking is fundamental to the effective implementation of IR, as it shapes how organisations recognise, manage, and communicate value creation across multiple forms of capital.

Integrated thinking involves recognising the interdependencies among financial, intellectual, natural, social, and relationship, manufactured, and human capital, and understanding how these capitals are connected to organisational strategy, governance, and operations (IIRC 2021). Rather than focusing solely on short-term financial outcomes, integrated thinking emphasises the alignment of organisational functions and decision-making to create sustainable value over the short, medium, and long term. As highlighted by De Villiers et al. (2020), value creation under integrated thinking extends beyond financial returns to incorporate economic, environmental, and social considerations simultaneously.

Although the adoption of IR remains largely voluntary, growing recognition of the role of integrated thinking in enhancing long-term organisational success has increased stakeholder pressure for IR adoption (IIRC 2021). As a result, many organisations now publish integrated reports. However, concerns persist regarding whether these reports reflect genuinely embedded integrated thinking or merely represent symbolic compliance with reporting expectations. This has raised questions about the extent to which integrated thinking is substantively integrated into organisational practices and decision-making processes, highlighting the need for mechanisms that enable stakeholders to assess the depth and quality of integrated thinking reflected in integrated reports (Malafronte & Pereira 2020).

From a performance perspective, integrated thinking is expected to influence firm outcomes by promoting holistic decision-making, stronger governance, and more effective resource allocation across the six capitals (IIRC 2021). By balancing short-term performance pressures with long-term value creation and preservation, integrated thinking is theorised to contribute to improved organisational performance and sustainability. However, empirical examination of this relationship remains limited, particularly due to challenges associated with measuring integrated thinking in a consistent and conceptually aligned manner.

While extensive research has examined IR adoption, IR quality, assurance practices, and implementation challenges (Songini et al. 2023), relatively little attention has been paid to how integrated thinking is practiced within organisations and how it affects firm performance. In the Sri Lankan context, prior evidence suggests that while early adopters of IR experienced substantive benefits, later adopters often treated IR as a symbolic or fashionable practice rather than a transformational one (Gunarathne & Senaratne 2017). This underscores the importance of examining whether integrated thinking is genuinely embedded within IR practices and whether such embeddedness translates into improved firm performance.

Addressing this gap, the present study examines the extent to which integrated thinking is embedded in integrated reports published by Sri Lankan listed companies and analyses its impact on firm performance. Given the absence of a globally standardised approach to measuring integrated thinking, prior studies have relied on proxy measures that are not always fully aligned with the integrated thinking framework (Serafeim 2015). To overcome this limitation, this study employs the integrated thinking measurement schematic developed by Sustain-X (Maroun et al. 2022), which is explicitly grounded in the principles of the integrated thinking framework. By doing so, the study provides a more conceptually consistent assessment of integrated thinking and its performance implications in the Sri Lankan context.

The remainder of the paper is organised as follows. Section two reviews the relevant literature, section three outlines the research methodology, section four presents the analysis and discussion, and section five concludes the study.

2 LITERATURE REVIEW

2.1 Integrated Reporting (IR)

IR can be identified as a part of an evolving corporate reporting system that combines financial and non-financial information to explain how an organisation creates, preserves, or erodes value over the short, medium, and long term (IIRC 2021). IR is underpinned by comprehensive frameworks and standards that guide the measurement and disclosure of information relating to multiple forms of capital, supported by appropriate regulation and assurance mechanisms. IR has been widely recognised as a response to the limitations of traditional financial reporting, particularly due to the inability to capture non-financial factors in traditional financial reporting. By integrating financial and non-financial information within a single report, IR enhances the usefulness of corporate disclosures for a broad range of stakeholders (Busco et al. 2019).

Early research on IR was largely qualitative and focused on implementation challenges, motivations for adoption, and perceived benefits. Over time, the literature has evolved to examine more specific issues, including the determinants of IR adoption, the quality of integrated reports, the role of assurance, and the extent to which IR effectively communicates the value creation process (Kannenberg & Schreck 2019, Pistoni et al. 2018, Simnett & Huggins 2015). In line with the objectives of the International Integrated Reporting framework (IIRF), many studies have emphasised IR's contribution to organisational value creation (Songini et al. 2023).

Beyond value creation, scholars have conceptualised IR from multiple perspectives. Some view IR as an extension of sustainability reporting, designed to integrate sustainability considerations with strategy and performance from a stakeholder-oriented perspective (Songini et al. 2023). Others interpret IR through the lens of the triple bottom line, suggesting that it has the potential to reorient corporate behaviour by aligning economic objectives with social and environmental well-being (Adams 2015). More recent research increasingly frames IR not merely as a communication tool, but as a managerial practice that influences internal decision-making and organisational behaviour (Songini et al. 2023).

2.2 Integrated Thinking

IR is a process founded on integrated thinking that results in a periodic integrated report by an organisation about value creation over time and related communications regarding aspects of value creation (IIRC 2021), indicating the importance of understanding integrated thinking in the process of understanding IR. Scholars explain the IR process using the iceberg theory, stating that IR is just the tip of the iceberg and that integrated thinking is the process that drives the whole IR process (Churet & Eccles 2014).

Integrated thinking involves recognising the links between the different capitals: financial, intellectual, human, manufactured, social and relationship, and natural capital; and how they connect to various functions, divisions, and business undertakings to create value (Maroun et al. 2022). Changes in an organisation's capital, whether direct or indirect, reflect increases or decreases in value created. Key features of integrated thinking include responding to stakeholders' legitimate needs and interests; evaluating, managing, and capitalising on risks and opportunities in the external environment; assessing interdependencies among activities and capitals, including related trade-offs and outcomes; and adopting a multi-timeframe perspective on activities, performance, and outcomes (IIRC 2021).

2.3 Measuring Integrated Thinking

Despite the importance of integrated thinking, there is no universally accepted method to measure it. In response, prior studies have relied on various proxy measures, such as using the quality of integrated reports as an indirect indicator of integrated thinking (Churet & Eccles 2014), assessing reporting sophistication, or employing economic, social, and environmental performance indicators. However, these approaches are not fully aligned with the IIRC's value creation framework and therefore offer only partial representations of integrated thinking. This limitation has highlighted the need for a more structured and theoretically grounded measurement approach.

To address this gap, the present study employs the Sustain-X integrated thinking schematic developed by Maroun et al. (2022). This tool was designed through extensive empirical research and practitioner engagement, drawing on longitudinal case studies of profit-oriented organisations and their strategic and operational adaptations towards integrated thinking. Importantly, this schematic is explicitly grounded in the principles of the integrated thinking framework. The Sustain-X schematic evaluates integrated thinking across five core dimensions: integrated awareness and understanding, integrated leadership commitment and capability, integrated structures, integrated organisational performance management systems, and integrated external communication. Each dimension is operationalised through a set of sub-indicators, allowing for a comprehensive and systematic assessment of integrated thinking practices (Appendix 1).

The Sustain-X schematic focuses on how internal governance arrangements, management processes, and performance systems support the integration of economic, environmental, and social considerations into decision-making and value creation. It also emphasises the role of governing bodies, stakeholder engagement in strategy formulation, and internal performance evaluation in sustaining long-term value creation (Adams et al. 2020). The robustness of the Sustain-X schematic has been validated in prior research. Maroun et al. (2022) confirm its reliability through both conceptual validation against existing integrated thinking proxies and empirical application to listed firms, demonstrating its technical

soundness and practical relevance. Accordingly, the Sustain-X schematic provides a suitable and theoretically consistent approach for measuring integrated thinking in the context of this study.

2.4 Firm Performance

Firm performance is a multidimensional construct (Murphy et al. 1996) that can be assessed using both objective and subjective indicators (Dawes 1999, Harris 2001). Prior studies note that performance may be evaluated at different organisational levels (e.g., functional areas such as production, finance, and marketing) and through broader outcomes such as growth and financial gains (Atalay et al. 2013, Sohn et al. 2007). From a theoretical perspective, resource orchestration theory argues that firm performance improves when managers effectively structure, bundle, and deploy resources and capabilities, with outcomes shaped by the interconnectedness of resources rather than isolated resource effects (Chadwick et al. 2015, Zaefarian et al. 2013). Consistent with this logic, research examining IR and related constructs has typically operationalised firm performance using accounting-based and market-based measures such as return on assets (ROA), return on equity (ROE), earnings per share (EPS), market value added (MVA), leverage, return on capital employed (ROCE), and market-to-book ratios (Alatawi & Daud 2022, El Deeb 2019, Lueg 2022, Ranaweera & Jayawardhana 2022, Rao & Reddy 2013).

In the present study, firm performance is operationalised using ROA. ROA captures the efficiency with which a firm's asset base is utilised to generate profits and therefore aligns closely with integrated thinking's emphasis on resource optimisation and value creation through interconnected capitals. Compared with ROE and market-based indicators, ROA is less sensitive to capital structure and market fluctuations and provides a more comparable measure across firms. Prior IR-related studies frequently employ ROA as a robust proxy for firm performance, supporting its use in this context (Alatawi & Daud 2022, Ranaweera & Jayawardhana 2022). Although the relationship between IR and firm performance has received considerable attention (Adegboyegun et al. 2020, Bello et al. 2021), fewer studies have examined how integrated thinking affects firm performance. Addressing this gap, this study examines the level of integrated thinking among Sri Lankan listed companies and analyses its impact on firm performance.

3 RESEARCH METHODOLOGY

3.1 Research Paradigm and Approach

This study examines the extent to which integrated thinking is embedded in integrated reports published by Sri Lankan listed companies and analyses its impact on firm performance. To achieve this, the study adopts a positivist paradigm and utilises a quantitative research approach (Saunders et al. 2019).

3.2 Conceptual Diagram

Figure 1 shows the conceptual diagram of the study, which was developed based on the extant literature.

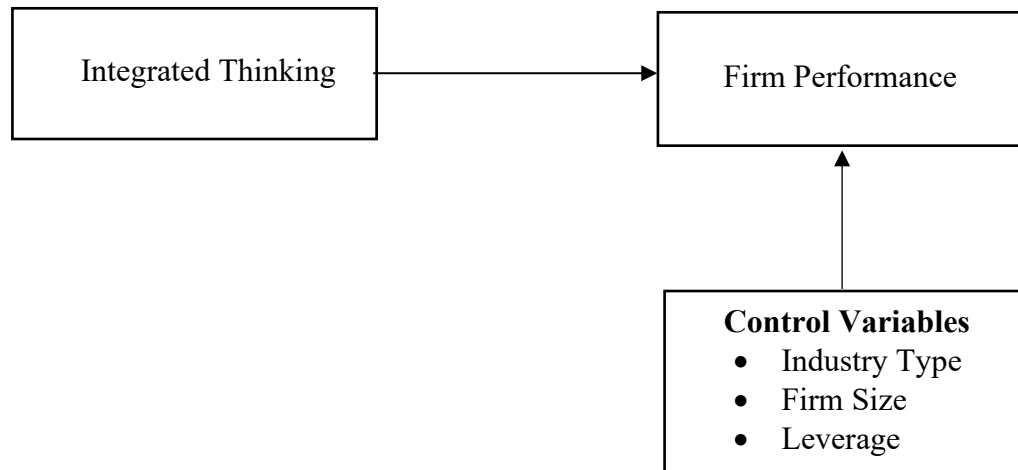


Figure 1: Conceptual Diagram

Source: Author Constructed

3.3 Hypothesis Development

According to the IIRC, value creation centers on the relationship between IR and integrated thinking, emphasising the importance of both for enhancing organisational connectivity and communication around value creation (IIRC 2021). Thomas Kusterer, CFO of Energie Baden-Württemberg, views IR as essential for corporate value creation in the twenty-first century. He argues that integrated thinking, which combines financial and non-financial data, enhances holistic performance management and must be embedded in a company's culture for long-term success (IIRC 2021). Similarly, Bello et al. (2021) highlight that integrated thinking aims to align performance with purpose, guiding sustainable business decisions and value development.

While the statements highlight the positive impact of integrated thinking on firm performance, research on measuring integrated thinking in integrated reports is limited. This study aims to fill this gap by examining the impact of integrated thinking on firm performance in publicly listed companies in Sri Lanka. Based on this premise, the following hypothesis is proposed.

H₁: Integrated thinking positively impacts firm performance

3.4 Operationalisation

The study examines integrated thinking as the independent variable and firm performance as the dependent variable. It further includes three control variables: firm size (to account for firm-specific effects), leverage (to capture capital structure), and industry dummy variables (to control for industry-specific effects), following Nguyen's observations as reported in Bui and Krajcsak (2023). The operationalisation table of the study is presented in Table 1.

Table 1: Operationalisation

Variable	Measurement	Literature/ Reference
Integrated Thinking (<i>IT</i>)	Measured using the integrated thinking schematic (Sustain-X) (Appendix 1)	Maroun et al. (2022)
Firm Performance (<i>FP</i>)	Measured using ROA (ROA = Net income/Total assets)	Mahboub (2019) Bergmark and Dahlberg (2015)
Firm Size (<i>FS</i>)	The natural logarithm of the total assets	Wintoki et al. (2012) Han and Suk (1998) Bui and Krajcsak (2023) Frias-Aceituno et al. (2014) Ghani et al. (2018)
Leverage (<i>LE</i>)	Leverage = Total debts/Total assets	Jensen (1986) Ang et al. (2000) Bui and Krajcsak (2023)
Industry Type (<i>IN</i>)	Dichotomous Scale 0 = Nonservices 1 = Services	Conway (2019) Akisik and Graham (2019) Radu and Dragomir (2022) Cahaya et al. (2008)

Source: Author Constructed

3.5 Sources and Collection of Data

The study population comprises all companies listed on the Colombo Stock Exchange (CSE) that have adopted IR. The sample includes 60 listed companies that issued integrated reports for three consecutive financial years (2021/22, 2022/23, and 2023/24). Sample selection was based on a systematic review of each firm's consistent application of the IIRF (2021) over the period. To confirm eligibility and assess integrated thinking, the study employed manual content analysis of the integrated reports. Secondary data were obtained from reports retrieved via the CSE website and analysed to extract evidence relating to integrated thinking principles and firm performance indicators. Indicator scores were averaged to derive principal-level measures and an overall integrated thinking score for each firm, which was then used to rank firms based on their integrated thinking.

3.6 Data Analysis Strategies

The following analyses were conducted to address the study objectives and test the hypotheses. The first objective examines the extent to which integrated thinking is embedded in the integrated reports published by Sri Lankan listed companies. To address this objective, descriptive statistical analysis was performed. Specifically, measures of central tendency (mean and median) and measures of dispersion (minimum, maximum, and standard deviation) were computed, together with measures of distribution (skewness). All analyses were conducted using the EViews statistical package.

The second objective assesses the impact of integrated thinking on firm performance among Sri Lankan listed companies that publish integrated reports. For this purpose, correlation analysis was initially applied to examine the direction and strength of associations among the study variables. Thereafter, panel regression analysis was conducted to estimate the effect of integrated thinking on firm performance.

4 ANALYSIS AND DISCUSSION

4.1 Examining the Extent of the Integrated Thinking Embedded in Integrated Reports Published by Sri Lankan Listed Companies

This section provides the results of the analysis performed to achieve the research objective one: to examine the extent of the integrated thinking embedded in integrated reports published by Sri Lankan listed companies.

4.1.1 Descriptive statistics

To achieve this research objective, a manual content analysis was conducted. This analysis gathered information that was then applied to the Sustain-X schematic to measure the extent of integrated thinking embedded in integrated reports in the sample for the specified period. To facilitate this measurement, various descriptive statistics were calculated, including measures of central tendency (mean and median), measures of dispersion (maximum, minimum, and standard deviation), and measures of distribution (skewness). Under this research, 180 observations have been made for 60 firms across a period of three years. The descriptive statistics of the variables of the study are shown in Table 2.

Table 2: Descriptive Statistics

Statistic	<i>FP</i>	<i>IT</i>	<i>FS</i>	<i>IN</i>	<i>LE</i>
N	180	180	180	180	180
Mean	0.049	3.656	24.036	0.550	0.612
Median	0.029	4.000	24.189	1.000	0.694
Minimum	-0.160	2.000	19.956	0.000	0.008
Maximum	0.605	5.000	28.064	1.000	0.924
SD	0.084	0.899	1.695	0.499	0.269
Skewness	2.956	-0.102	0.074	-0.201	-0.571
Kurtosis	17.907	2.223	2.621	1.040	2.045

Source: Author Constructed

Firm Performance (*FP*)

According to the observations made, the *FP* measured using ROA lies at an average of 0.049 (4.9%). This indicates that, in general, the firms are experiencing a modest average performance. However, the skewness of *FP* is 2.96, showing a positively skewed distribution. This indicates that the performance of most firms practising integrated thinking has recorded ROA values below the mean. The standard deviation of 0.084 indicates on average, a company's performance score deviates from the mean performance score by approximately 0.084 units. The positive kurtosis indicates that there are many outliers, confirming the higher concentration of data in the center.

Integrated Thinking (*IT*)

Similarly, *IT* follows an average of 3.656. In contrast to *FP*, *IT* appears to be more symmetrical as the mean and the median values are close (median 4.000). There is a moderate level of variability in the level of *IT* across firms, with a standard deviation of

0.899. In terms of skewness, it is observed that it is lower compared to *FP*, which suggests the *IT* distribution is closer to normal than that of *FP*.

Control Variables

This analysis uses three control variables: firm size (*FS*), leverage (*LE*), and industry type (*IN*). *FS* is measured as the natural logarithm of total assets, with an average of 24.036 and a standard deviation of 1.695, indicating a wide range in *FS*. *LE* is the ratio of total debt to total assets, averaging 0.612 with a standard deviation of 0.269, suggesting firms finance 61% of their assets with debt. *IN* is a dichotomous variable coded as 1 for service industries and 0 for non-service industries, with the sample showing 55% service firms and 45% non-service firms.

4.2 Assessing the Impact of Integrated Thinking on Firm Performance in the Sri Lankan Listed Companies that Publish Integrated Reports

4.2.1 Correlation analysis

The correlation analysis of the study is shown in Table 3.

Table 3: Results of the Correlation Analysis

	<i>FP</i>	<i>FS</i>	<i>IN</i>	<i>LE</i>	<i>IT</i>
<i>FP</i>	1.000				
<i>FS</i>	-0.052	1.000			
<i>IN</i>	-0.353*	0.368*	1.000		
<i>LE</i>	-0.289*	0.431*	0.423*	1.000	
<i>IT</i>	0.712*	-0.142	-0.435*	-0.350*	1.000

Note: Significance level: * $p < 0.05$

Source: Author Constructed

Correlation analysis provides a preliminary understanding of the relationships among the variables and assesses the potential for multicollinearity. As per the data analysis, the correlation between *IT* and *FP* lies at 0.712. This indicates that there is a statistically significant strong positive correlation between *FP* and *IT*. This means that firms with high levels of *IT* tend to exhibit higher *FP*, or rather higher returns on assets. Among the control variables, *IN* ($r = -0.353$) and *LE* ($r = -0.289$) have statistically significant negative weak correlation with *FP*.

4.2.2 Testing for regression assumptions

The dataset of the current study comprises a balanced panel, as each firm has an equal number of observations over the three-year period. Prior to estimating the panel regression models, multicollinearity was assessed using VIF, as discussed in the correlation analysis. In addition, a panel unit root test was conducted to examine the stationarity of the variables.

Multicollinearity

Table 4 shows the results derived from the multicollinearity test using the VIF value.

Table 4: Results of the Multicollinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centred VIF
<i>C</i>	0.00484	249.460	N/A
<i>IT</i>	0.000031	22.874	1.297
<i>FS</i>	0.000009	265.404	1.306
<i>IN</i>	0.000115	3.250	1.463
<i>LE</i>	0.000389	8.919	1.435

Source: Author Constructed

As per Table 4, VIFs for all variables are relatively low, ranging from 1.297 to 1.463. As the VIF values are below 5, it is acceptable and confirms that multicollinearity is not a significant concern in the model (Postiglione et al. 2025). This indicates that the correlations among the independent variables that were available are not strong enough to cause substantial problems in estimating the individual effects of each variable on *FP*.

Panel Root Test

As the dataset is a balanced panel, the Levin–Lin–Chu (LLC) test was employed to assess panel unit roots (stationarity) in this study. As per the LLC test results, the data collected for *FP* is stationary. However, when employing the same test for the independent variable *IT*, it was observed that the data were stationary, but a significant number of observations were dropped.

In this regard, the Augmented Dickey-Fuller (ADF) or Phillips-Perron (PP) tests were performed to further confirm the results thus obtained. Under ADF and PP tests, it was observed that the data collected for *IT* were indeed stationary and could be used for the regression analysis.

4.2.3 Tests for best approach

To choose between the best method out of the two panel regression specifications, the Hausman test was employed. Table 5 shows the results of the Hausman test.

Table 5: Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-SQ. df.	Prob.
Cross-section random	3.334	3.	0.343

Note: Significance level: * $p < 0.05$

Source: Author Constructed

As per Table 5, the results of the Hausman test indicate that the random effects model was more appropriate for the study, as the probability value of 0.343 is not significant. Therefore, the random effects model was employed to examine the impact of integrated thinking on firm performance, controlling for firm size, industry type, and leverage.

4.2.4 Regression results

The regression equation of the current study is as follows.

$$FP_{it} = \beta_0 + \beta_1 IT_{it} + \beta_2 FS_{it} + \beta_3 LE_{it} + \beta_4 IN_{it} + \varepsilon_{it}$$

Where:

Dependent Variable

FP = Firm performance

Independent Variable

IT = Integrated thinking

Control Variables

FS = Firm size

LE = Leverage

IN = Industry type

ε = Error term

β_0 to β_4 = coefficient

i and t = cross-sectional and time-series dimensions

Table 6 shows the results of the Random Effects Model Regression of the study.

Table 6: Swarry and Arora Estimator of Component Variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
<i>C</i>	-0.279	0.074	-3.742	0.000
<i>FS</i>	0.005	0.003	1.531	0.128
<i>IN</i>	-0.011	0.011	-0.990	0.324
<i>IT</i>	0.063*	0.006	10.943	0.000
<i>LE</i>	-0.022	0.021	-1.057	0.292

Effects Specification

	S.D.	Rho
Cross-section random	0.016	0.076
Idiosyncratic random	0.057	0.925

Weighted Statistics

R-squared	0.497	Mean dependent var	0.044
Adjusted R-squared	0.486	S.D. dependent var	0.079
S.E. of regression	0.057	Sum squared resid	0.568
F-statistic	43.303	Durbin-Watson stat	2.033
Prob (F-statistic)	0		

Unweighted Statistics

R-squared	0.518	Mean dependent var	0.049
Sum squared resid	0.612	Durbin-Watson stat	1.887

Note: Significance level: * $p < 0.05$

Source: Author Constructed

The results generated under the random effects model in Table 6 reveal a statistically significant impact of integrated thinking on firm performance. The coefficient for *IT* is 0.063 ($p < 0.05$), which indicates that higher levels of integrated thinking led to improved firm performance.

There are no statistically significant control variables. Overall, the model demonstrates a reasonably good fit, with an R^2 of 0.497, indicating that the regression explains approximately 49.74% of the variation in *FP*. The model is statistically significant ($F = 43.303$, $p < 0.05$), suggesting that at least one explanatory variable is significantly associated with *FP*. In addition, the Durbin-Watson statistic of 2.033 indicates no evidence of serious autocorrelation in the regression residuals.

4.3 Discussion

With respect to the first objective, examining the extent to which integrated thinking is embedded in integrated reports published by Sri Lankan listed companies, the results are encouraging. The evidence suggests that most firms practising IR exhibit moderate to high levels of integrated thinking. Although the overall average is relatively high, the findings also indicate substantial heterogeneity, with some firms demonstrating markedly higher levels of integrated thinking than others.

This variability can be interpreted in light of prior literature. Extant research suggests that IR adoption among Sri Lankan listed companies may, in some instances, reflect a symbolic or “fashion-driven” practice rather than a strategic shift in organisational thinking. If IR is adopted primarily to mirror market leaders, stakeholders may not fully realise the intended benefits of IR, particularly where integrated thinking is not substantively embedded. In other words, while certain firms appear to operationalise integrated thinking in a meaningful manner, others may be engaging in IR largely as a compliance-oriented or reputational exercise. This interpretation is consistent with Herath et al. (2021), who argue that some firms follow leading organisations’ reporting practices to enhance legitimacy and perceived performance, rather than to internalise the underlying logic of integrated thinking. Accordingly, although integrated thinking levels among Sri Lankan IR adopters are generally high, the practice remains uneven across firms.

Turning to the second objective, the hypothesis tested whether integrated thinking has a positive impact on firm performance among Sri Lankan listed companies that publish IR. The panel regression results provide strong support for this proposition, revealing a statistically significant positive association between integrated thinking and firm performance ($\beta = 0.063$, $p < .005$). This finding indicates that, within the sampled firms, higher levels of integrated thinking are associated with stronger financial performance.

More specifically, the results suggest that a one-unit increase in integrated thinking (as measured using Sustain-X) is associated with an average 6.3% increase in ROA, holding other factors constant. This provides empirical support for the argument that integrated thinking can strengthen firm performance, potentially by improving internal coherence in decision-making, enhancing resource optimisation across capitals, and aligning strategy with value creation processes. The finding is consistent with prior research linking IR-related practices to performance outcomes. For example, Barth et al. (2017) report a positive association between IR quality and stock liquidity and firm value, suggesting that enhanced disclosure and strategic clarity can benefit both managers and investors. Similarly, De Villiers et al. (2017) identify a positive relationship between IR and firm

value, indicating that IR may facilitate improved investment and strategic decisions. Rao and Reddy (2013) further show that IR affects ROA and ROE, supporting resilience and competitiveness in volatile markets, while Amirrudin et al. (2020) document a significant relationship between IR and firm performance. Although much of this evidence focuses on IR rather than integrated thinking directly, integrated thinking constitutes a core mechanism through which IR is expected to influence organisational outcomes. Taken together, the results provide robust support for the study hypothesis and suggest that integrated thinking is a meaningful driver of firm performance among Sri Lankan listed companies that publish integrated reports.

5 CONCLUSION

This study examines the extent to which integrated thinking is embedded in integrated reports published by Sri Lankan listed companies and analyses its impact on firm performance. The study empirically assesses whether integrated thinking has an impact on firm performance using the Sustain-X schematic to measure integrated thinking and content analysis of integrated reports. Statistical analysis was conducted on listed companies that publish integrated reports, with firm performance measured using ROA.

The results derived from the statistical data analysis demonstrate that the majority of IR-practicing businesses have moderate to high levels of integrated thinking. The results on the extent of integrated thinking practiced by firms following IR show significant heterogeneity, with some organisations exhibiting noticeably higher levels of integrated thinking than others, despite the overall average being rather high. The findings with regard to the impact of integrated thinking on firm performance indicate a strong and statistically significant positive association. Specifically, a one-unit increase in the integrated thinking score is associated with an average 6.3% increase in ROA, holding other factors constant. Although the model includes firm size, industry type, and leverage as control variables, none show a statistically significant relationship with firm performance. This suggests that the observed performance improvement is driven primarily by integrated thinking rather than by conventional firm characteristics.

The study offers several important practical implications. For organisations, the results demonstrate that embedding integrated thinking can enhance performance through improved decision-making, stronger strategic alignment, and more effective stakeholder engagement. Managers and policymakers within firms may use the integrated thinking framework to establish benchmarks and performance metrics aligned with long-term value creation. For professional bodies and institutions that evaluate integrated reports in Sri Lanka, such as those administering IR awards, the findings underscore the importance of moving beyond compliance-based assessments to explicitly recognise and reward embedded integrated thinking. At a policy level, the evidence suggests that integrated thinking has implications beyond firm-level performance, extending to broader economic sustainability. Policymakers may consider developing national guidelines or incentive mechanisms that encourage firms to move beyond symbolic IR adoption toward genuine implementation of integrated thinking practices. Such initiatives could support organisational growth and contribute to long-term economic resilience.

Notwithstanding its contributions, this study has several limitations. It relies on secondary data and publicly available corporate disclosures, which may constrain the depth of analysis and introduce interpretive bias. The assessment of integrated thinking using the Sustain-X

schematic is dependent on disclosed information and lacks cross-validation through primary data. In addition, firm performance was measured solely using ROA, focusing on financial outcomes rather than incorporating non-financial performance indicators. The study period covered three years, which may limit insights into longer-term dynamics, particularly during periods of economic disruption. Future research could address these limitations by adopting mixed-method approaches, incorporating qualitative data to capture internal organisational processes, extending the study period, and employing multiple financial and non-financial performance measures. Expanding the set of control variables may also provide a more nuanced understanding of the relationship between integrated thinking and firm performance. Such extensions would further strengthen empirical evidence on the role of integrated thinking in driving sustainable organisational success.

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Appendix 1: Integrated Thinking Schematic (Sustain-X)

Principle	Explanation	Indicator
Principle 1: Integrated awareness and understanding	The organisation demonstrates clear awareness and understanding of the connectivity and interdependence of matters material to its ability to create value over time	1.1. Awareness and understanding of external factors impacting the organisation's operating context 1.2. Awareness and response to the legitimate needs and interests of stakeholders 1.3. Awareness and understanding of risks and opportunities 1.4. Awareness and understanding of material themes 1.5. Articulation of business rationale for sustainability and integrated thinking as a driver of long-term value creation
Principle 2: Integrated leadership commitment and capability	Leadership provides the mandate for integrated thinking and makes a deliberate and coordinated effort to connect and integrate matters material to organisational sustainability	2.1. Leadership ambition and commitment to an integrated approach to sustainability 2.2. Diversity of leadership experience 2.3. Strategic positioning of sustainability 2.4. Values and ethics 2.5. Conscious and relevant adoption of codes and standards
Principle 3: Integrated structures	Organisational structures and systems are conducive to integrated decision-making and reporting	3.1. Integrated governance 3.2. Integrated accountability for sustainability 3.3. Integrated business model 3.4. Integrated and devolved stakeholder engagement processes 3.5. Integrated systems, technologies and processes
Principle 4: Integrated organisational performance management	Performance management of targets and KPIs is balanced and integrated to express the holistic and comprehensive performance of the organisation over the short-, medium-, and long-term	4.1. Non-financial metrics 4.2. Targets and contextualised performance metrics 4.3. Response to performance 4.4. Integrated assurance
Principle 5: Integrated External Communication	Communication with external stakeholders offers an accurate, holistic, balanced, and integrated view of the organisation's performance and ability to create value over the short-, medium, and long-term	5.1. Integrated marketing and communication 5.2. Integrated external reporting

Source: Author Constructed based on Maroun et al. (2022)