IFRS S1 and S2 Implementation Readiness in Emerging Markets: A Multi-Dimensional Assessment Framework and Market Readiness Index

1   **IFRS S1 and S2 Implementation Readiness in Emerging Markets: A Multi-Dimensional**

2   **Assessment Framework and Market Readiness Index**

3   **Abstract**

4   **Purpose**: This paper aims to examine IFRS S1 and S2 Sustainability Disclosure Standards

5   awareness and implementation readiness among Public Interest Entities (PIEs).

6   **Design/methodology/approach**: A quantitative research approach with a cross-sectional

7   survey of 241 PIEs across 11 sectors was used. Data was collected using a closed-ended

8   structured questionnaire based on the four pillars of IFRS's sustainability framework:

9   Governance, Strategy, Risk Management, and Metrics and Targets. Data was analysed using

10 different statistical analyses. Descriptive statistics and factor analysis were used to establish

11 the four pillars, with their relative importance determined through the Analytic Hierarchy

12 Process based on expert pairwise comparisons.

13 **Findings**: Findings reveal high general awareness of IFRS S1 and S2 standards (82%),

14 although detailed implementation knowledge is lower (55.6%). Readiness assessment across

15 pillars yielded an overall Ghana Sustainability Reporting Market Readiness Index (GSRMRI)

16 score of 46.6% based on the four pillars (governance (48.25%), strategy (49.25%), risk

17 management (46.50%), and metrics & targets (41.00%). Sectoral analysis indicates renewable

18 resources and energy sectors lead in readiness, while technology and communications lag.

19 **Originality**: This study contributes three key novel advances: First, it provides a pioneering

20 assessment of IFRS S1 and S2 implementation readiness in emerging markets. Second, it

21 introduces the GSRMRI framework as a standardised methodology adaptable across emerging

22 markets. Third, it offers unique insights through sector-specific analysis of preparedness levels.

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23   **Practical implications**: The study proposes a phased IFRS S1 and S2 implementation

24   roadmap, starting with voluntary adoption and capacity building before moving to mandatory

25   implementation, while providing practical recommendations for stakeholders to enhance

26   sustainability reporting capabilities.

27   **Social implications**: The research contributes to advancing sustainable business practices in

28   emerging markets, potentially improving environmental and social accountability. It supports

29   the development of more robust sustainability reporting frameworks, benefiting stakeholders,

30   including investors, regulators, and the broader society in their decision-making processes.

31   Keywords: IFRS Sustainability Disclosure Standards, IFRS S1 and S2, Corporate

32   Sustainability, ESG Reporting, Emerging Markets, Market Readiness Index

33   **Introduction**

34   The global sustainability reporting landscape stands at a critical inflection point. After decades

35   of fragmented disclosure practices and competing frameworks, the establishment of the

36   International Sustainability Standards Board (ISSB) in 2021 represents a watershed moment in

37   the evolution of corporate sustainability reporting (de Villiers, La Torre, & Molinari, 2022).

38   The subsequent release of IFRS S1 (General Requirements for Disclosure of Sustainability-

39   related Financial Information) and IFRS S2 (Climate-related Disclosures) by the ISSB in June

40   2023 marks the culmination of global efforts to harmonise sustainability disclosure practices

41   and integrate them with financial reporting frameworks (IFRS Foundation, 2023a; van Dijk et

42   al., 2024). However, the transition from voluntary, diverse reporting practices to these

43   standardised global frameworks presents unique challenges for emerging economies,

44   challenges that remain critically underexplored in current academic discourse. The urgency of

45   addressing these implementation challenges cannot be overstated. As sustainability-related

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46   risks increasingly impact corporate financial performance and market valuation (Taiwo et al.,

47   2022; Thawani, Panigrahi, & Bhatia, 2024), the gap between developed and emerging markets

48   in sustainability disclosure capabilities threatens to exacerbate existing economic disparities

49   and investment inequalities. This issue is particularly pressing for countries like Ghana, where

50   varying levels of sustainability awareness, weaker regulatory environments, and constrained

51   organisational capacities create significant barriers to ISSB standards adoption (Ali et al.,

52   2020). While existing literature has extensively explored sustainability reporting in emerging

53   markets and its relationship with corporate governance mechanisms (Al-Qudah & Houcine,

54   2024; Alshhadat, 2023), investor expectations (Millar & Slack, 2024), and market valuation

55   (Taiwo et al., 2022), there remains a critical gap in our understanding of how developing

56   economies can effectively transition to ISSB standards (IFRS S1 and S2). The existing

57   patchwork of voluntary frameworks, including the Global Reporting Initiative (GRI), Carbon

58   Disclosure Project (CDP), Sustainability Accounting Standards Board (SASB), and Task Force

59   on Climate-related Financial Disclosures (TCFD), has led to inconsistent reporting practices

60   that impede meaningful cross-organisational comparison (Baboukardos et al., 2022; Dicuonzo

61   et al., 2022; Goswami et al., 2023). Moreover, these frameworks have largely operated in

62   isolation from financial reporting standards, dissociating sustainability-related risks and

63   opportunities from firms' financial performance and value creation capabilities (Dincer et al.,

64   2023).

65   Recent studies examining IFRS S1 and S2 implementation readiness in various emerging

66   markets have highlighted concerning institutional voids and regulatory challenges. Benhayoun

67   et al. (2025) and Khatib (2024) provide empirical evidence from Morocco and Brazil,

68   respectively, documenting significant barriers including a lack of standardised enforcement

69   mechanisms, regional disparities in reporting infrastructure, and evolving regulatory oversight.

70   These findings suggest that the successful implementation of ISSB standards (IFRS1 and S2)

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71 ~~implementation~~ in emerging economies requires not only regulatory reforms but also enhanced

72 corporate capability-building and stakeholder engagement tailored to local contexts. Our

73 research addresses this critical gap by developing a comprehensive assessment framework to

74 evaluate Ghana's market readiness for implementing IFRS S1 and S2. While prior research has

75 investigated discrete aspects of sustainability governance readiness (Klettner et al., 2014;

76 Barletta et al., 2021), stakeholder engagement capacity (Manetti, 2011), and technical systems

77 preparedness (Barletta et al., 2021), no existing study offers a holistic evaluation framework

78 that captures the multi-dimensional nature of implementation readiness. This omission is

79 particularly problematic as it hinders effective strategy development and resource allocation

80 for ISSB standards adoption in developing markets. Drawing on Mac Cormac et al.'s (2023)

81 technical analysis of IFRS S1 and S2 requirements and Kulik and Dobler's (2023) stakeholder

82 engagement insights, we develop the Ghana Sustainability Reporting Market Readiness Index

83 (GSRMRI), a novel measurement tool that assesses preparedness across four critical

84 dimensions: governance structures, risk management frameworks, strategy integration

85 mechanisms, and metrics and targeting capabilities.

86 Specifically, we address the following research questions:

87 1. What is the current level of awareness and knowledge of IFRS sustainability reporting

88 standards among key Public Interest Entities (PIEs) in Ghana?

89 2. What is the readiness level of ~~'~~Ghana~~'~~'s PIEs in sustainability governance, risk

90 management, strategy integration, and metric and targeting setting across material

91 sustainability KPIs?

92 3. What is Ghana's Sustainability Reporting Market Readiness Index (GSRMRI)?

93 Our study makes three substantial contributions to sustainability reporting research and

94 practice. First, we introduce the Ghana Sustainability Reporting Market Readiness Index

95   (GSRMRI), providing the first empirical assessment of IFRS S1 and S2 implementation

96   readiness in an African emerging market. This novel instrument employs weighted scoring

97   across governance, strategy, risk management, and metrics dimensions, creating a

98   methodological advancement that addresses geographical bias in sustainability reporting

99   literature. Second, our sector-wise assessment reveals distinctive implementation readiness

100   patterns across industries, examining how industry characteristics influence reporting

101   capabilities and implementation approaches. This analysis provides critical insights for

102   developing targeted interventions rather than imposing one-size-fits-all solutions that have

103   proven ineffective in emerging markets. Third, we develop an evidence-based implementation

104   roadmap for IFRS S1 and S2 adoption, proposing a phased approach from voluntary adoption

105   through capacity building to mandatory implementation. This framework acknowledges

106   institutional voids while offering tailored solutions for resource-constrained environments. As

107   global capital markets increasingly incorporate sustainability performance into investment

108   decisions, the ability of emerging economies to effectively implement IFRS S1 and S2 will

109   significantly influence their access to international capital and economic development. Our

110   research thus addresses critical academic gaps with far-reaching implications for sustainable

111   development and global market integration.

112   The remainder of this paper is structured as follows. The next segment captures the review and

113   the theoretical background of the study. Section three explains the research method used.

114   Findings follow ~~this~~ in section four. Section five discusses the findings and ends with a

115   conclusion of the study.

116

117   **Literature Review**

118   **Evolution of Sustainability Reporting Standards**

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119   Over the years, sustainability reporting has seen a fundamental transformation in organisational

120   accountability, from the initial voluntary environmental reporting in the 1970s to a more

121   comprehensive environmental, social, and governance (ESG) framework (Stolowy and

122   Paugam, 2018). This transformation was facilitated through the introduction of various

123   standardised frameworks, each designed to address specific aspects of sustainability reporting

124   and enhance disclosure practices. The Global Reporting Initiative (GRI), a collaboration

125   between CERES (Coalition for Environmentally Responsible Economies) and the United

126   Nations Environment Programme, became the first to establish standardised sustainability

127   reporting in 1997, which has since evolved from the initial environmental focus to a

128   comprehensive triple bottom line approach (Holmon, 2022). According to Adams and

129   Abhayawansa (2022) and Reinhardt, Genovese, and Dunstan (2016), the guidelines underwent

130   several multiple iterations, helping the GRI to develop a more sophisticated guideline,

131   culminating in the 2021 Universal Standards emphasising human rights and due diligence. In

132   2000, a standardised environmental data reporting, which was expanded from the initial focus

133   on greenhouse gas emissions to include water security and forest programs, was launched by

134   the Carbon Disclosure Project (CDP) (Fialho et al., 2021). This was in response to rising

135   investor concerns about climate-related risks. According to CDP (2024), over 23,000

136   companies representing two-thirds of global market capitalisation disclosed through CDP in

137   2023.

138   The Sustainability Accounting Standards Board (SASB), established in 2011, introduced

139   industry-specific material sustainability factors, addressing a critical gap in sustainability

140   reporting (SASB, 2023). The development culminated in codified standards covering 77

141   industries across 11 sectors by 2018 before merging with the International Integrated Reporting

142   Council (IIRC) in 2021 to form the Value Reporting Foundation (Godelnik, 2021). In 2015,

143   the Task Force on Climate-related Financial Disclosures (TCFD) was launched, focusing on

144 climate considerations in mainstream financial reporting using a four-pillar approach:

145 governance, strategy, risk management, and metrics and targets (Braasch and Velte, 2023).

146 According to TCFD (2024), over 4,900 organisations support the TCFD. In an effort to create

147 a global baseline for sustainability reporting by building on existing frameworks, the

148 International Sustainability Standards Board (ISSB) in 2023 introduced the IFRS S1 and S2

149 standards to harmonise sustainability reporting practices. The IFRS Foundation's

150 sustainability-related financial disclosures (IFRS 1) and climate-related disclosures (IFRS S2)

151 together are expected to improve sustainability reporting quality, uniformity, and comparability

152 worldwide (Mio et al., 2024) and consequently to help capital flow to sustainable business

153 practices and the low-carbon economy when they are adopted (Scholten et al, 2020; Hwara, et

154 al, 2024).

155 **Comparisons Between IFRS S1/S2 and Other Frameworks**

156 The IFRS S1 and S2 aim to create a globally consistent sustainability reporting framework;

157 however, critical analysis reveals significant conceptual and practical differences when

158 compared to established frameworks such as GRI, SASB, and TCFD (de Villiers et al., 2022;

159 Moscariello and Pizzo, 2024; Goswami et al., 2023). The most fundamental distinction lies

160 in the approach to materiality. IFRS S1 and S2 embrace a financial materiality perspective,

161 focusing primarily on sustainability matters affecting an entity's financial performance (IFRS

162 Foundation, 2022), contrasting with GRI's double materiality concept that encompasses both

163 financial and impact materiality (de Villiers et al, 2022). This creates implementation

164 challenges for organisations seeking to satisfy both frameworks simultaneously. Similarly,

165 SASB also focuses on financial materiality; it takes an industry-specific approach, whereas

166 IFRS S1 provides general principles across all industries, potentially resulting in broader but

167 less targeted disclosures (IFRS Foundation, 2023a). Significant disparities exist in scope and

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168 coverage across frameworks. GRI comprehensively covers environmental, social, and

169 economic impacts, while IFRS S2 focuses specifically on climate-related disclosures, and IFRS

170 S1 establishes general requirements for all sustainability-related financial information.

171 Organisations previously reporting under GRI may find IFRS S2 narrower regarding

172 environmental matters, while finding IFRS S1's approach more financially oriented (de Villiers

173 et al., 2022). Furthermore, the CDP requires extensive quantitative environmental data,

174 whereas IFRS S2 takes a more integrated approach, connecting climate risks to business

175 strategy and financial impacts. The TCFD framework provided the foundational four-pillar

176 structure that IFRS S2 adopted, but with important differences in implementation guidance (

177 IFRS Foundation, 2023b; Novata, 2024). IFRS S2 incorporates more prescriptive requirements

178 regarding climate scenarios and financial implications, making it more demanding for

179 organisations to connect climate scenarios directly to financial statement impacts. GRI's

180 governance disclosures focus broadly on organisational structure and stakeholder engagement,

181 while IFRS standards emphasise governance specifically related to financially material

182 sustainability risks. Reporting boundaries also differ significantly across frameworks. GRI

183 encourages reporting on impacts throughout the value chain, while IFRS standards require

184 consideration of value chain risks only when they have significant financial implications for

185 the reporting entity (Kowsana and Muraleetharan, 2021; IFRS Foundation, 2023a, Massari and

186 Giannoccaro, 2023). This creates potential gaps where significant ecological or social impacts

187 might occur without clear short-term financial materiality. Organisations navigating multiple

188 frameworks must reconcile these different boundary approaches to avoid inconsistent

189 sustainability narratives. A distinctive feature of IFRS S1 and S2 is their explicit connection to

190 financial reporting, requiring consideration of how sustainability risks affect financial position,

191 performance, and cash flows. This integrated approach differs from GRI, CDP, and earlier

192 versions of SASB, which typically produced standalone sustainability reports. The frameworks

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193   also differ in their approach to assurance, with IFRS standards developing with an expectation

194   of assurance similar to financial statements, whereas GRI encourages but does not mandate

195   external assurance (Akisik and Gal, 2020; IFRS Foundation, 2023a). Additionally, IFRS standards

196   place greater emphasis on forward-looking information and future impacts, requiring

197   organisations to disclose anticipated financial effects of sustainability trends and transition

198   plans. This temporal orientation creates challenges in developing reliable projections and

199   connecting future sustainability scenarios to financial implications (PricewaterhouseCoopers,

200   2023). As organisations navigate the evolving landscape of sustainability reporting, these

201   critical differences will shape implementation strategies, particularly for organisations in

202   emerging   markets   with   limited   reporting   resources,   highlighting   the   need   for

203   organisationsorganisation in emerging markets with limited reporting resources.

Overview of IFRS S1 and IFRS S2 Sustainability Disclosure Standards

205   IFRS S1 sets out the overall requirements for sustainability-related financial disclosures and

206   requires an entity to disclose information about its sustainability-related risks and opportunities

207   that is useful to primary users of General-Purpose Financial Reports (GPFR) in making

208   decisions relating to providing resources to the entity (IFRS Foundation, 2024). It also defines

209   sustainability-specific materiality and establishes a financial-style reporting structure (ISSB.

210   (2022a). Building on TCFD guidelines, the IFRS S2 on the other hand addresses climate-

211   related disclosures (ISSB, 2022b). The standard requires disclosure of greenhouse gas

212   emissions metrics and targets to analyse climate risks and opportunities (Kaplan and Norton,

213   2023). IFRS S2 also includes industry-specific disclosure requirements derived from SASB

214   Standards (ISSB, 2022b). Both IFRS S1 and S2 are structured around a four-pillar framework

215   that ensures comprehensive coverage of sustainability issues. This four-pillar framework

216   comprises Governance, Strategy, Risk, Metrics, and Targets. The governance pillar of the

217   sustainability disclosure standard requires entities to disclose information about their

218 governance structure and processes related to sustainability considerations. Specifically,

219 organisations are expected to develop organisational oversight mechanisms, including board

220 supervision, management systems, resource deployment, staff development, responsibility

221 allocation, policy frameworks, and reporting structures for sustainability and climate-related

222 information (Baumüller et al., 2023). The strategy, which is the second pillar of the

223 sustainability disclosure standard, requires entities to disclose information about their

224 sustainability and climate-related strategies, including how they identify, assess, and manage

225 sustainability-related risks and opportunities in addition to embedding sustainability into

226 business operations through transition planning (Harahap et al., 2024). The next is risk

227 management, which assesses the capacity of organisations to identify, assess, and manage

228 sustainability risks through control systems, monitoring processes, climate risk analysis,

229 opportunity assessment, mitigation strategies, and review mechanisms (ISSB, 2022a). Metric

230 and target define the last pillar, which requires assessing the technical infrastructure for

231 sustainability reporting, including data collection systems, performance indicators, GHG

232 emissions targets, progress monitoring, and data quality control processes (ISSB, 2022a;

233 2022b). Within the context of developing countries where institutional capacity varies,

234 organisations need to build their capacities with respect to governance, strategy, risk

235 management, and target and metrics for successful implementation of the standard (Atu et al.,

236 2016; Hassan et al, 2019) assessing market readiness for the implementation of the

237 sustainability-related financial disclosures (IFRS S1) and climate-related disclosures (IFRS S2)

238 standard is therefore critical

239 **Organisational Readiness for Sustainability Reporting in Developing Countries**

240 In developing economies, sustainability reporting implementation presents unique challenges

241 with evidence of varying degrees of awareness and readiness across different sectors. Ikpor et

242 al. (2022) note a general increase in sustainability reporting knowledge among developing and

243 emerging markets, Kulik and Dobler (2023) identify a critical gap between general awareness

244 and the specific technical knowledge required for effective implementation. This knowledge

245 gap represents a significant barrier that must be addressed before meaningful progress in

246 sustainability reporting can occur in these markets. The absorptive capacity of organisations

247 emerges as a crucial determinant in addressing this knowledge gap. As organisations attempt

248 to implement complex reporting frameworks such as IFRS S1 and S2, their ability to acquire

249 and apply new knowledge becomes paramount. Benhayoun et al. (2025) provide compelling

250 evidence through their quantitative investigation of 150 Moroccan accounting professionals,

251 revealing that organisational learning capabilities significantly outweigh structural factors,

252 size, and cultural elements in predicting readiness. These findings suggest that structural

253 barriers and governance prerequisites vary significantly across different types of organisations.

254 Sectoral variations significantly influence sustainability reporting readiness and practices.

255 González-Ramos et al. (2018) observe that environmentally sensitive industries typically

256 develop more sophisticated sustainable management strategies, a pattern confirmed by

257 Babangida and Kao'je (2023) who document more advanced sustainability strategy

258 development in high-environmental-impact sectors. These variations reflect the uneven

259 institutional capacities and resource limitations characteristic of emerging markets (Hassan et

260 al., 2019). Motivational factors further differentiate reporting practices, with Alshhadat's

261 (2023) research on Saudi petrochemical companies revealing that compliance with

262 international best practices, competitiveness, reputation, and legitimacy serve as primary

263 drivers for sustainability reporting adoption. These findings suggest that implementation

264 strategies must be tailored to sector-specific contexts rather than pursuing one-size-fits-all

265 approaches.

266 Corporate governance mechanisms and organisational characteristics fundamentally influence

267 sustainability reporting capabilities. Al-Qudah and Houcine's (2024) research demonstrates

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268   that firm size, profitability, engagement with Big 4 auditors, government ownership, and board

269   independence significantly affect reporting quality in GCC countries. This research highlights

270   the need for differentiated implementation approaches that account for varying organisational

271   profiles and governance structures across developing economies. Risk management

272   capabilities show considerable variation across organisations and reporting dimensions. The

273   TCFD (2022) critically notes that organisations typically prioritise non-climate related risks

274   over climate-related ones, focusing on opportunity-seeking rather than comprehensive risk

275   management. This tendency creates significant gaps in climate risk disclosure. Khatib's (2024)

276   detailed study of Brazil provides empirical evidence of uneven implementation readiness

277   across the four reporting pillars, with governance indicators showing notably lower

278   applicability (10%) compared to Risk Management (42%), Strategy (24%), and Metrics and

279   Goals (24%). This governance deficit represents a fundamental challenge for developing

280   countries, where sustainability oversight mechanisms and formal accountability structures

281   often remain underdeveloped (Erin et al., 2022). Measurement and target-setting present

282   formidable technical challenges for organisations in developing economies. The literature

283   consistently identifies significant barriers including inadequate data collection infrastructure,

284   lack of standardised methodologies, and limited technical expertise (Bachmann et al., 2022;

285   Nilashi et al., 2023). Khatib's (2024) finding that only 20% of indicators received unanimous

286   expert approval underscores the scale of this challenge. Specific measurement difficulties are

287   evident in Scope 3 emissions reporting, where Stanny (2018) and Busch et al. (2022) document

288   substantial complexities in value chain measurements and data verification. Organisations

289   transitioning to systematic sustainability reporting face additional challenges due to the absence

290   of historical sustainability data and limited benchmarking capabilities that hinder effective

291   target-setting (Sharma and Goel, 2024; Chopra et al., 2024).

292   Critical analysis of these studies reveals that while sustainability reporting is gradually gaining

293   traction in developing economies, significant implementation gaps persist across governance,

294   strategy, risk management, and metrics dimensions. The evidence suggests that effective IFRS

295   S1 and S2 implementation in developing countries requires a multifaceted approach that

296   prioritises enhancing organisational learning capabilities, leverages sector-specific incentives,

297   strengthens governance structures, and develops context-appropriate measurement

298   frameworks. Implementation strategies would need to recognise varying readiness levels

299   across organisational profiles and reporting dimensions, potentially adopting phased

300   approaches that begin with areas of greater existing capacity while systematically addressing

301   more challenging aspects of the reporting standards.

302

303   **Theoretical Framework**

304   *Dynamic Capabilities Theory*

305   This study employs Dynamic Capabilities Theory (DCT) as its theoretical foundation to

306   examine organisational readiness for implementing IFRS S1 and S2 sustainability standards in

307   developing economies. DCT, initially conceptualised by Teece et al. (1997), provides a robust

308   framework for understanding how organisations develop the ability to integrate, build, and

309   reconfigure internal and external competencies to address rapidly changing business

310   environments. This theoretical lens is particularly valuable for examining sustainability

311   reporting implementation, as it helps explain how organisations develop adaptability in

312   response to evolving regulatory and market expectations. The core tenets of DCT revolve

313   around three essential capabilities: sensing, seizing, and reconfiguring. Sensing capabilities

314   involve environmental scanning and market intelligence activities that enable firms to identify

315   new opportunities and threats. Seizing capabilities focus on resource allocation and strategic

316   decision-making to capitalise on identified opportunities. Reconfiguring capabilities

317 encompass organisational transformation processes that allow firms to continuously adapt their

318 resource base and operational routines to maintain competitive advantage in dynamic

319 environments (Teece, 2007). These capabilities operate as hierarchical processes that enable

320 organisations to evolve beyond ordinary operational capabilities toward more sophisticated

321 strategic adaptability (Helfat and Maritan, 2024).

322 DCT offers valuable insights for understanding organisational readiness across different

323 dimensions. First, sensing capabilities relate directly to this study's objective of assessing

324 awareness and knowledge of IFRS sustainability reporting standards. These capabilities

325 manifest through environmental scanning to identify sustainability risks, stakeholder

326 engagement to understand disclosure expectations, and regulatory monitoring to anticipate

327 reporting mandates. Varying awareness levels across sectors in developing economies can be

328 understood through differences in sensing capabilities. Second, seizing capabilities align with

329 evaluating organisational readiness in sustainability governance, risk management, strategy

330 integration, and metrics (Abdullah, 2024). These capabilities involve resource allocation for

331 data infrastructure, development of governance structures, and integration of sustainability

332 principles into strategy and risk management. The four IFRS reporting pillars correspond

333 directly with how organisations operationalise seizing capabilities for sustainability disclosure.

334 Third, reconfiguring capabilities connect to developing a sustainability reporting market

335 readiness index. These enable firms to adapt by embedding sustainability accountability,

336 developing knowledge management systems, and innovating business models. The readiness

337 index captures organisations' ability to reconfigure operations in response to reporting

338 requirements. DCT is particularly relevant for examining sustainability reporting in developing

339 economies by addressing how organisations navigate resource constraints and institutional

340 voids. Eisenhardt and Martin (2000) describe how resource-constrained firms use "resource

341 bricolage" to fulfil requirements despite limitations. Zahra et al. (2006) note that weak

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342   institutional environments require stronger internal mechanisms to compensate for limited

343   external support. The theory provides a basis for understanding sectoral differences through

344   capability hierarchies (Helfat and Maritan, 2024), capability gaps (Winter, 2003), and

345   capability mobility (Eisenhardt and Martin, 2000). This research extends DCT by applying it

346   to sustainability reporting in developing economies, proposing a capability hierarchy

347   framework, and offering insights into inter-sectoral capability diffusion pathways. This

348   framework provides conceptual clarity on how organisations develop capabilities to meet

349   evolving sustainability reporting requirements despite resource and institutional constraints.

350

351   **Methodology**

352   The study adopted the quantitative research design, specifically the cross-sectional survey

353   approach, to examine Ghana's readiness to implement the IFRS S1 and S2 sustainability

354   disclosure reporting standards. The quantitative design was adopted for this study due to its

355   ability to provide statistically evaluated numerical data for objective assessment (Cohen et al.,

356   2017) and to collect standardised data from a large sample at one time to assess different sector

357   readiness. The population of the study comprised 1500 PIEs and corporations such as financial

358   institutions, publicly listed companies, insurance companies, pensions companies, mining

359   companies, oil and gas companies, etc., in Ghana expected to implement IFRS sustainability

360   disclosure standards. The population was stratified into 11 sectors using the Sustainable

361   Industry Classification System® (SASB, 2018). Stratified random sampling was employed to

362   ensure proportional representation and mitigate sectoral variability (Stehman and Xing, 2022).

363   Within each stratum, simple random sampling selected organisations proportionate to their

364   sizes, ensuring unbiased representation and facilitating statistically significant findings across

365   sectors (Kalton, 2020). A sample size of 306 organisations was drawn from the population

366   using Cochran's sample size formula for finite populations (Cochran, 1977). Closed-ended

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367 structured questionnaires served as data collection instruments for the study. The questionnaire

368 was developed based on the four pillars of the IFRS sustainability disclosure framework:

369 Governance, Strategy, Risk Management, and Metrics and Targets (See Appendix 1). The

370 questionnaire was grouped into subsections, namely organisational characteristics, level of

371 awareness, and four pillars of the IFRS sustainability disclosure framework. While the

372 organisational characteristics were captured using nominal and ordinal scales, the level of

373 awareness and four pillars of IFRS sustainability were measured using the Likert scale. Likert

374 scales were used due to their effectiveness in measuring attitudes and perceptions and their

375 suitability for statistical analysis (Joshi et al., 2015). Respondents were asked to express their

376 candid opinion on the indicators using the five-point Likert scale ranging from 1=strongly

377 disagree, 2=disagree, 3=neither agree nor disagree, 4= agree, and 5=strongly agree. The

378 questionnaire was pilot-tested with a small group of 50 organisations and refined based on their

379 feedback to ensure content validity and reliability (Agyei-Mensah, 2019). The validity and

380 reliability of the instrument were measured using Cronbach Alpha and Average Variance

381 Extracted (AVE). The questionnaire was administered online via Google form to senior

382 executives, sustainability managers, and finance directors of the selected PIEs. Online

383 administration was chosen for its cost-effectiveness and ability to reach a geographically

384 dispersed sample.

385 Data from Google Forms was coded in version 27 of Statistical Package for the Social Sciences

386 (SPSS) and analysed using descriptive statistics. The descriptive statistics analysed the

387 organisation's characteristics and the level of awareness and readiness in terms of Governance,

388 strategy, risk management, and metrics and targets, including frequencies, percentages, and

389 mean score ranking analysis. The Ghana Sustainability Reporting Market Readiness Index

390 (GSRMRI) was established based on a range of quantitative processes with four written

391 measures. The first step in the analysis was to examine the survey items to extract the number

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392   of factors that were supposed to underlie each of the established pillars. This analysis was done

393   per the procedure provided by Costello and Osborne (2019). Later, each of the four pillars was

394   prioritised through the Analytic Hierarchy Process (AHP) to drive the quantification of expert

395   judgment as outlined by Saaty (2008). The concurrent scores of individual companies for each

396   pillar were then arrived at using a weighted sum model (WSM), a widely used mathematical

397   model in multi-attribute decision-making (Zanakis et al., 1998). To improve the interpretability

398   of scores and for easier comparison, the values were scaled and brought to the same range of 0

399   to 100 using min-max normalisation, as suggested by Jain et al. (2005). For the last step, sector-

400   level and overall readiness market indices were calculated using the average of the normalised

401   values, which corresponded to the readiness measures at various levels of analysis as proposed

402   by Nardo et al. (2008). This approach made it possible to achieve systematic and thorough

403   work on the development of the GSRMRI. The equation for the determination of the GSMRI

404   is given below:

405    $GSMRI = (W1 * G) + (W2 * R) + (W3 * S) + (W4 * M)$......................................1

406   Where: GSMRI = Ghana Sustainability Market Readiness Index G = Governance score (as a

407   percentage) R = Risk Management score (as a percentage) S = Strategy score (as a percentage)

408   M = Metrics and Targets score (as a percentage) and W= Weights

409   The weights (W) for GSMRI were developed through various consultative processes and a

410   series of surveys with a panel of experts. The joint approach adopted meant that technical inputs

411   and the requirements of other stakeholders interested in sustainability reporting in Ghana

412   informed the final content of the index. The GSMRI weights were determined, which involved

413   integrating various sustainably oriented stakeholders to develop this. Several factors influenced

414   the allocation of weights to the factors, the most important one being governance, which weighs

415   0.30 since it is the most fundamental factor. Thus, Risk Management and Strategy shared the

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416 same importance and were assigned scores of 0.25. Metrics and Targets was ranked marginally

417 lower (.20), noting that it depends on other factors (Figure1). This was a more collaborative

418 approach of incorporating both the opinions of experts and the key stakeholders in the

419 completion of the index, thereby making it more scholarly-based and more practical when

420 applied to the current state of sustainability in Ghana.

421

422   [INSERT FIGURE 1]

423

424 Ethical research practices such as informed consent, anonymity, and confidentiality were

425 observed in the study, and approval from the corresponding institutional review board was

426 obtained (Cohen et al., 2017).

427 **Data Analysis and Results**

428   In this section, we present an analysis of the market readiness of Ghanaian companies to

429 adopt the IFRS S1 and S2. Our analysis examines demographic characteristics; awareness

430 levels and uses factor analysis to identify key pillars for IFRS S1 and S2 adoption.

431 **Sample Characteristics and Preliminary Analysis**

432   The results from Table 1 reveal that the services industry dominates, representing 43.6% of

433 the survey entities. Financials follow at 22.4%, Other sectors include Food and Beverage and

434 Infrastructure at 5.4% each, Extractives and Minerals Processing at 4.6%, NGOs at 4.1%,

435 Consumer Goods and Transportation at 3.3% each, Health Care at 3.7%, Renewable Resources

436 and alternative Energy at 2.1%, Technology and Communications at 1.7%, and Resource

437 Transformation at 0.4%. Organisational sizes vary widely, with the largest group (27.8%)

18

438   having 50 or fewer employees. Organisations with 51-100 employees and over 1000 employees

439   each account for 17.4% of the total. Most survey respondents hold financial roles, with

440   Accountants forming the largest group at 44.4%, Internal Auditors at 16.6% and Chief Finance

441   Officers at 16.2%. Only 1.2% of respondents are Sustainability Managers. The results further

442   reflect that few organisations have fully embraced sustainability practices. Only 18.7% have

443   appointed senior management representation for sustainability, and just 15.8% publish

444   sustainability reports. Of those publishing reports, 14.1% have them assured by third parties.

445   Finally, results reveal that external requirements play a substantial role in driving sustainability

446   reporting. Regulators require sustainability reports from 10.4% of the surveyed organisations,

447   while investors demand such reports from 4.6%. The predominance of financial roles among

448   respondents (77.2% combined for Accountants, Internal Auditors, and Chief Finance Officers)

449   and the lack of dedicated Sustainability Managers (1.2%) warrant consideration in interpreting

450   the results, particularly regarding the potential for positional bias in sustainability-related

451   assessments.

452   [INSERT TABLE 1 HERE]

453   **Assessment of Awareness Levels**

454   In general, there is a high level of awareness and knowledge of the IFRS Sustainability

455   reporting standards, as 82% of the respondents indicated they were familiar with the standards.

456   Table 2 presents the descriptive statistics and response distributions.

457   [INSERT TABLE 2 HERE]

458   The mean scores of the first four constructs range 4.05 to 4.32 (on a 5-point scale) indicating

459   a high level of general awareness about the IFRS sustainability standards. Over 80% of the

460   respondents agree with the statement related to the IFRS S1 and S2 focus, the upcoming

19

461 requirements, and general knowledge. The last two constructs have relatively lower mean

462 scores (3.53 and 3.63) indicating a medium level of detailed knowledge about Ghana's IFRS

463 S1 and S2requirements. Only 55.6% of the respondents registered their agreement to the

464 question related to general knowledge of the standards, whereas 65.9% knew where to find

465 information about the standards.

466 The standard deviation ranged from 0.827 to 0.966 across all constructs.

467 Table 3 below shows the awareness levels by sector.

468 [INSERT TABLE 3 HERE]

469 The sector-specific awareness levels reveal interesting patterns. Resource-intensive sectors

470 (e.g., extractives and minerals processing, renewable resources, and alternative energy) and

471 consumer-facing sectors such as food and beverages and services demonstrated the highest

472 levels of awareness, exceeding 80%. Notably, the financial, technology, and communication

473 sectors recorded the lowest levels of awareness.

474 **Assessment of Readiness Level**

475 Regarding implementing readiness, specifically in sustainability governance and oversight

476 it was observed that while the results show some progress among the public interest entities in

477 environmental considerations in financial decisions (3.45) and building sustainability

478 competence at all levels (3.34), there are specific gaps. For instance, the results from the table

479 show that adequate training (2.54), staffing (2.61), and responsibility reassignment (2.60) for

480 the IFRS S1 and S2 implementation are below average. The level of board involvement in

481 sustainability (3.01, 3.05) is average. This imply that sustainability governance has not been

482 fully integrated into top-level corporate governance to ensure proper oversight, accountability,

483 and strategic direction.

20

484   For strategy readiness, incorporating sustainability priorities into management decision-

485   making scored highest mean (3.12) The lowest mean score (2.73) was recorded for climate-

486   related transition planning revealing the lack of long-term climate strategy planning. The

487   assessment of environmental risk in short-, medium-, and long-term planning and identification

488   of sustainability concerns 2.92 and 2.98, respectively, both below the midpoint.

489   For risk and opportunities readiness, the highest mean score (2.95) is for "Exploits non-

490   climate sustainability opportunities," and the lowest mean score (2.85) is for "Manages

491   climate-related transition risks". This indicates slight preference for addressing non-climate

492   sustainability issues over climate-specific ones and pursuing opportunities rather than

493   managing risks and lack deeper strategic integration necessary for successful IFRS S1 and S2

494   implementation.

495   For metrics and target, organisations perceive their performance as below average in setting

496   GHG emission reduction targets and aligning with sustainability reporting standards, with

497   mean scores ranging from 2.59 to 2.71. Organisations feel slightly more confident in data

498   quality controls (mean 2.71) than in setting emission targets. There's a minor decline in mean

499   scores from overall GHG targets (2.65) to Scope 3 targets (2.59), possibly indicating less focus

500   on indirect emissions.

501   **Evaluation of readiness levels across four pillars**

502   We performed factor analysis through a two-stage method to establish the four pillars. We

503   began with Exploratory Factor Analysis (EFA) to discover latent factors before using

504   Confirmatory Factor Analysis (CFA) through covariance-based structural equation modelling

505   (CB-SEM) with AMOS to validate and assess the measurement model's reliability and validity.

21

506 Following the procedure laid down by DeVellis (2016) and Hinkin et al. (1997), we started by

507 conducting a literature and document review of literature related to assessing readiness levels

508 of matrices, professional accountancy practice, and the sustainability standards to determine

509 what main focus areas were necessary for making an organisation ready for the adoption of the

510 standards.

511 EFA was conducted on all samples (n = 306) using SPSS v27. The Kaiser-Meyer-Olkin

512 measure of sampling adequacy was 0.912, while Bartlett's test of sphericity produced a

513 significant result (χ^2 (306) = 5429.37, p < 0.001), indicating the data was appropriate for factor

514 analysis. The scree plot analysis indicated that a four-factor solution best explained the data,

515 which included Governance and Oversight, Strategy, Risk and Opportunities, and Metrics and

516 Targets.

517 After performing EFA, we conducted CFA analysis using AMOS to validate the measurement

518 model. The CB-SEM approach enabled us to validate the factorial validity of constructs

519 through robust model fit indices. The CFA analysis validated the four-factor structure that EFA

520 had previously identified. Table 4 displays the measurement results, including factor loadings

521 and reliability scores for each construct.

522   [INSERT TABLE 4 HERE]

523 The Governance and Oversight factor consists of 9 items demonstrating loadings between

524 0.703 and 0.850. This factor demonstrates the level of understanding regarding governance

525 structures and oversight processes related to sustainability reporting in accounting. The

526 Strategy factor consists of 5 items demonstrating loadings between 0.780 and 0.890. The Risk

527 and Opportunities factor consisted of 7 items, which demonstrated strong loadings between

528 0.765 and 0.881 to indicate the level of awareness regarding sustainability reporting risks and

529   opportunities. The Metrics and Targets factor measured sustainability reporting measurement

530   approaches and targets through six items with loadings ranging from 0.760 to 0.965.

531   The study conducted thorough assessments to validate the reliability and validity of its

532   constructs. Table 5 shows the complete analysis of construct discriminant validity and the

533   relationship between variables.

534   [INSERT TABLE 5 HERE]

535   The constructs achieved outstanding internal consistency through Cronbach's alpha values,

536   which exceeded 0.909 to 0.964, above the recommended threshold of 0.700. The composite

537   reliability values surpassed 0.900 for every construct.

538   The Average Variance Extracted (AVE) values demonstrated sufficient convergent validity

539   because they exceeded 0.500 with a range from 0.604 to 0.821. The measurement tools

540   demonstrate adequate convergent validity because their values exceed the required threshold.

541   Governance and Oversight construct showed the lowest Average Variance Extracted value

542   (0.604) yet maintained excellent reliability (α = 0.932), suggesting its broad nature and

543   complexity.

544   The discriminant validity assessment involved comparing the square root of AVE values

545   (diagonally displayed in Table 5) with the inter-construct correlations. The square root of AVE

546   values exceeded all inter-construct correlations, which validated discriminant validity between

547   the constructs.

548   The CB-SEM analysis revealed a good model fit between the theoretical framework and

549   observed data (Table 6).

550   [INSERT TABLE 6 HERE]

23

551 These indices satisfy the recommended thresholds, providing strong evidence for the structural

552 validity of our measurement model. The path diagram from the CFA analysis is presented in

553 Figure 1.

554   [INSERT FIGURE 2 HERE]

555 The four identified factors match the essential requirements for implementing IFRS S1 and S2

556 standards which determine the most vital organisational readiness aspects for sustainability

557 reporting. Our measurement approach demonstrates strong factor loadings and robust

558 psychometric properties which validate our methodology and create a solid foundation for

559 additional analysis.

560   Factor analysis was conducted to establish the four key pillars of IFRS S1 and S2 readiness.

561 **Sector readiness based on the four pillars**

562   The results in Table 6 shows sector readiness across the four pillars.

563   [INSERT TABLE 6]

564   The renewable resources and alternative energy industry had the highest degree of

565 preparedness in most of the four pillars, ranging from 55.5% to 62%. The food and beverage

566 sector is the second most prepared industry, showing a well-balanced degree of preparation in

567 all areas. Notably, the technology and communications industry had the least preparedness

568 compared to the others. In general, most industries demonstrate relatively higher readiness in

569 terms of strategy and assessing risks and opportunities, as opposed to governance and

570 supervision, as well as measurements and objectives.

571   To examine sector-specific differences in GSRMRI scores, we conducted a one-way

572 ANOVA. The analysis revealed significant differences among sectors ($F(10, 230) = 5.627$, $p <$

24

573 0.001, η2 = 0.196). Post-hoc Tukey HSD tests identified several significant pairwise

574 differences, as illustrated in Figure 2.

575   [INSERT FIGURE 2]

576

Determination of 'Ghana's Sustainability Market Readiness Index (GSMRI)

578 To The weights (W) for the Ghana Sustainability Market Readiness Index (GSMRI) were

579 determined through a two-round Delphi process with 15 experts form academia, business, and

580 regulatory authorises.

581 The resulting weights are:

582 • W1 = 0.30 for Governance

583 • W2 = 0.25 for Risk Management

584 • W3 = 0.25 for Strategy

585 • W4 = 0.20 for Metrics and Targets

586 Governance received the highest weight (0.30), reflecting its foundational importance, while

587 Risk Management and Strategy were weighted equally (0.25 each), and Metrics and Targets

588 received 0.20. Thus, the resulting GSRMRI was calculated as follows: $GSMRI = (0.30 * G)$

589 $+ (0.25 * R) + (0.25 * S) + (0.20 * M)$

590 $GSMRI = (0.30 * 48.25) + (0.25 * 46.50) + (0.25 * 49.25) + (0.20 * 41.00)$

591 $GSMRI = 14.475 + 11.625 + 12.3125 + 8.20$

592 $GSMRI = 46.6$

25

593   Therefore, the Ghana Sustainability Market Readiness Index is 46.6%.

594

595   **4. Discussion**

596   This study examined Ghana's readiness for implementing the IFRS S1 and S2 sustainability

597   disclosure standards in public interest entities. The findings reveal varying levels of awareness

598   and practical preparedness across different sectors and readiness dimensions, offering

599   significant insights when viewed through the lens of Dynamic Capabilities Theory (DCT).

600   Our findings suggest that awareness of IFRS S1 and S2 among PIs in Ghana is reasonably

601   high, consistent with research indicating growing knowledge of sustainability reporting

602   standards in emerging and developing markets (Ikpor et al., 2022). However, the gap between

603   general awareness and specific knowledge of implementation requirements represents a critical

604   limitation highlighted by Kulik and Dobler (2023) also conceptualised by organisation sensing

605   capabilities (Teece et al. (1997). This sensing capability gap explains why organisations can

606   recognise the existence of sustainability standards but struggle to operationalise them

607   effectively. The sectoral variations in awareness with extractives, consumer goods, and food

608   and beverage sectors demonstrating higher awareness than technology and communications

609   sectors align with DCT's premise that sensing capabilities develop unevenly across

610   organisations based on their environmental exposure and stakeholder pressures. González-

611   Ramos et al. (2018) and Babangida and Kao'je (2023) attribute this pattern to environmentally

612   sensitive industries' need to develop more sophisticated environmental scanning mechanisms,

613   which DCT identifies as essential components of sensing capabilities. These industries face

614   greater regulatory scrutiny and stakeholder pressure, driving enhanced capability development

615   for identifying sustainability-related opportunities and threats. The uneven development of

26

616   sensing capabilities across sectors reflects what Eisenhardt and Martin (2000) characterise as

617   "path-dependent capability development," where organisations' historical exposure to

618   sustainability pressures shapes their current ability to recognise and interpret new reporting

619   requirements. This theoretical perspective explains why sectors with established environmental

620   management practices demonstrate superior awareness of IFRS standards as they have

621   developed more robust sensing routines through prolonged engagement with sustainability

622   issues.

623   The moderate to low readiness level for sustainability governance and oversight reveals

624   significant limitations in what Teece (2007) identifies as organisations' seizing capabilities

625   which is their ability to mobilise resources, establish governance structures, and implement

626   decision processes to capitalise on identified opportunities. The implementation gaps in

627   training, staffing, and responsibility reassignment represent fundamental barriers to developing

628   the organisational structures necessary for effective sustainability reporting. This finding

629   extends DCT by demonstrating how governance capabilities form a foundation for other

630   aspects of sustainability reporting readiness. As Helfat and Maritan (2024) theorise, capability

631   hierarchies determine how effectively organisations can develop higher-order capabilities. Our

632   study shows that weak governance foundations constrain organisations' ability to develop more

633   sophisticated sustainability reporting capabilities as indicated by Erin et al. (2022), Al-Qudah

634   and Houcine (2024) and Alshhadat (2023) supporting DCT's hierarchical conception of

635   organisational capabilities. The sectoral pattern, with food and beverage and NGOs scoring

636   high on governance readiness while finance, technology, and communications lag challenges

637   simplistic applications of DCT that assume uniform capability development within industries.

638   Instead, our findings support Eisenhardt and Martin's (2000) argument that capability

639   development is shaped by organisation-specific factors beyond industry positioning. This

640 nuance is often overlooked in sustainability reporting research that treats sectors as

641 homogeneous units (Ali et al., 2020; Atu et al., 2016).

642   The moderate levels of strategic readiness in implementing IFRS S1 and S2 reveal

643 limitations in what DCT terms integration capabilities which is the ability to incorporate new

644 knowledge into strategic decision-making processes. While organisations show progress in

645 integrating sustainability priorities into management decisions (3.12), they struggle with

646 developing climate-related transition plans (2.73). This finding extends Teece's (2007)

647 conceptualisation of strategic integration capabilities by demonstrating that integration occurs

648 unevenly across different aspects of strategy. The cross-sector analysis showing renewable

649 resources and food and beverage sectors with the highest strategic readiness, while the health

650 sector lags, supports DCT's premise that capability development is influenced by the strategic

651 relevance of sustainability to core business operations. However, our findings challenge Eccles

652 and Klimenko's (2019) assertion that strategic integration of sustainability is becoming

653 mainstream across all sectors. Instead, we find significant sectoral variations that suggest

654 capability development is more uneven and contextually dependent than previously

655 acknowledged. This strategic variation aligns with Winter's (2003) concept of capability gaps,

656 where entrenched operational routines and path dependencies inhibit certain sectors from

657 developing advanced strategic capabilities for sustainability. The health sector's lower strategic

658 readiness, despite its social mission, illustrates how organisational structures can create

659 rigidities that impede the development of new strategic capabilities, a phenomenon predicted

660 by DCT but underexplored in sustainability reporting research.

661   The below-average preparedness in addressing climate-related and sustainability risks and

662 opportunities reflects limitations in what DCT terms reconfiguring capabilities which is the

663 ability to transform business processes in response to changing environments. The preference

664   for addressing non-climate sustainability issues over climate-specific ones and pursuing

665   opportunities rather than managing risks reveals how reconfiguring capabilities develop

666   unevenly based on perceived strategic relevance and complexity (Rafi, 2022). This finding

667   extends DCT by demonstrating that reconfiguring capabilities develop along paths of least

668   resistance. Organisations prioritise capability development in areas perceived as more

669   manageable (non-climate issues) or potentially beneficial (opportunities) rather than in

670   complex or potentially costly areas (climate risk management). This pattern supports Zahra et

671   al.'s (2006) argument that capability development in resource-constrained environments

672   follows pragmatic paths based on perceived feasibility and return on investment. The sectoral

673   readiness comparison showing resource transformation and renewable energy sectors with

674   more developed risk and opportunity capabilities, while technology and communications lag,

675   both supports and challenges existing literature. It aligns with Eccles and Serafeim's (2013)

676   finding that climate exposure drives risk management maturity. However, it challenges

677   TCFD's (2022) and Demers' (2024) assumption that risk management capabilities develop

678   primarily through regulatory pressure. Our findings suggest that capability development is

679   more strongly influenced by market positioning and resource dependence than by regulatory

680   factors alone, a nuance that DCT accommodates but that is often overlooked in sustainability

681   reporting research.

682   The below-average readiness level in establishing GHG emission targets and adhering to

683   reporting frameworks reflects limitations in what DCT terms performance measurement

684   capabilities which is the ability to develop metrics, collect data, and track progress toward

685   sustainability goals. The declining trend from overall GHG targets (2.65) to Scope 3 targets

686   (2.59) illustrates how capability development becomes increasingly challenging as technical

687   complexity increases. This is consistent with earlier studies in which Bachmann et al., (2022)

688   and Nilashi et al., (2023) identified significant barriers including inadequate data collection

29

689 infrastructure, lack of standardised methodologies, and limited technical expertise (Bachmann

690 et al., 2022; Nilashi et al., 2023). The findings are also alignment with Stanny (2018) and Busch

691 et al. (2022) where they revealed document substantial complexities in value chain

692 measurements and data verification as major barriers to measuring GHG emission targets. This

693 finding extends Winter's (2003) concept of capability thresholds by demonstrating that

694 organisations develop capabilities up to the point where marginal difficulty exceeds perceived

695 marginal benefit. The challenge of developing Scope 3 measurement capabilities represents

696 such a threshold, where the technical complexity and resource requirements exceed many

697 organisations' capacity for capability development without external support. The sectoral

698 pattern showing renewable resources and food and beverage sectors with the highest metrics

699 readiness while resource transformation lags challenges Stanny's (2018) and Busch et al.'s

700 (2022) findings that resource-intensive industries generally lead in measurement capabilities.

701 This contradiction suggests that capability development is influenced by factors beyond mere

702 industry categorisation, such as competitive positioning, management orientation, and resource

703 allocation decisions, factors that DCT incorporates but that are often homogenised in sector-

704 based analyses.

705 The overall Ghana Sustainability Market Readiness Index (GSRMRI) of 46.6% indicates

706 partial progress in developing the dynamic capabilities necessary for IFRS S1 and S2

707 implementation, with significant room for improvement across all dimensions. This composite

708 measure supports DCT's premise that capability development is multi-dimensional and

709 interconnected, with strengths in one area potentially offsetting weaknesses in others. Our

710 findings extend DCT by demonstrating how organisations in resource-constrained

711 environments develop sustainability reporting capabilities through what Eisenhardt and Martin

712 (2000) term "resource bricolage", leveraging existing capabilities and adapting them to new

713 regulatory requirements. The sectoral variations in readiness across the four pillars illustrate

30

714 how organisations reconfigure existing capabilities rather than developing entirely new ones,

715 supporting DCT's emphasis on the evolutionary nature of capability development.

716   Furthermore, the finding that governance readiness forms a foundation for other capability

717 dimensions supports Helfat and Maritan's (2024) concept of capability hierarchies, where

718 lower-order capabilities enable the development of higher-order ones. This hierarchical

719 relationship explains why sectors with stronger governance structures demonstrate greater

720 overall readiness; they have established the organisational foundations necessary for

721 developing more specialised sustainability reporting capabilities. These theoretical insights

722 extend beyond Atu et al.'s (2019) and Ikpor et al.'s (2022) emphasis on institutional factors by

723 highlighting the microfoundations of capability development within organisations. While

724 recognising the importance of the institutional environment, our analysis demonstrates that

725 organisational-level factors, particularly dynamic capabilities in sensing, seizing, and

726 reconfiguring, play a decisive role in determining sustainability reporting readiness that has

727 been underexplored in previous research.

728 **5. Conclusion**

729 This study assessed Ghana's readiness for implementing IFRS S1 and S2 sustainability

730 disclosure standards across Public Interest Entities (PIEs). Our findings reveal a paradox of

731 high general awareness (82%) coupled with moderate implementation readiness, as captured

732 by Ghana's Sustainability Reporting Market Readiness Index (GSRMRI) of 46.6%. While

733 organizations demonstrate familiarity with sustainability standards, significant capability gaps

734 persist across governance (48.25%), strategy (49.25%), risk management (46.50%), and

735 metrics and targets (41.00%). Sectoral analysis indicates that renewable resources and food

736 and beverage industries lead in readiness, while technology and communications sectors lag

737 considerably.

738 The research contributes three key advances: introducing the GSRMRI as a standardized

739 assessment methodology adaptable across emerging markets, providing the first empirical

740 evaluation of IFRS S1 and S2 implementation readiness in an African context, and offering

741 sector-specific insights that challenge one-size-fits-all approaches. Through Dynamic

742 Capabilities Theory, we demonstrate that implementation readiness reflects organizations'

743 varying abilities to sense sustainability requirements, seize implementation opportunities, and

744 reconfigure operational capabilities. Our findings suggest that successful IFRS S1 and S2

745 adoption in emerging markets requires a phased approach that acknowledges institutional voids

746 while building context-appropriate capabilities. This research provides critical insights for

747 policymakers, regulators, and organizations navigating the transition to global sustainability

748 reporting standards in resource-constrained environments. The findings presented in this

749 research will enable an assessment of Ghana's preparedness for implementing IFRS S1 and S2

750 sustainability disclosure standards across all PIERs. Results indicate a mixed level of

751 awareness and preparedness in the different sectors and aspects of sustainability reporting.

752 These findings indicate that, in general, there is a relatively high level of awareness about the

753 IFRS S1 and S2 standards. However, there are marked deficiencies in perceiving the

754 preparedness to work with them. Ghana's GSMRI of 46.6% shows that much needs to be done

755 about sustainability reporting across governance, strategy, risk, and metrics and targets. Key

756 findings reveal a gap between general awareness and detailed implementation knowledge of

757 IFRS standards, particularly S2. While environmentally sensitive industries demonstrate higher

758 preparedness, overall governance readiness remains moderate to low, indicating inadequate

759 organisational structures. Organisations struggle with climate policy development and impact

760 management, especially in sectors less exposed to environmental concerns. Additionally,

761 performance is notably weak in establishing GHG emission reduction targets, particularly for

762 Scope 3 emissions measurement and reporting. In conclusion, Ghana's performance in

32

763   implementing IFRS S1 and S2 is encouraging; however, there is a significant emphasis on

764   improvement. Realising the standards mentioned above will require mutual collaboration

765   between policymakers, regulators, industry, and organisations to enhance capacity, exchange

766   information, and strengthen the infrastructure necessary for the success of sustainability

767   reporting.

768   **Policy Implications and Future Studies**

769   The findings of this research carry profound implications for multiple stakeholder groups as

770   emerging markets navigate the transition to IFRS S1 and S2 sustainability disclosure standards.

771   The observed gap between general awareness and implementation readiness necessitates a

772   fundamental reconsideration of how sustainability reporting standards are introduced and

773   supported in developing economies.

774   For policymakers and regulators, our research underscores the critical importance of

775   developing differentiated implementation strategies that acknowledge varying organizational

776   capabilities and sectoral contexts. The GSRMRI score of 46.6% suggests that immediate

777   mandatory implementation would likely result in widespread non-compliance or superficial

778   reporting that fails to achieve the standards' intended objectives. Instead, regulatory authorities

779   should consider adopting a graduated approach that begins with voluntary adoption among

780   more prepared sectors, such as renewable resources and food and beverage industries, while

781   simultaneously investing in comprehensive capacity-building programs for lagging sectors.

782   This approach allows for organic learning and knowledge transfer while providing adequate

783   time for organizations to develop the necessary infrastructure and capabilities.

784   The sectoral variations revealed in our analysis have important implications for regulatory

785   design and resource allocation. Rather than pursuing uniform implementation timelines,

786   regulators should develop sector-specific guidance and support mechanisms that address

787   unique industry challenges and leverage existing strengths. For instance, while renewable

788   resources sectors demonstrate higher readiness across all pillars, technology and

789   communications sectors require targeted interventions to develop basic sustainability

790   governance structures. This differentiated approach maximizes the likelihood of successful

791   implementation while minimizing regulatory burden on unprepared organizations.

792   Educational institutions and professional development organizations face a critical mandate to

793   bridge the knowledge gap between general awareness and technical implementation

794   competency. Our findings reveal that while 82% of respondents are aware of IFRS standards,

795   only 55.6% possess detailed implementation knowledge. This gap represents both a challenge

796   and an opportunity for accounting education programs, professional certification bodies, and

797   continuing education providers. Universities should integrate sustainability reporting into their

798   curricula, moving beyond theoretical coverage to practical application of IFRS S1 and S2

799   requirements. Professional accounting bodies should develop specialized certification

800   programs that equip practitioners with the technical skills necessary for effective

801   implementation.

802   Organizations themselves must recognize that successful IFRS S1 and S2 implementation

803   requires fundamental organizational transformation rather than mere reporting compliance.

804   The moderate readiness scores across governance (48.25%), strategy (49.25%), risk

805   management (46.50%), and metrics and targets (41.00%) indicate that most organizations need

806   substantial capability development across multiple dimensions simultaneously. This reality

807   necessitates significant investment in organizational infrastructure, including governance

808   structures, data management systems, and human capital development. Organizations should

809   prioritize building dynamic capabilities that enable continuous adaptation to evolving

810   sustainability requirements rather than pursuing static compliance approaches.

811   The international development community and multilateral organizations have a crucial role to

812   play in supporting emerging markets' transition to global sustainability standards. Our research

34

813   demonstrates that capability development requires sustained support and knowledge transfer

814   mechanisms that go beyond traditional technical assistance. Development partners should

815   consider establishing regional centres of excellence that provide ongoing support for IFRS S1

816   and S2 implementation, facilitate peer learning among organizations, and develop context-

817   appropriate implementation tools and guidance. Such initiatives could significantly accelerate

818   capability development while reducing implementation costs for individual organizations.

819   The implications extend beyond technical implementation to broader questions of sustainable

820   development and global market integration. As international capital markets increasingly

821   incorporate sustainability performance into investment decisions, emerging markets' ability to

822   effectively implement IFRS S1 and S2 will significantly influence their access to international

823   capital and economic development opportunities. Our research suggests that without deliberate

824   and sustained support for capability development, the implementation of global sustainability

825   standards could inadvertently exacerbate existing inequalities between developed and

826   emerging markets.

827   Finally, the research highlights the need for continuous monitoring and adaptive management

828   of implementation processes. The GSRMRI framework provides a tool for tracking progress

829   and identifying emerging challenges as organizations advance through their implementation

830   journeys. Regular assessment of market readiness can inform policy adjustments, resource

831   allocation decisions, and the timing of mandatory implementation requirements. This evidence-

832   based approach to policy development increases the likelihood of successful outcomes while

833   minimizing unintended consequences. These findings have vital policy implications for

834   policymakers, regulators, and organisations, particularly in Ghana and possibly in other

835   emerging markets. They suggest a need for:

836

837   1. Cross-listed equity educational campaigns aimed at narrowing the observed divorce

838   between general knowledge about IFRS S1 and S2 and specific implementation

839   knowledge.

840   2. Sector-specific interventions to address unique challenges and leverage best practices

841   from leading sectors.

842   3. Enhanced support for developing robust sustainability governance structures and

843   processes.

844   4. Capacity building in long-term climate strategy development and risk management.

845   5. Technical assistance in setting comprehensive GHG emission reduction targets,

846   particularly for Scope 3 emissions.

847   Given sectorial variation and moderate readiness levels of 46.6% for the implementation of

848   IFRS S1 and S2 sustainability disclosure standards in Ghana, it is highly recommended that

849   implementation be adopted in phases. The following timeline outlines the proposed

850   implementation process.

851   1. Voluntary adoption phase: Ghana could initiate a plan for voluntary adoption as early

852   as today. This phase would enable more prepared organisations (as identified by the

853   readiness score, such as renewable resources and alternative energy, food and beverage,

854   NGOs, etc.) to begin implementing the standards. This period would serve as a learning

855   process for other organisations and sectors, enabling them to adopt and follow best

856   practices from those already implemented.

857   2. Capacity-building period: With the start of a voluntary adoption phase in Ghana, there

858   should be an intensive capacity-building program within 2–3 years. This period would

859   endeavour to fill the existing deficits in Governance, risk management strategy, metrics,

860   and targets in all sectors.

36

861   3. Gradual mandatory implementation: In Ghana, a gradual and systematic process of

862   mandatory adoption could be initiated as soon as two to three years of voluntary IFRS

863   and IFRS implementation capacity have been established. This could commence with

864   the most compliant industries or large companies, providing other small businesses or

865   industries that are not yet prepared with sufficient time to prepare.

866   4. Complete mandatory implementation: "Following the fulfilment of the voluntary and

867   incremental implementation periods, it is feasible to incorporate full mandatory

868   implementation across all sectors within three to five years.

869   This timeline allows executive champions and other individuals to continuously advance

870   implementation while giving organisations adequate time and resources to build the needed

871   capabilities. It also offers the possibility of extending the timeline based on the results obtained

872   during the voluntary adoption and capacity-building processes. A frequent GSMRI assessment

873   could indicate readiness improvements and allow for decisions about the mandated

874   implementation rate.

875   **Methodological Considerations and Limitations**

876   The quantitative survey approach enabled us to collect standardised data across multiple

877   sectors; however, we acknowledge some methodological limitations. First, self-reported data

878   may be subject to social desirability bias, where respondents might overstate their

879   organisation's sustainability readiness. To mitigate this, the questionnaire emphasised factual

880   preparedness indicators rather than evaluative judgments. Also, the questionnaire underwent a

881   pilot test with 50 organisations to achieve content validity through feedback implementation.

882   The research collected data from senior executives and professionals who possessed direct

883   knowledge about sustainability practices in their organisations. The survey guaranteed

884   complete anonymity to respondents which created an environment for honest feedback.

885   Second, respondent characteristics may influence data quality. Most respondents held financial

886   roles (77.2% combined for Accountants, Internal Auditors, and Chief Finance Officers), with

887   dedicated Sustainability Managers comprising only 1.2%. This distribution, while reflecting

888   organisational realities in Ghana, where sustainability is often managed through finance

889   departments, may introduce positional bias in how readiness is perceived and reported. Our

890   focus on Ghana was deliberate, as it represents an instructive case for emerging markets

891   sustainability reporting readiness. Ghana has consistently adopted international financial

892   reporting standards, maintains a diverse industrial landscape with varying sustainability

893   impacts, and features a regulatory environment actively considering enhanced sustainability

894   disclosure requirements. These characteristics make it an appropriate context for examining

895   IFRS S1 and S2 implementation challenges likely to be encountered across similar emerging

896   economies.

897   The sample distribution across sectors (Table 1) shows some concentration in services (43.6%)

898   and financials (22.4%), which aligns with Ghana's economic structure but may limit

899   generalizability to economies with different sectoral compositions. Our stratified random

900   sampling approach ensured proportional representation across the 11 SASB-classified sectors,

901   providing sufficient statistical power (>0.90 at $\alpha=0.05$) for our analyses while minimising

902   sectoral variability.

Future Research

904   The implementation of IFRS S1 and S2 presents complex challenges that warrant further

905   investigation as organisations transition to these new standards. Future studies can

906   comprehensively explore the barriers and challenges in the implementation of the IFRS S1 and

907   S2 sustainability disclosure standards. Additionally, longitudinal studies can be used to explore

908   the progress of the IFRS S1 and S2 implementation with a focus on how capabilities evolve

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909 across the four pillars. Researchers can also carry out comparative studies across different

910 emerging markets, which would enhance their understanding of country-specific

911 implementation challenges. Finally, future studies can explore technology adoption barriers

912 and digital transformation needs for effective sustainability reporting and assessment of

913 capacity-building programs' effectiveness in improving organisational readiness.

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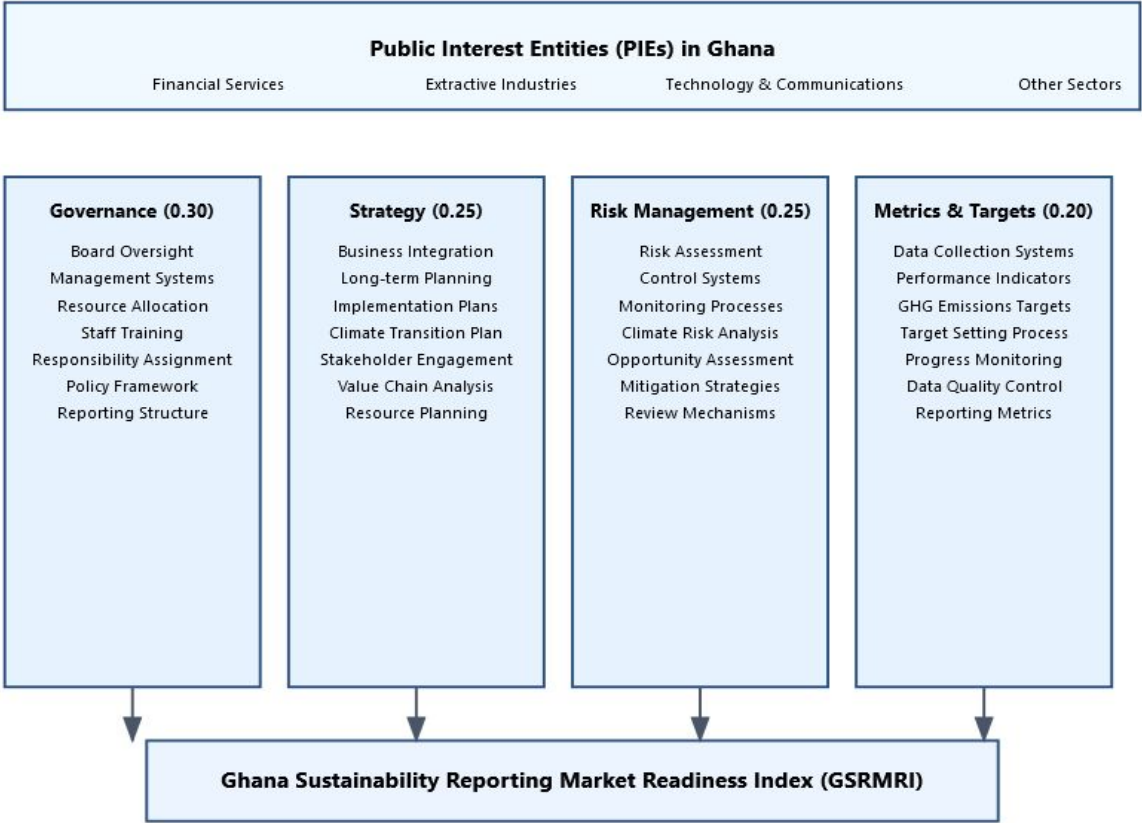
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Figure 1: Conceptual Framework for Ghana Sustainability Reporting Market Readiness Index (GSRMRI)
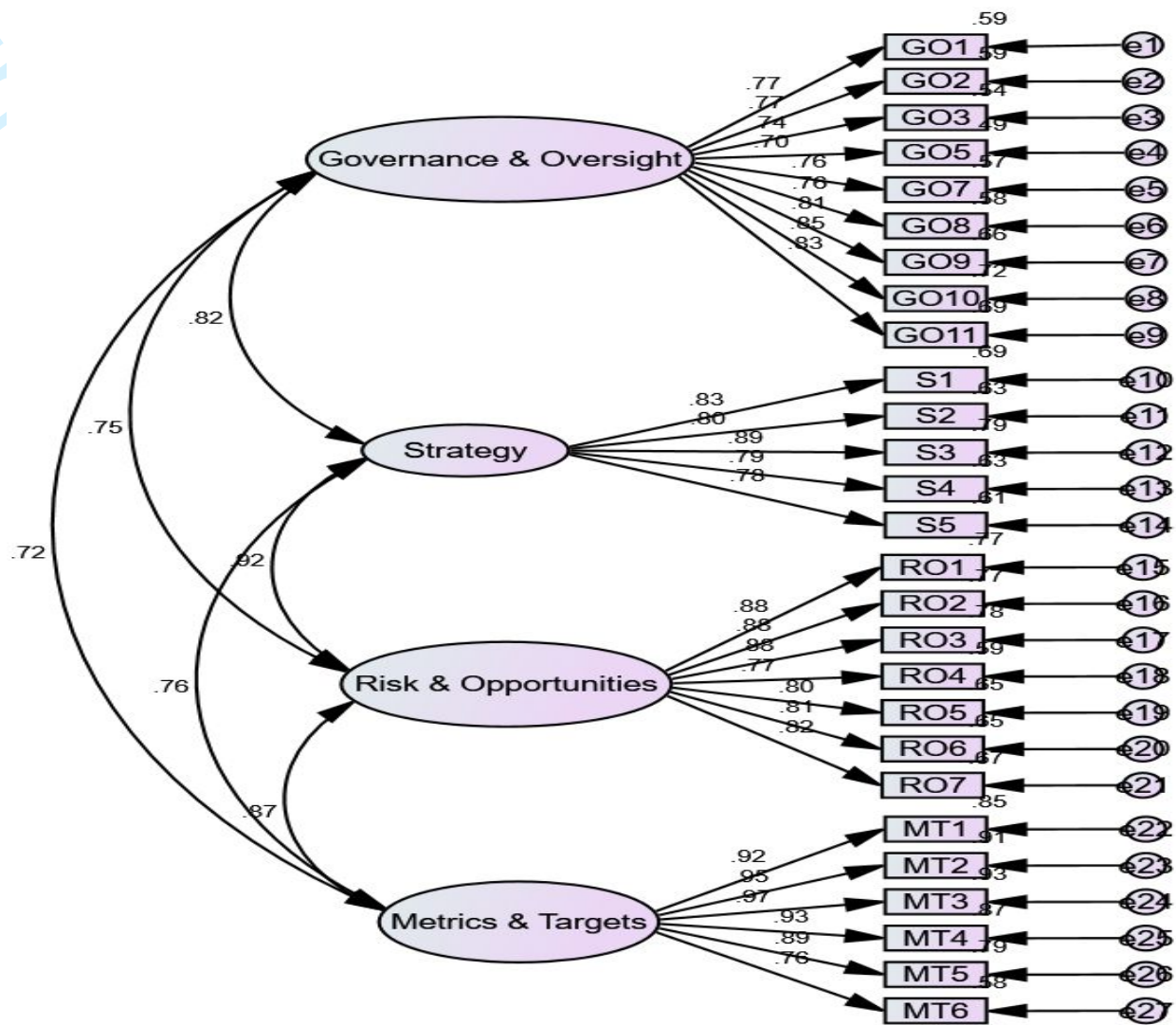
Source: Authors' own work

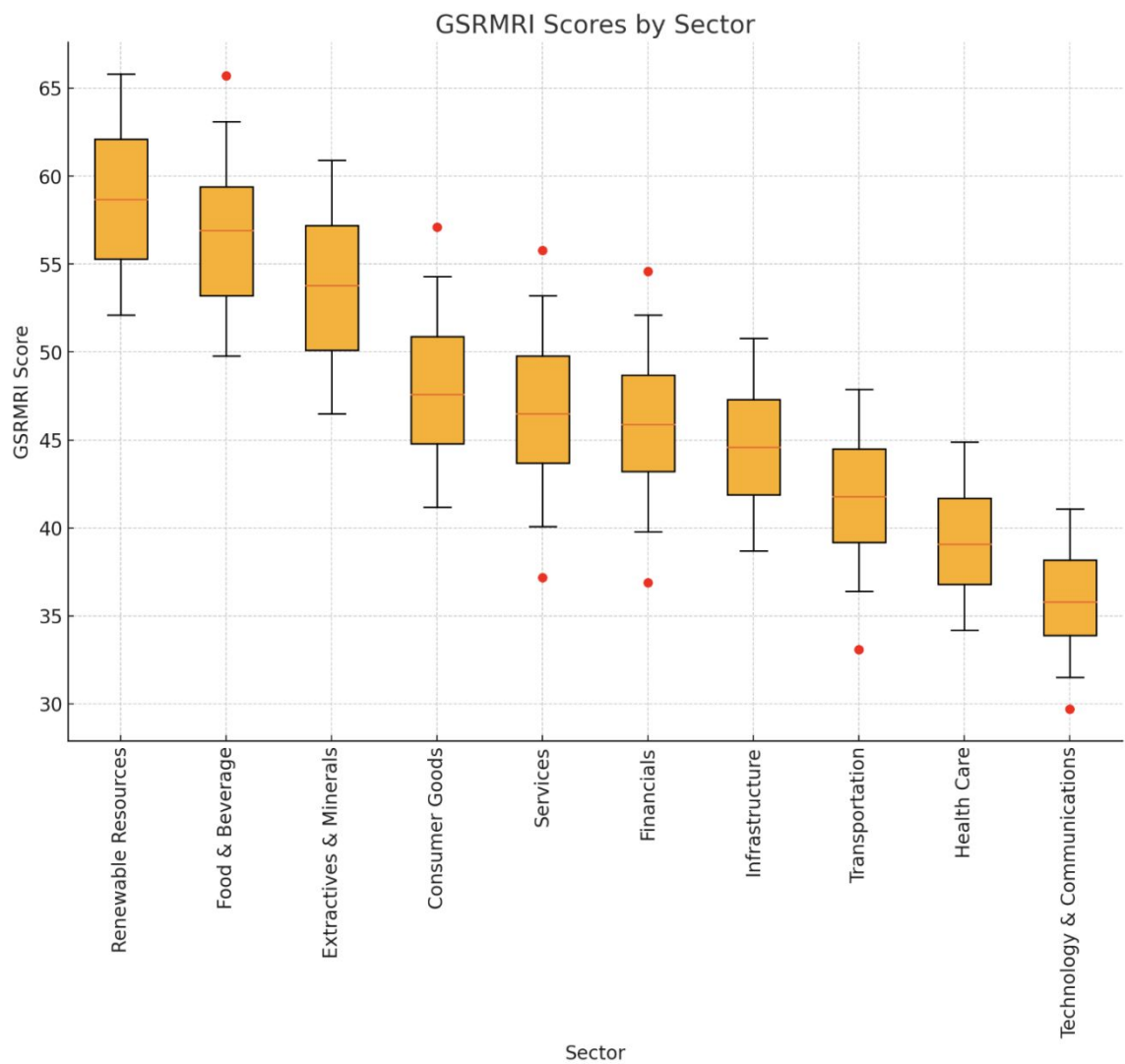**Figure 2: CFA Model Path Diagram**

Figure 3: GSRMRI Scores by Sector

Source: Authors' own work

Table 1: Distribution of respondents by sector and organizational characteristics

Variables	Category	Frequency	Percentage
Sector Distribution	Consumer Goods	8	3.3
	Extractives and Minerals Proc.	11	4.6
	Financial	54	22.4
	Food and Beverage	13	5.4
	Health care	9	3.7
	Infrastructure	13	5.4
	Renewable Resources and Alt Energy	5	2.1
	Resource Transformation	1	0.4
	Services	105	43.6
	Technology and Communications	4	1.7
	Transportation	8	3.3
	Others (NGO)	10	4.1
Organizational size	Less than or equal to 50	67	27.8
	51 - 100	42	17.4
	101-250	34	14.1
	251 -500	25	10.4
	501- 1000	31	12.9

Page 48 of 59

Position of Respondents	Chief Finance Officer	39	16.2
	Accountant	107	44.4
	Sustainability Manager	3	1.2
	Internal Auditor	40	16.6

Source: Authors' own work

Table 2: Descriptive statistics and frequency analysis of IFRS SI and S2 awareness constructs

Constructs	N	Min	Max	Mean	Std. Deviation	Frequency Analysis		
						Agree	Disagree	Neutral
Know about new IFRS S1 and S2 standards	241	1	5	4.32	0.966	215 (89.2%)	15 (6.2%)	11 (4.6%)
Understand what IFRS S1 requires companies to report	241	1	5	4.19	0.92	207 (85.9%)	11 (4.5%)	23 (9.5%)
Know IFRS S2 focuses on climate-related reporting	241	1	5	4.12	0.85	205 (85.1%)	10 (4.2%)	26 (10.7%)
Aware these standards will be required in Ghana soon	241	1	5	4.05	0.827	199 (82.5%)	11 (4.6%)	31 (12.9%)
Can list specific IFRS S2 reporting requirements	241	1	5	3.53	0.899	134 (55.6%)	26 (10.8%)	81 (33.6%)
Know where to find information about these standards	241	1	5	3.63	0.927	159 (65.9%)	29 (12.1%)	53 (22.0%)

Source: Authors' own work

Table 3: IFRS Awareness Percentage Mean Scores by Sector

Sector	Percentage Mean Score
Consumer Goods	81.25%
Extractives and Minerals Processing	82.42%
Food and Beverage	81.79%
Renewable Resources and Alternative Energy	82.00%
Resource Transformation	80.00%
Services	81.52%
Transportation	82.08%
Financial	75.37%
Health Care	77.04%
Infrastructure	77.45%
Technology and Communications	69.17%
NGO and Other	78.00%

Source: Authors' own work

Table 4: Reliability and Validity

Construct	Item	Loadings	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Governance and Oversight	GO1	0.770	0.932	0.932	0.604
	GO2	0.766			
	GO3	0.736			
	GO5	0.703			
	GO7	0.755			
	GO8	0.759			
	GO9	0.814			
	GO10	0.850			
	GO11	0.830			
Strategy	S1	0.831	0.909	0.910	0.671
	S2	0.797			
	S3	0.890			
	S4	0.793			
	S5	0.780			
Risk and Opportunities	RO1	0.878	0.941	0.941	0.696
	RO2	0.878			

	RO3	0.881			
	RO4	0.765			
	RO5	0.804			
	RO6	0.806			
	RO7	0.821			
Metrics and Targets	MT1	0.922	0.964	0.965	0.821
	MT2	0.954			
	MT3	0.965			
	MT4	0.931			
	MT5	0.887			
	MT6	0.760			

Table 5: Discriminant Validity and Inter-Item correlation

Construct	1	2	3	4
Governance and Oversight	0.777			
Strategy	0.623***	0.819		
Risk and Opportunities	0.748***	0.716***	0.834	
Metrics and Targets	0.722***	0.760***	0.765***	0.906

Table 6: Model fitness indices

	Estimated model	Threshold
CMIN/DF	2.715	< 3
NFI	0.901	> 0.9
IFI	0.935	> 0.9
TLI	0.924	> 0.9
CFI	0.935	> 0.9
SRMR	0.027	< 0.08
RMSEA	0.068	< 0.08

Table 7: Sector-level readiness level across the four pillars

Sector	Governance and oversight	Strategy	Risks and Opportunities	Metrics and Target
Renewable Resources and Alternative Energy	55.50%	62.00%	61.43%	57.50%
Food and Beverage	58.47%	60.70%	53.85%	53.85%
Other (NGO)	58.62%	57.00%	52.86%	47.92%
Consumer Goods	47.54%	52.50%	45.98%	38.54%
Extractives and Minerals Processing	57.01%	51.36%	55.52%	46.97%
Resource Transformation	45.61%	50.00%	64.29%	25.00%
Services	50.53%	49.10%	45.61%	39.37%
Financials	50.40%	47.13%	44.91%	39.89%
Infrastructure	45.82%	46.92%	46.43%	43.59%
Transportation	40.17%	46.25%	41.97%	32.81%
Health Care	38.27%	37.80%	40.48%	36.58%
Technology and Communications	35.94%	36.25%	33.93%	32.29%

Source: Authors' own work

Appendix 1: IFRS Sustainability Disclosure Standard Implementation Scale

IFRS SUSTAINABILITY DISCLOSURE STANDARD IMPLEMENTATION

This section of the questionnaire seeks your candid opinions about your organization's readiness for the IFRS S1 and S2 implementation. Kindly choose from the options (**Strongly Disagree-SD, Disagree –D, Neutral-N, Agree-A and Strongly Agree -SA)** to express your candid opinions on the items in this section.

Governance & Oversight		**SD**	**D**	**N**	**A**	**SA**
GO1	The board and senior management have clearly defined oversight roles, responsibilities and terms of reference for sustainability issues	SD	D	N	A	SA
GO2	Regular processes exist for the board and its committees to be appraised about latest sustainability risks and performance	SD	D	N	A	SA
GO3	Sustainability KPIs are incorporated into remuneration policies and they apply to senior executives and business unit managers	SD	D	N	A	SA
GO4	Adequate competencies and skill sets needed to govern sustainability management cascades down from the board to operating levels	SD	D	N	A	SA
GO5	Sustainability matters routinely get raised in key oversight forums like audit/risk committee meetings	SD	D	N	A	SA
GO6	In our organisation, major decisions on where to spend money take into account the positive and negative effects on the environment.	SD	D	N	A	SA

GO7	There are formal procedures in place for management to regularly report on and discuss key sustainability metrics, goals progress, and risk exposures with the board in our organisation.	SD	D	N	A	SA
GO8	Adequate staff with skills in sustainability reporting have been devoted for IFRS adoption	SD	D	N	A	SA
GO9	Training programs have covered expected reporting enhancements from evolving to IFRS standards	SD	D	N	A	SA
GO10	In our organisation, responsibilities have been reassigned appropriately to handle expanded reporting volumes due to the implementation of IFRS S1 and IFRS S2 sustainability disclosure standards.	SD	D	N	A	SA
GO11	Our organisation has clearly assigned responsibility for sustainability oversight to specific management roles or committees.	SD	D	N	A	SA
	strategy					
S1	Our organisation now assesses potential environmental risk over short, medium, and long timeframes when planning.	SD	D	N	A	SA
S2	When deciding budgets, our organisation considers how moving towards a greener operations/sustainability could impact our resources.	SD	D	N	A	SA
S3	Our organisation uses formal processes to determine sustainability issues most relevant for the business success	SD	D	N	A	SA
S4	Assessing sustainability related opportunities guides our management priorities and decision making in the organisation.	SD	D	N	A	SA

S5	Our organisation has a well-developed climate-related transition plan.	SD	D	N	A	SA
	Risk & Opportunities					
RO1	Our organisation thoroughly assesses, monitors, and manages climate-related physical risks such as climate change, drought, water availability etc.	SD	D	N	A	SA
RO2	Our organisation rigorously assesses, monitors, and manages climate-related transition risks e.g. fossil fuel to renewable energy.	SD	D	N	A	SA
RO3	Our organisation actively assesses, monitors, and exploits climate-related opportunities	SD	D	N	A	SA
RO4	Our organisation actively assesses, monitors, and addresses sustainability-related risks not related to climate issues.	SD	D	N	A	SA
RO5	Our organisation actively assesses, monitors, and exploits sustainability-related opportunities not related to climate issues.	SD	D	N	A	SA
	Metrics and Targets					
MT1	Our organisation has set clear greenhouse gas (GHG) emission reduction targets.	SD	D	N	A	SA
MT2	Our organisation has set a clear greenhouse gas reduction target for scope 1 emissions, which *are direct greenhouse gas emissions that result from sources that are owned or controlled by our organisation.*	SD	D	N	A	SA
MT3	Our organisation has set a clear greenhouse gas reduction target for scope 2 emissions, which are *indirect greenhouse gas*	SD	D	N	A	SA

	emissions associated with the purchase of electricity, heat, steam, or cooling.					
MT4	Our organisation has set a clear greenhouse gas reduction target for scope 3 emissions, which are *other indirect emissions that occur in the value chain of the reporting entity, including both upstream and downstream activities such as supply chain emissions, business travel, employee commuting, product use, and end-of-life treatment of sold products*.	SD	D	N	A	SA
MT5	Our organisation's current sustainability reporting provide data to reliably track sustainability KPIs required by IFRS S1 and IFRS S2.	SD	D	N	A	SA
MT6	Our organisation has adequate controls/automation to meet IFRS S1 and IFRS S2 data quality requirements.	SD	D	N	A	SA
RISK (RO12)	Our organisation has comprehensively assessed the vulnerability of our assets and business activities to climate-related transition risks.	SD	D	N	A	SA
RISK (RO13)	Our organisation has assessed the vulnerability of our assets and business activities to climate-related physical risks comprehensively.	SD	D	N	A	SA