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Investigating the Level of Awareness of Indian Executives about ESG and the ESG Reporting Software

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Abstract:

The paper investigated the awareness among Indian executives about the importance of the metrics of the three pillars of ESG and investigated the opinion of the respondents on the features and characteristics of the ESG software. The data revealed that the respondents were aware of the concept of ESG and the present ESG reporting system at their organizations. The category map reveals that Easy use, One-Stop Solutions, Integration with existing software, and, Training and supportive Manual are the features/characteristics of ESG Software, that fall under the "Core quadrant" of the Category map.

Keywords: *Environment Social and Governance; ESG; ESG Initiatives; Environmental Sustainability; Sustainability Development Practices; ESG Reporting Software; ESG Practices*

JEL Classification: M 15, M 14, O 33

Introduction:

ESG (Environmental, Social, and Governance) issues affect every firm. With the current COVID-19 epidemic, ESG has become more important to investors, legislators, and other key stakeholders as a means of protecting companies from potential hazards. According to PricewaterhouseCoopers (2020a), there is no unified structure for ESG reporting. The ESG concept, evaluation standards, and comprehensive reporting tools must be properly understood in order to assess the company's non-financial performance within the future-focused approach (PricewaterhouseCoopers, 2020b). In order to make business responsibility more acceptable, the Ministry of Corporate Affairs (MCA) released the Voluntary Guidelines on Corporate Social Responsibility in 2009, which marked the beginning of ESG reporting in India. After the introduction of Business Responsibility Reporting (BRR), Corporate Social Responsibility (CSR), and other reporting standards, they have advanced significantly.

The reporting demands proper documentation, mapping the activities to the evaluation criteria, evidence mapping and proper explanation with action plan. This labour intensive and knowledge driven process may be more time-effective and organized by a proper information system or an integrated software solution. While adopting such software, the designated users examine the software, which suit their requirements. With the help of the category analysis, the present paper investigates the opinion of the ESG practitioners, in assigning the importance to the features and characteristics of such software.

A glimpse into ESG concepts

The general understanding from the literature review is that ESG generally encompasses a wide range of Environmental, Social and Governance considerations that can influence a company's ability to execute its business strategy and create value over the long term. While ESG factors may be non-financial in nature, the way a company manages his ESG factors definitely has a measurable financial impact (Nasdaq, Inc., 2019).

The state of ESG can be traced back to the Brundtland Report, formally known as the United Nations (UN) Global Commission on Environment and Development Report or Our Common Future, published 1987 (Brundtland, 1987). The report defines sustainability as "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Ultimately, sustainable development is not a constant state of harmony, but a process of change in which the development of resources, directions of investment, directions of technological development, and changes in institutions are adapted to the future. (Elkington, 1999) introduced the concept of the triple bottom line in his work. Finance, Environment, Society [Profit, Planet, People] are essential parameters for a company's performance. Moreover, the investment market has responded strongly to this, introducing “responsible investors” into the market (Beergi, 2022). In 1998, Robert Levering and Milton Moskowitz analyzed the Fortune 100 Best Places to Work list and showed the financial impact of ESG factors(Ballou et al., 2003).

However, the term “ESG” was first widely explained and endorsed in 2004 by a report entitled “Who Cares Wins” by 20 prominent financial institutions at the invitation of the United Nations. The report provided key recommendations for the financial industry to successfully integrate environmental, social and governance issues into analysis, asset management and securities brokerage operations (United Nations & Swiss Federal Department of Foreign Affairs, 2004). These developments prompted the formation of an informal group of financial leaders, urban advocates, and environmental NGOs known as the Virtuous Circle. His commission explored the relationship between environmental and social standards and financial performance (Gangi & D’Angelo, 2016).

(Edmans, 2011) published the "100 Best Companies to Work For" and from 1984 to 2009 he found that these responsible operating companies outperformed their peers in price-to-earnings ratios and outperformed analyst expectations in earnings. reported to have surpassed Another notable work of his in this series is Douglas Cogan (Cogan, 2008), Michael L. Barnett and Robert Salomon (Barnett & Salomon, 2006) and Ruth V. Aguilera et al. (Aguilera et al., 2006).

Literature review exercises reveal the importance and research in the fields of environmental, social and governance (ESG). A Google Scholar search for ESG by title presence returns 10,100 results and applying the filter for publications from 2020 to 2022 shows 6,780 results. 2,150 results are for the 2022 publication, which is very promising. ESG in its current form is at the forefront of non-financial performance, not the solution (Frigo et al., 2022). However, the authors found that various studies require more clarity and discussion on how to consider intangible factors related to sustainable and ethical investment. Additionally, researchers and analysts have used various terms such as ‘green’, ‘responsible investment’, ‘socially responsible investment’ (SRI), ‘non-financial factors’, ‘long-term investment’ (LHI), and ‘business enhancement’. defines a word. , “Corporate Health”, etc.

The term ESG has been widely used since 2015 with the 2030 Agenda for Sustainable Development, commonly known as the Paris Agreement, adopted by the United Nations Member States. This is perhaps the most famous and well-known agreement created by the United Nations to achieve its sustainability goals. The Paris Agreement was signed and agreed by 195 countries in 2015 (United Nations, 2022). The report calls for the sustainable integration of economic resources beyond natural resources to achieve a holistic and balanced approach to environmental, social and governance issues. A comprehensive approach to sustainability led UN Member States to publish their Sustainable Development Agenda in 2015. It includes 17 Sustainable Development Goals (SDGs) and 169 targets to be achieved by 2030(Wikipedia, 2022).

A key tool for achieving the Sustainable Development Goals (SDGs) is the introduction of regulatory requirements for environmental (E), social (S) and governance (G) corporate information, known as ESG criteria(Investopeida, 2022). ESG criteria form a report that shows how sustainable a company is. ESG reports clearly demonstrate a company’s sustainability and attract investment and interest in companies with solid sustainability prospects. Additionally, investors and stakeholders can gain insight into non-financial information about the company. ESG has become essential in corporate society as a concept for building a sustainable corporate organization that emphasizes profitability, rather than just pursuing profit from corporate activities.

Therefore, it is necessary to establish a proper mindset based on ethical and value-based thinking among business managers and professional managers involved in business activities. With this in mind, ESG’s key tenants formulate a mission, vision, operating framework, organizational structure and business decisions to operate their organizations effectively and efficiently. ESG principles can help organizations adopt a more balanced, stakeholder-centric approach to achieve organizational sustainability and increased brand equity. Moreover, you can achieve business growth that can withstand the test of time and fluctuations in an uncertain business environment.

A literature review helped the author to understand the need to explore Indian management's understanding of his ESG reporting initiative in each company. This gap has been clearly highlighted in the literature study (Chaudhary, 2022), (Dhamne & Modak, 2021), (Narayanan & Sirigauri, 2020) and, (Sood et al., 2022).

The three pillars of the ESG is better understood by the NASDAQ ESG Reporting Guide, based on the recommendations of Barnett and Solomon(2006) and Aguilera et al (2006). This selection provides a comprehensive and consistent description of each key figure in the ESG report and helps explain the assessment key figures.

The three Pillars of ESG

The authors adapted Investopedia's Description of ESG Factors (2022) to understand and present the concepts of this study. ESG is a defined framework for aligning an organization's vision, mission and strategy with its processes and performance, environmental, social and governance in terms of identifying, assessing and managing sustainability-related risks. Each factor was analyzed based on specific studies during the literature review and presented below.

- ***Environmental factors:*** This element focuses on the protection of natural resources and eco-friendly efforts. This element addresses climate change, greenhouse gas emissions, biodiversity loss, deforestation, pollution, energy efficiency and water management, and other aspects of natural resource conservation (S&P Global, 2022a).
- ***Social factors:*** The most important aspects considered in this element are people, relationships and accountability to stakeholders. Measures are taken to support organizational gender and diversity, equity, inclusion, improved customer experience, employee engagement, and socially inclusive efforts (Fitzpatrick et al., 2020).
- ***Governance factors:*** This factor takes into account past and current practices of running an organization and improving the business environment for a better place to work. This factor considers board composition, management structure, cybersecurity practices, remuneration, anti-corruption, gender equality and balance, and other best practices (S&P Global, 2022b).

ESG reporting software

In India, many companies are following BRR (Business Responsibility Reporting) and CSR (Corporate Social Responsibility) reporting standards or guidelines for ESG reporting compliance. Corporate Responsibility and Sustainability Report (BRSR) produced by SEBI (led by MCA) in May 2020, due to lack of technology and lack of defined standards, BRSR report will be applicable to 1000 largest listed companies by March 2021 - needs research and discussion (Dhamne & Modak, 2021), (Sood et al., 2022), (Narayanan & Sirigauri, 2020). However, there is a need for thorough research on employee perceptions and opinions on the process of such reporting, since employees are key stakeholders in the implementation of the ESG practices. In this regard, a ESG software helps companies manage their environmental, social, and governance (ESG) initiatives in a more organized manner and more time-effective way. ESG software can automate data collection, manage reporting frameworks, and provide insights into ESG performance. ESG software can be used by companies of all sizes to improve their ESG performance. Some of the benefits of using ESG software include:

- Improved data collection and management: ESG software can help companies collect data from a variety of sources, including internal systems, external data providers, and surveys. This data can then be used to track ESG performance and identify areas for improvement.
- Automated reporting: ESG software can automate the reporting process, freeing up employees to focus on other tasks. This can help companies save time and money, and it can also help ensure that reports are accurate and up-to-date.
- Insights into ESG performance: ESG software can provide insights into ESG performance, such as identifying areas where a company is doing well and areas where it could improve. This information can be used to make decisions about ESG initiatives and to improve ESG performance over time.

The authors have identified 16 available software(s) which support the ESG Reporting. The software were identified based on the adherence to the standards, implementation, age of the software, ratings, number of reviews, and the quality based on the provided description of the software. The list of software(s) identified is presented as *Annexure A*. Companies needs to choose an ESG software, keeping certain features and characteristics of such software in mind, which would meet the company's requirement effectively.

Objective of the study:

The objectives of the paper are:

- To investigate whether the respondents are aware of the importance of the various metrics of each of the three pillars of ESG, i.e., environmental, social, and governance, for ESG reporting of the respective companies.
- To investigate the opinion of the respondents on the features and characteristics of the ESG software.

Methodology

To attain the first objective, NASDAQ ESG Reporting Guide 2.0 has been chosen, in which 10 metrics for each ESG parameters have been included (Figure 1).

Figure 1
NASDAQ ESG Reporting Guide – Metrics

Nasdaq ESG Reporting Guide – Metrics		
Environmental	**Social**	**Corporate Governance**
E1. GHG Emissions	S1. CEO Pay Ratio	G1. Board Diversity
E2. Emissions Intensity	S2. Gender Pay Ratio	G2. Board Independence
E3. Energy Usage	S3. Employee Turnover	G3. Incentivized Pay
E4. Energy Intensity	S4. Gender Diversity	G4. Collective Bargaining
E5. Energy Mix	S5. Temporary Worker Ratio	G5. Supplier Code of Conduct
E6. Water Usage	S6. None-discrimination	G6. Ethics and Anti-corruption
E7. Environmental operations	S7. Injury Rate	G7. Data Privacy
E8. Climate Oversight/Board	S8. Global Health and Safety	G8. Publishes Sustainability Report
E9. Climate Oversight / Management	S9. Child and Forced Labor	G9. Disclosure Practices
E10. Climate Risk Mitigation	S10. Human Rights	G10. External Assurance

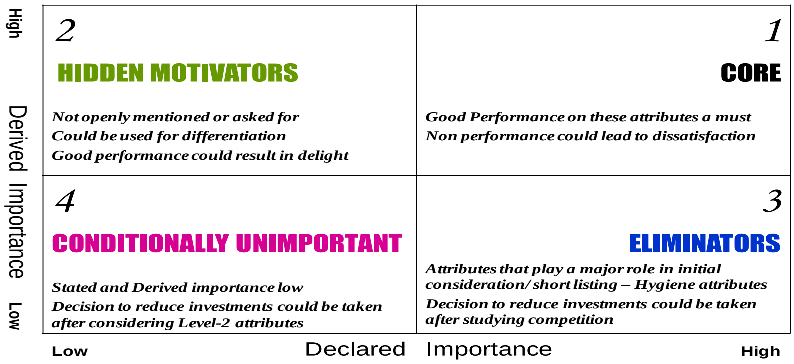
Source: Nasdaq, Inc. (2019). ESG Reporting Guide 2.0—A Support Resource for Companies

In order to meet the first objective, a questionnaire was prepared with 30 multiple choice questions, 10 addressing specific metrics under 3 ESG pillars (environment, social and corporate governance) mentioned in the Nasdaq, Inc. (2019) ESG Reporting Guide 2.0. The questionnaire used a 5-point Likert scale for each item (Very important = 5, Important = 4, Moderately Important = 3, Slightly Important = 2, and, Not Important = 1). The questionnaire has the required overall consistency level (Cronbach alpha = .903), and each pillar with ten metrics had the required consistency (for pillar I, Cronbach alpha = .795; for pillar II, Cronbach alpha = .851; for pillar III, Cronbach alpha = .870). The questionnaire also included question about the respondents' opinion about the significance of the features and charateeristics of the ESG Software, which has been or to be adopted by the respective company. The questionnaire was sent to 157 executives, responsible for ESG practices and reporting, from Bangalore, Mysore, Pune, Kolkata, and Delhi (as a google form and hard copy), randomly selected from the database available from personal and social media sources. Respondents were asked to indicate their perception of the importance of each metric (a total of 30 metrics for a total of 3 ESG pillars) for their respective company's ESG reporting.

In regard to the second objective, Importance-Performance Analysis (IPA), or quadrant analysis (Martilla and James, 1977) framework (Figure 2) has been chosen to investigate the respondents' opinion, related to selection of ESG-software. Research evidences prove the benefits of IPA, in the context of customer service, marketing and strategies for developing and evaluating computing information systems, and, better allocation of organizational resources and HR strategies (Martilla & James, 1977; Crompton & Duray, 1985; Sampson & Showalter, 1999; Slack, 1994), Skok et al., 2001, Dandridge & Levenburg, 2000; Graf et al., 1992). This framework is based on the two dimensions of attribute importance that define categories, such as, *declared importance* and *derived importance,* which help to understand the customer expectation and satisfaction. Declared Importance or mentioned Importance, is attached to attributes by experts in response to direct questions about importance (identified by number/rating/score/percentage). Declared importance is itself independent and may or may not influence the final judgment or evaluation of a trademark. Derived Importance is derived from the collective opinion of practitioners. It is derived from the categorical attributes and related to the context. Based on the derived and declared importance, four quadrants are proposed: core, hidden, eliminator, and conditionally unimportant . The core region contains functions declared and inferred to be most important. Hidden motives include features commonly inferred but not considered important. Eliminators contain features with low derived features but high declared importance. Conditionally immaterial functionality includes functionality that is neither declared nor derived.

Data from the detailed assessment was used to present the ESG software requirements of Indian companies in the form of a "category map", to attain the second objective.

Figure 2:
Explanation of Quadrants of Importance-Performance Analysis



Source: Authors' analysis

Sample of the study

The sample for the study was the executives from Bangalore, Mysore, Pune, Kolkata, and Delhi. The questionnaire was sent as a google form and hard copy to 157 executives. The sample was randomly selected from the database available to the authors from personal and social media sources. Respondents were asked to indicate their perception of the importance of each metric (a total of 30 metrics for a total of 3 ESG pillars) for the respective company's ESG reporting. Convenient sampling was used for the study, keeping in mind the timeline for conducting the research. It was, however, aimed that, based on the present study findings, the authors would conduct the next level of study. Out of 63 respondents, 21 were female, and 42 were male. Seven were between 26 to 30 years, 14 were between 31 to 35 years, four were between 36 to 40 years, 14 were between 41 to 45 years, and 24 were between 46 years and above; 3 respondents had total work experience of 0 to 5 years, 14 had 6 to 10 years, 8 had 11 to 15 years, 7 had 16 to 20 years, 11 had 21 to 25 years, 8 had 26 to 30 years, and 12 had 30 years and above. Sixteen respondents worked in manufacturing, 4 in IT, 11 in Construction Engineering and Real Estate Management & Development, 12 in Education, 8 in Business Consultancy, 6 in Telecommunication, and 6 in Banking, Financial Services, Insurance & Capital markets.

Data analysis

To attain the first objective, the mean scores for each metric, assigned by the respondents were computed (Table 1). The mean score for all the metrics was more than 3 (on a scale of 1 to 5). Therefore, respondents agreed that all the metrics were important (more or less) in the context of ESG reporting. This supports the existing literature, where it is evident that globally, ESG has been recognized as a significant ingredient for organizational sustainability. Water usage (E6 metrics) and Global Health and Safety (S8 metrics) were assigned the highest mean score by the respondents, i.e., these two metrics were perceived to be the most critical metrics for the respondents' respective company ESG reporting. In contrast, Board Independence (G2 metrics) were assigned the least mean score by the respondents, i.e., these metrics were perceived to be the least important metrics for the respondents' respective company ESG reporting.

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Table 1:
Descriptive statistics presenting the respondent's perception of metrics and the mean scores for each metrics

Metrics	Mean	Standard Deviation	Kurtosis	Skewness
Pillar I - Environment Metrics [E1. GHG Emissions]	4.2540	0.9327	1.0255	-1.1523
Pillar I - Environment Metrics [E2. Emissions Intensity]	3.9365	1.1198	-0.3311	-0.8681
Pillar I - Environment Metrics [E3. Energy Usage]	4.5397	0.7793	5.9190	-2.1423
Pillar I - Environment Metrics [E4. Energy Intensity]	4.3333	0.8424	3.1525	-1.5418
Pillar I - Environment Metrics [E5. Energy Mix]	4.4127	0.6632	-0.5396	-0.6962
Pillar I - Environment Metrics [E6. Water Usage]	4.5556	0.8187	0.9434	-1.5501
Pillar I - Environment Metrics [E7. Environmental operations]	4.0476	0.9057	-1.4538	-0.2303
Pillar I - Environment Metrics [E8. Climate Oversight/Board]	4.0000	0.8231	1.2632	-0.7170
Pillar I - Environment Metrics [E9. Climate Oversight / Management]	3.7778	0.9579	-0.7124	0.0117
Pillar I - Environment Metrics [E10. Climate Risk Mitigation]	3.5238	1.2682	-1.3298	-0.3001
Pillar II - Social Metrics [S1. CEO Pay Ratio]	3.8571	1.2029	0.1448	-0.8648
Pillar II - Social Metrics [S2. Gender Pay Ratio]	4.1429	1.2554	1.2856	-1.4907
Pillar II - Social Metrics [S3. Employee Turnover]	4.2222	0.9409	2.4929	-1.4255
Pillar II - Social Metrics [S4. Gender Diversity]	4.1429	1.1894	-0.1797	-1.1164
Pillar II - Social Metrics [S5. Temporary Worker Ratio]	4.0635	1.0606	0.9840	-1.2188
Pillar II - Social Metrics [S6. None-discrimination]	4.2698	1.0193	1.9945	-1.5162
Pillar II - Social Metrics [S7. Injury Rate]	4.1905	1.0904	1.7156	-1.4720
Pillar II - Social Metrics [S8. Global Health and Safety]	4.5556	0.9294	8.4797	-2.8439
Pillar II - Social Metrics [S9. Child and Forced Labor]	3.6349	1.5059	-1.3129	-0.5460
Pillar II - Social Metrics [S10. Human Rights]	4.3333	1.0925	3.3434	-1.9333
Pillar III - Governance Metrics [G1. Board Diversity]	3.6984	1.5201	-0.5879	-0.9752
Pillar III - Governance Metrics [G2. Board Independence]	3.3175	1.7304	-1.5869	-0.4913
Pillar III - Governance Metrics [G3. Incentivized Pay]	3.8730	1.2762	-0.3063	-0.8126
Pillar III - Governance Metrics [G4. Collective Bargaining]	4.0159	1.1143	0.8500	-1.1879
Pillar III - Governance Metrics [G5. Supplier Code of Conduct]	4.2381	0.8746	-1.5278	-0.4912
Pillar III - Governance Metrics [G6. Ethics and Anticorruption]	4.5397	0.9302	1.7896	-1.7955
Pillar III - Governance Metrics [G7. Data Privacy]	4.5238	0.8587	2.7854	-1.8915
Pillar III - Governance Metrics [G8. Publishes Sustainability Report]	4.1905	0.9308	4.6531	-1.8825
Pillar III - Governance Metrics [G9. Disclosure Practices]	3.9683	0.8793	-1.7230	0.0629
Pillar III - Governance Metrics [G10. External Assurance]	4.3968	0.6101	-0.6106	-0.4703

Source: Authors' analysis

The analysis and findings drawn from the above study reported by the authors (Sunil & Mousumi, 2022) is the base for this study.

Category Map

This study developed the “category map”, where the declared importance is represented by the mean ranking scores assigned by the relevant experts (X axis) and the derived importance is represented by the mean ranking scores assigned by the respondents (Y axis), for each feature and characteristics of the ESG software, in the context of effective adoption of the same for a company (Table 2 and Table 3). A total of 9 features and characteristics were considered, based on the literature review and experts’ opinion. 5 experts were consulted for the same purpose: 1 Senior Management representative, 1 ESG Practitioner, 1 ESG consultant, 1 Software Developer, and 1 Academician in the ESG field. The experts and the respondents assigned ranking on a scale of 1 to 9 (1 being the least important and 9 being the most important feature/ characteristics of the software for adoption).

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Table No. 2
Declared Importance

Experts	Adherence to the standards	Cloud / Web based solution	Easy to use	Integration with the existing software	Module based selection option	One stop solution	Price	Support & Services	Training and Supportive Manual
Management Representative	9	1	5	4	6	8	7	3	2
ESG Practitioner	6	2	9	8	5	4	1	3	7
ESG Consultant	9	1	8	2	3	4	5	6	7
Software Developer	5	4	6	3	2	9	1	8	7
Academician	9	3	8	4	2	1	5	7	6
Mean Score	7.6	2.2	7.2	4.2	3.6	5.2	3.8	5.4	5.8

Source: Primary Research Data

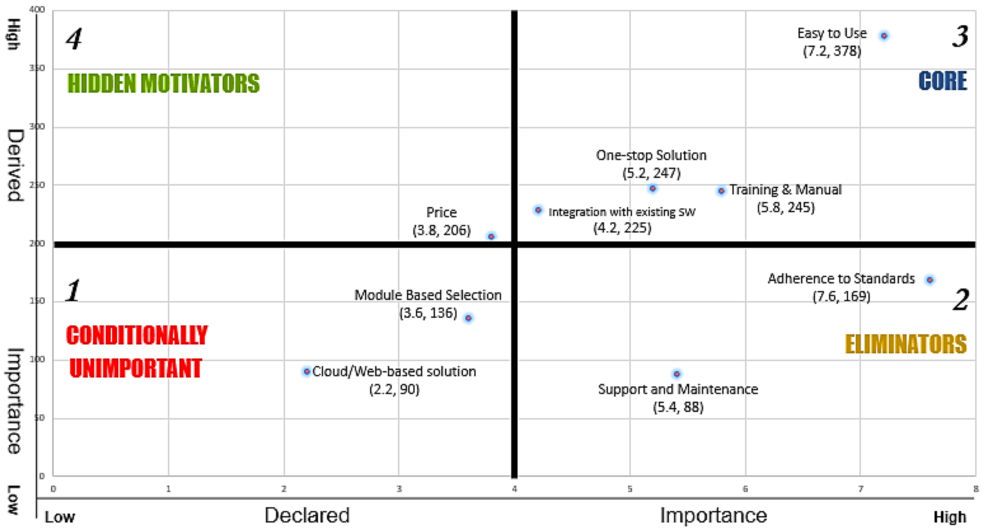
Table No. 3Derived Importance

	9	8	7	6	5	4	3	2	
Criteria for Selection of Software	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Priority 6	Priority 7	Priority 8	Derived Significance
Adherence to the standards		7		7	11	4		0	169
Cloud / Web based solution			3	8			7	0	90
Easy to use	42							0	378
Integration with the existing software	4	11	15					0	229
Module based selection option		4	8	8				0	136
One stop solution	7	23						0	247
Price	3		7	15	8			0	206
Support and Services			3		7	8		0	88
Training and Supportive Manual	7	3	8	3	4	10	8	0	245

Source: Primary Research Data

With above declared and derived importance, the authors plotted the Category Map of the Indian Corporates Requirements in ESG Software (Figure 3).

Figure 3: Indian Corporates Requirements in adoption of ESG Software



Discussion

The respondents were well aware of the concept of ESG and the present ESG reporting system followed in their respective organizations. This awareness is crucial since, from this awareness, the journey towards sustainable business with the help of ESG reporting can be effectively envisioned. In general, all the respondents agreed that all the metrics were important (more or less) in the context of ESG reporting. Water usage (E6 metrics) and Global Health and Safety (S8 metrics) were considered the most critical metrics, whereas Board Independence (G2 metrics) was considered the least essential metrics. So-called general issues related to water consumption and promoting health and safety were the areas where the respondents felt more confident expressing their perceptions. However, since the functioning of the board and its implications were less discussed at all levels of the organizational hierarchy, the respondents needed to be able to consider its significance in the context of ESG reporting. This was investigated further during the personal interview. The respondents were more comfortable discussing and reporting the environmental and social issues related to ESG reporting. This needs to be considered by the organizations. They need to be more transparent about board-related governance issues.

For adoption of the ESG software, four quadrants revealed the following.

Quadrant 1: Conditionally Unimportant

The category map reveals that the feature(s) i.e.; Need of cloud based or Web-based solution (2.2, 90); and the Module based selection option (3.6, 136) in an ESG Software is Conditionally Unimportant. Since both the solutions have been used by the Indian companies, choosing between cloud based or web-based solution is insignificant. Also, migrating any software from cloud to web-based or visa-versa can be achieved with the prevailing technology solutions, and thus the opinion provided. In regard to the Module based selection option, respondents considered a comprehensive ESG Software, instead of opting for the pick and choose the module they require for the organization. The presence of this feature also justifies the findings from the literature study that Indian corporate needs more awareness, information and the process knowledge to manage the ESG initiative. However, with the demand for pick and choose of selected modules of ESG Software and cloud-based environment to increase, there is every chance to move to quadrant 4 (Hidden Motivators) or to quadrant 2 (Eliminators) in future.

Quadrant 2: Eliminators

The features of an ESG Software, such as, Adherence to Standards (7.6, 169); and Support and Maintenance (5.4, 88) fell under this quadrant. It was expected since Indian corporate is aware about the recent developments and release of standards from various assessment and accreditation bodies including NASDAQ, EFRAG, MSCI, TCFD and others in the international scenario and BRR and BRSR which are from India (Sunil & Mousumi, 2022). Expectations of certain standards and the process dictated to the contemporary environment a ESG Software is a hygiene factor and hence the presence of this feature in this quadrant is justifiable. The Support and Maintenance feature of any software is a viability indicator for the customer to select the software. It is obvious that any company will expect this feature to be bundled with the purchase policy and the agreement. Also it observed by the authors many of the ESG practitioners are from the Non-technology background or practices, like from HR, Operations, and Finance, hence continuous support and maintenance is expected to be taken care by the software developer.

Quadrant 3: Core

Easy to use (7.2, 378), One-Stop Solution (5.2, 247), Integration with existing software (4.2, 229); and Training & Supportive Manual (5.8, 245) , are the features/characteristics of an ESG Software, which fell under this quadrant. Many of the respondents were from non-technical background and thus, easy to use features (e.g.; easy navigation, guided alerts, menu driven options and quick reference for the option, and possibility to integrate the same with the existing software and interoperability), have attracted high declared and high derived importance. The need for detailed training for the employees to work on an ESG Reporting solution and to support them with suitable training tutorials, materials, manuals, and other aids are much required. This justifies the presence of the feature – training and supportive manual – in the Core quadrant in this category map.

Quadrant 4: Hidden Motivators

During the discussion with the expert and the interview with some of the respondents as part of this study, the feature or the *Price* factor in the ESG Reporting Software did not gain much attention. However, the presence of Price in the Quadrant 4 has justified the author(s) belief that ultimately in the Indian corporate, the price paramount some of the important or hygiene features in decision-making. This is proved again in this study with the category map.

Conclusion

The concept of ESG has been in the focus, among the Indian corporate. The experts opine that the mission of the ESG Center or Cell in any company is intimately related to the parent organization, and ESG practitioners or In-charge of the ESG initiative are concerned today with the meeting the standards, norms and prevailing rules to have their presence in the market and which can act as a core differentiator in the competitive advantage. The effectiveness of a ESG initiative is the balancing act of all the 3 pillars – Environment, Social and Governance – to achieve the desired goal in this initiative. Moreover, it is equally important to get the top management support, social inclusiveness, employees involvement, financial resources and the concern for adherence to the standards, to serve better with the implementation of technology for growth and service excellence.

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Annexure A List of ESG Reporting Software(s)

Sl No	Name	Developer/Company	Link	Year	Users
1	Cority Software	Cority	https://www.cority.com/	1985	Unilever, Volvo, RioTinto, Seattle City Light
2	Benchmark Risk + Compliance Software	Gensuite	https://www.benchmarkdigitalesg.com/ind/benchmark-solution-suites-all/	2011	Adani, General Electrics, ITC, Dr. Reddy's, Whirpool
3	Wdesk Software	Workiva	https://www.workiva.com/solutions/esg-reporting	2010	Cognizant, AMGEN, JPMorgan Chase & Co., Kinder Morgan
4	SmartHead Software	SmartHead Co.	https://www.besmarthead.com/newsfeed	2016	Tesco, Dell, Citi, EY, BMW
5	Goby Software	Conservice ESG	https://www.gobyinc.com/	2009	
6	OneTrust Software	OneTrust	https://www.onetrust.com/	2015	
7	Emex EHS & ESG Software	Emex Software Ltd	https://emex.com/	2010	Aer Lingus, Addax Petroleum, Premier Foods, LafargeHolcim, Hermes, Hanover County, Glencore, Applegreen
8	Impact Software	Impact Social Value Reporting Ltd.	https://impactreporting.co.uk/	2018	
9	denxpert Software	Inogen Alliance	https://denxpertsolutions.com/en/esg/	2021	Siemens Energy, GE Power, Lufthansa, Suzuki
10	Locus ESG & Sustainability Software	Locus Technologies	https://www.locustec.com/applications/sustainability/	1997	Bayer, Del Monte, Alstom, Big Heart, Port Authority NY NJ
11	NAVEX ESG Software	Navex Global	https://www.navex.com/en-us/products/navex-esg-environmental-social-governance/	2006	Serco, General Dynamics, Bumble Bee, JLL
12	Metrio Software	Metrio INC	https://www.metrio.net/	2009	Target, The Clorox Company, Air Canada, Decathlon, Unity
14	Novisto Software	Novisto	https://novisto.com/	2019	CAE, Intact, IGM Financial
15	Brightest Software	Brightest	https://www.brightest.io/	2017	NYC, Unilever, Arizona State University, Alter CEO
16	IsoMetrix Lumina Software	Isometrix	https://www.isometrix.com/lumina	2002	Alterra Capital Partners