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Green Intellectual Capital

Salwa Muda, Musliha Musman and Raziah Bi Mohamed Sadique



Introduction

Intellectual capital encompasses all the processes and the assets which are not normally shown on the balance sheet, including the intangible assets in modern accounting such as trademarks and patents (Edvinsson, 1997). These intangible assets and resources that are categorized into human capital, structural capital and relational capital are believed to drive value creation of the organisations by improving operational efficiency, fostering innovation and enhancing performance. Building on the concept of intellectual capital, green intellectual capital (GIC) is a relatively modern evolution emphasizing on blending intangible assets and a commitment to environmental awareness. As Industry 4.0 advances with digitization and automation, organizations are increasingly recognizing their environmental responsibilities and the urgent need to reduce carbon emissions, driving a shift towards sustainable practices. Embracing green intellectual capital (GIC) and aligning with the United Nations' Sustainable Development Goals (SDGs) are key strategies for achieving environmental sustainability (Soomro & Soomro, 2024). Below is the definition of GIC and its dimensions:

1.0 Green intellectual capital

According to Chen (2008, p.277), GIC refers to “the total stocks of all kinds of intangible assets, knowledge, capabilities, relationships, etc., about environmental protection or green innovation at the individual level and the organization level within a company.” GIC highlights an organization’s commitment to adopting and implementing environmentally friendly technologies, renewable energy solutions, and eco-responsible processes (Soomro & Soomro, 2024). By actively engaging in GIC, organizations can boost employee motivation and encourage the adoption of green practices. Notably, GIC empowers organizations to adhere to stringent international environmental regulations, respond to the increasing environmental consciousness among consumers, and generate value for the organization.

2.0 Green human capital

The summation of “knowledge, skills, capabilities, experience, attitude, wisdom, creativities, and commitments embedded in employees about safeguarding the environment or creating green innovation.” (Chen, 2008, p.277). Green human capital forms the foundation of the intellectual capital process and serves as a driving force for both green structural and green relational capital. Due to its embedded nature within employees, organizations cannot own or imitate human capital. This underscores the importance of organizations investing in their employees to achieve superior performance. It encompasses the talent and expertise that employees contribute to address ecological challenges and implement environmentally friendly practices (Shahbaz, Ahmad & Malik, 2024).

3.0 Green structural capital

Green structural capital refers to “capabilities, commitments, knowledge management systems, reward systems, information technology systems, databases, managerial mechanisms, operation processes, managerial philosophies, organizational culture, company images, patents, copyrights, and trademarks, etc. about environmental protection or green innovation within a company.” (Chen, 2008, p.277). It encompasses the wealth of knowledge about an organization's processes, structures, technologies, policies, and culture and owned by the organization. Green structural capital acts as the backbone for ensuring the smooth flow of information and practices within organizations, empowering human capital to drive innovation, sustainability, and competitive advantages (Hina et.al, 2023).

4.0 Green relational capital

Green relational capital is “the stocks of a company’s interactive relationships with customers, suppliers, network members, and partners about corporate environmental management and green innovation, enabling it to create fortunes and obtain competitive advantages.” (Chen, 2008, p.278). Strong customer capital not only differentiates the quality of intellectual competition but also raises awareness about environmental sustainability (Hina et al, 2023). Building strong relationships with suppliers and customers is crucial for boosting relational capital, which in turn enhances innovation, operations, and environmental performance through quality and green management. By focusing on green customer capital, organizations can maintain high standards of environmental consciousness.

Conclusion

Malaysia is a dynamic and rapidly growing economy in Southeast Asia, with a pressing need for knowledge workers who possess strong soft skills and a commitment to environmental sustainability. With the rising importance of economies that harness both tangible and intangible resources to drive GDP growth, Malaysia is standing out as a major player. As a developing country, Malaysia faces significant challenges related to environmental issues, particularly as its manufacturing sector, a major contributor to waste and pollution, continues to expand (Hina et. Al. 2023). For instance, Malaysia accounts for just over 6% of global CO2 emissions annually, closely trailing behind China, which contributes 7.42% (Hina et.al, 2023). Despite plays the crucial role in organization’s environmental strategy, GIC is still a relatively new field in Malaysia. Therefore, this topic offers a promising research avenue for examining how the adoption of GIC can drive sustainability in Malaysian companies and contribute to creating an eco-friendlier and more resilient environment.

References

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