Educational Administration: Theory and Practice
2024, 30(1), 476-484
ISSN: 2148-2403
https://kuey.net/

Research Article

Intellectual Capital For Enhancing Sustainable Development Goal (SDG)

G. A. Alamry[1]*, Farah Y. F. Abdelkhair[2], Yasir T. A. Attico[3], Abdullah Bindawas[4], Falah M. F. Alkhateeb[5], and Ayman H. Ahmed[6]

[1*]Department of Home economics, Faculty of Art and Science, king Khalid University,Abha 62529, Saudi Arabia . galamri@kku.edu.sa
[2] Business Administration Dept., College of Science and Arts, King Khalid University, Muhayil Asir, P.C. 63751, Saudi Arabia. fabdelkhair@kku.edu.sa. ORCID iD: https://orcid.org/0000-0001-6036-594X
[3] Business Administration Dept., Applied College, King Khalid University, Khamis Mushait, P.C. 62461, Kingdom of Saudi Arabia; & Department of Business Administration, Faculty of Economics and Administrative Sciences, University of Kassala, Republic of Sudan. E-mail: yattico@kku.edu.sa, ORCID ID: https://orcid.org/0009-0007-1866-9596
[4]Business Administration Dept., Applied College; & Center for Tourism Research and Economics (CTRE), King Khalid University, Abha, P.C. 61421, Kingdom of Saudi Arabia. E-mail: adwas@kku.edu.sa, Orcid ID: https://orcid.org/0000-0002-6300-6229
[5]Business Administration Dept., Applied College, King Khalid University, Muhayil Asir, P.C. 63751, Saudi Arabia. fmfalah@kku.edu.sa.
[6] Financial and Banking Sciences Department, Applied College, King Khalid University, Muhayil Asir, P.C. 63751, Saudi Arabia. Email: alaymnahmed@kku.edu.sa

*** Corresponding author:** G. A. Alamry
[*]Department of Home economics, Faculty of Art and Science, king Khalid University,Abha 62529, Saudi Arabia . galamri@kku.edu.sa

Citation: G. A. Alamry (2024), Intellectual Capital For Enhancing Sustainable Development Goal (SDG), *Educational Administration: Theory and Practice*, *30* (1), 476-484
Doi: 10.53555/kuey.v30i1.3170

ARTICLE INFO

ABSTRACT

Intellectual Capital (IC) has been crucial in fostering long-term growth, enhancing competitiveness, and ensuring the durability of organisations, so enhancing the welfare of individuals and bolstering economic performance. The Sustainable Development Goals (SDGs) of the United Nations are an attempt to take a holistic approach to the many aspects of sustainable development, such as people, planet, prosperity, peace, and collaboration, these goals were established in 2015. These goals address one of the most pressing concerns of our day. The industrial sector faces significant difficulties in implementing a sustainable strategy to resolving development challenges by achieving the Sustainable Development Goals (SDGs). Sustainable Development Goal 9 (SDG 9) is based on three interrelated pillars: infrastructure, industry, and innovation. These pillars are closely interwoven and have the shared objective of attaining socially equitable and ecologically sustainable economic development. The global community may derive inclusive and sustainable industrial growth, which has a consequential effect on all other SDGs, by embracing SDG 9 and its associated objectives. From a strategic standpoint, Intellectual Capital (IC) is primarily examined as a collection of intangible assets that generate value. These assets represent a crucial set of resources that are essential for maintaining a competitive advantage, which is vital for long-term viability and promoting societal well-being and economic development, in alignment with the Sustainable Development Goals (SDGs). Although there have been several research investigating the connections between IC (information and communication) and sustainability, a significant deficiency arises about the impact of IC on the attainment of SDGs (Sustainable Development Goals) in particular or related objectives. The purpose of this article is to study how the characteristics of the IC may support the 2030 Agenda for Sustainable Development, namely the sustainable and creative growth of organisations through the adoption of Goal 9 and the goals linked with it. This research adds to the existing body of knowledge on intellectual capital (IC) as a catalyst for achieving sustainable development goals (SDGs). Specifically, it provides opportunities for further investigation into enhancing capacities to address developmental obstacles, including various participants, interested parties, industries, and areas.

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Keywords: Sustainable Development (SDG9), Intellectual Capital (IC), Sustainable Development (SD), Resilient infrastructure, Sustainable industry, and Innovation

1. Overview

In the early years of the 20th century, economists began to understand the significance of knowledge and information as fundamental driving forces behind economic growth, productivity, and wealth. At that time, the term "intellectual capital" (IC) was first used. In spite of this, it wasn't until the 1990s that people started using the term "intellectual capital" in everyday speech. Since that time, most research on IC has focused on it as the basis for competitiveness and a sustainable competitive edge; this is an indication of its potential for long-term success in the world of business. Research on intellectual capital (IC) initially concentrated on microeconomics; but, in recent years, this field has grown to incorporate macroeconomic perspectives. This approach places a strong focus on the connection between knowledge and cities and regions, as well as the evolution of society from an industrial society into a society that is founded on knowledge (Janukaite and Uien, 2018). The principles of Knowledge-Based Development (KBD) and the concept of knowledge cities or smart cities involve the integration of a city's or region's technical, intellectual, cultural, scientific, and innovative resources with the objective of supporting economic progress. According to Carrillo (2015), Knowledge-Based Development, which is sometimes referred to as KBD, is necessary for the continuance of human civilization in order for it to remain viable. It entails managing production, consumption, distribution, and key resources like matter and energy in an effective manner. This calls for a consensus on a common set of norms on ethics, politics, economics, and culture. According to Carrillo (2015:10), the author underlines that the future of human civilization may depend on our capacity to comprehend these principles and rethink how we coexist, both within nations and with the earth. This is something that we need to do in order to ensure that human civilization has a bright future. This perspective is in agreement with the action plan created by the United Nations (UN) to carry out the essential and significant changes that are required in order to achieve the results that are intended by the Sustainable Development Goals (SDGs). This action plan was declared in the 2030 Development Agenda, and its implementation is now being carried out by all countries and stakeholders in conjunction with the United Nations. The focus of the ninth Sustainable Development Goal (SDG) in the Agenda is on Industry, Innovation, and Infrastructure. Constructing sturdy infrastructure, encouraging inclusive and sustainable industrial growth, and providing support for innovative endeavours are the goals of this initiative. Historically, innovation has been regarded as a critical determinant of economic development. Nevertheless, Sustainable Development Goal 9 (SDG9) emphasises the pivotal significance of innovation in advancing sustainable economic prosperity across all countries. Ratified in December 2013 during the fifteenth session of the General Conference of the United Nations Industrial Development Organisation (UNIDO), the Lima Declaration sought to increase commitment to Inclusive and Sustainable Industrial Development (ISID). The primary objective is to eradicate poverty, which can solely be achieved by means of robust, inclusive, sustainable, and resilient industrial and economic expansion. Successful integration of the economic, social, and environmental dimensions of Sustainable Development (SD) is imperative for this purpose. Industrialization is a transformative economic process that leads to the generation of fresh job opportunities, enhancements in people's standard of living, the promotion of commerce, and the fostering of more effective utilisation of existing resources.

Intangible assets that contribute to value creation are taken into consideration by the strategic viewpoint of the IC theory. Taking this viewpoint enables us to uncover critical intangibles that, when combined, drive businesses closer to attaining the ISID goals and targets they have set for themselves. Chen (2008) introduced the concept of Sustainable Intellectual Capital (SIC), also referred to as "green IC," which combines environmental considerations with intellectual capital. In contrast, the study conducted on intellectual capital (Yusoff et al., 2019) has not focused much on this aspect. Similarly to the preceding issue, there is a lack of research (Alvino et al., 2019) that examines the relationship between IC and SD. To the best of the authors' knowledge, no research have been undertaken on the role of IC in achieving Sustainable Development Goal 9, which is one of the Sustainable Development Goals. Furthermore, the activities carried out by internal committees of firms related to sustainable development must align with the requirements established in the 17 Sustainable Development Goals (SDGs). The United Nations formulated these objectives with the aim of directing the world towards a more sustainable future. These objectives encourage businesses to help create a sustainable competitive advantage that focuses on preserving the natural environment and improving the quality of life in local communities. Put simply, these objectives incentivize firms to contribute to the enhancement of the quality of life in their communities. In this study, the theoretical elements of the characteristics of IC (Information and Communication) that contribute to the progress of SDG9 are investigated in depth. The ninth Sustainable Development Goal (SDG) focuses on improving the resiliency of infrastructure, encouraging industrialization that is inclusive and sustainable, and fostering innovation. In order to accomplish Sustainable Development Goal 9, we have devised a plan for the efficient management of Sustainable Intellectual Capital (SIC), which we based on our review of the relevant available literature. This study enhances the current corpus of knowledge on intellectual capital (IC) and sustainable development (SD), while also offering valuable new insights for company managers and other experts in the field. In order to

determine the variables that were going to be researched, SDG9 and IC, a literature review was carried out. We made use of the SCOPUS research study, which led to the discovery of eight things between 2016 and 2023. The content summaries provided convincing evidence to support the continuation of the study, which was warranted based on this approach as well as the little prior research that had been conducted on the combination of these two topics. In spite of the fact that there is an undeniable link between intellectual capital (IC) and sustainability, there is still a dearth of research on the topic, and the question of how IC influences the accomplishment of Sustainable Development Goals (SDGs) has been investigated from a number of different points of view. This demonstrates the need of having a more in-depth understanding of how each Sustainable Development Goal (SDG) can be achieved and enhanced via the strategic influence of Information and Communication (IC).

The organisation of this paper may be broken down into the following sections: The first section provides an overview of the purpose of the research as well as an introduction to a variety of IC (Information Communication) and SD (Sustainable Development) concepts, each of which will be further expounded on in later parts. In the next section of the article, "part 2," the author delves into an analysis of the characteristics of intrinsic capital that make it such an important driver of long-term wealth creation. The essay explores the function that IC plays in the process of maximising the potential of a corporation to achieve social, economic, and environmental benefits. After that, Section 3 is where the idea of Sustainable Intellectual Capital (SIC) is presented for the first time. In Section 4, we will examine the aspects of the SDGs that are universal and indivisible. The 5th section of this report outlines a methodical plan for addressing the issue of sustainable industrialization and meeting the requirements of goal number nine of the sustainable development agenda. The ultimate findings or conclusions are presented in Section 6.

2. Intellectual Capital: The Primary Catalyst for Sustainable Value:

There is still a lack of agreement on the definition of intellectual capital (IC), despite the fact that it is widely acknowledged in the literature that intellectual capital (IC) contributes to the value of an organisation (Marr, 2005). The lack of agreement stems from the diverse viewpoints on intellectual capital (IC) originating from many academic disciplines, including as strategy, economics, human resources, finance, accounting, reporting, and intellectual capital itself. The subjects of study include strategy, economics, and human resources. According to Cabrita et al. (2011), information capital refers to the information that generates value and offers a sustained competitive advantage to a company from a strategic standpoint. From an accounting point of view, the primary goals of internal control (IC) are two-fold: first, to assure correct external reporting of IC, and second, to measure and display IC data in a way that helps management decision-making. Both of these purposes are important in ensuring that IC is effective. Every definition of intellectual capital (IC) that can be found in published works emphasises both its intangible character and the function it plays in boosting the production of goods and services, hence giving businesses an advantage over their competitors. It is possible to deduce, on the basis of a number of definitions, that the primary features of IC are its intangibility and its ability to produce value or income. According to Cripi et al.'s research from 2020, intellectual capital (IC) is commonly recognised as an essential intangible asset for the achievement of business success. enterprises are subjected to a significant amount of pressure from stakeholders, who demand that these enterprises efficiently implement corporate goals designed to increase sustainable performance (Alvino et al., 2021) and reduce environmental hazards associated with industrial activities. San et al. (2022) found that intellectual capital (IC) has a favourable effect on the long-term sustainable performance of organisations in terms of their social, environmental, and financial aspects. The statement highlights the significance of intellectual capital (IC) in maximising organisational prospects, promoting creativity, and demonstrating a willingness to take risks to achieve social, environmental, and economic benefits. According to Figge and Hahn (2005), "sustainable value" refers to the value that is created through the optimal utilisation of all forms of capital. The notion of Intellectual Capital (IC) is inherently connected to the notion of long-term value. The study reveals that sustainable value creation can play a vital role in slowing down climate change and minimising harmful economic repercussions (Hariastuti and Lukmandono, 2022). This is according to Dwianika and Gunawan (2020), who state that the findings of the research demonstrate that sustainable value creation can play a crucial role in slowing down climate change. Consequently, the 2030 Agenda for Sustainable Development (SD) is tied to the growth potential of the IC.

3. Sustainable intellectual capital is a crucial factor in driving sustainable value:

As a component of the work being done to lessen the negative effects that human activity has on the natural world, studies have recently gotten under way to investigate how environmentally responsible policies and procedures might be included into the overarching management structures of businesses. Despite the fact that very few studies have looked at this idea in great depth, the focus of this research is on the inclusion of Sustainable Intellectual Capital (SIC) into the growth of organisations. According to Chen (2008), SIC incorporates all of the intangible assets, abilities, knowledge, and relationships that are relevant to the protection of the environment, and it may also incorporate social and economic factors. SIC is the collective knowledge that a company may employ to improve its environmental management and achieve a competitive

advantage, according to López-Gamero et al. (2011:21). According to the findings of a number of studies (Alvino et al., 2021; Popescu, 2020), efficient management practises for intellectual capital play an essential part in the progression of sustainable development by meeting environmental and ecological goals. In a similar vein, Yusliza et al. (2020) show that there is a significant association between SIC (containing all of its numerous dimensions) and sustainable performance, which takes into account environmental, social, and economic factors. According to Hahn et al. (2007), businesses may increase the value of their goods and services by offering customers choices that are better for the environment. According to the findings of this study, the concept of "Socially Inclusive Capital" (SIC) refers to a group of non-tangible assets that, when combined, can provide an enduring value that contributes to the achievement of the Sustainable Development Goals (SDGs) by advancing economic development, improving the quality of life for individuals, and preserving the natural environment.

4. Sustainable Development Goals: An all-encompassing and inseparable approach:

The United Nations World Commission on Environment and Development (WCED) released a study titled "Our Common Future" in 1987 (United Nations, 1987). In the course of this research, the idea of sustainable development (SD) was introduced for the very first time. The United Nations has developed a system that consists of 17 Sustainable Development targets (SDGs), each of which has 169 connected targets and more than 230 indicators to measure its movement towards achievement. This system is called the Sustainable Development Goals System (SDGs System). These objectives, which seek to promote sustainable economic growth, environmental sustainability, and social inclusion, were agreed upon by 195 nations and are meant to be a global norm. Their goal is to advance sustainable economic development, environmental sustainability, and social inclusion. The 2030 Agenda adopts a holistic approach by concentrating on five key areas that are important for the well-being of people and the world as a whole: persons, the environment, economic prosperity, tranquilly, and collaborative efforts.

Multiple academic publications have published papers examining the interconnections and conflicts between the Sustainable Development Goals (SDGs). The study conducted by Moyer and Bohl (2019), Dorg et al. (2018), and Pradhan et al. (2017) indicates that most interactions among the Sustainable Development Goals may be seen as levers. The findings of Anderson et al. (2022) provide even more credence to this hypothesis. The objective of the 2030 Agenda to be globally applicable and indivisible is a crucial component that sets it different from prior sustainability efforts, this aspect is what makes the 2030 Agenda so unique. The word "universality" refers to the reality that the Sustainable Development Goals (SDGs) that are stated in the 2030 Agenda are important to all nations and individuals throughout the globe, regardless of their present levels of affluence, cultures, or issues linked to sustainability. It follows from the principle of indivisibility that the implementation of the 2030 Agenda ought to make use of integrated methods, rather than taking a more narrow-minded approach. There are a number of ecological and social hurdles that are interrelated, which makes it difficult to achieve sustainable development. Beyond the scope of individual or specialist efforts, a concerted effort from a variety of nations and fields is required in order to effectively resolve these difficulties since they call for multidisciplinary collaboration.

Industry, innovation, and infrastructure are the focal points of the ninth Sustainable Development Goal (SDG) of the 2030 Agenda. Constructing sturdy infrastructure, encouraging inclusive and sustainable industrial growth, and providing support for innovative endeavours are the goals of this initiative. Infrastructure, industrialization, and innovation are three basic components that support sustainable development, and this Sustainable Development Goal (SDG) incorporates all three of these characteristics. Infrastructure is the collection of basic physical systems, resources, and organisational frameworks required to support essential societal functions and to guarantee people's safety, well-being, and social or economic welfare. Economic expansion and the creation of new jobs are both boosted by industrialization, which eventually lowers the rate of poverty. Innovation fosters the growth of new competencies in addition to enhancing a sector's current technological capabilities. The extant literature underscores the importance of industrialization in serving as a stimulant for both economic and social advancement. Agenda 2030 underscores the role of industry in accomplishing the Sustainable Development Goals (SDGs) and stresses the need for sustainable industrial development as the cornerstone of sustainable economic growth. The importance of industry's contribution in attaining the Sustainable Development Goals is emphasised by Agenda 2030. The sector is essential to achieving the Sustainable Development Goals (SDGs). The manufacturing sector is essential to the achievement of Sustainable Development Goal 9 (SDG 9) since it is responsible for the generation of resources that are capable of creating value that is long-lasting and contributing to the goals of sustainable industrialization that are set in the same document. Despite this, the vast majority of the academic literature is of the opinion that the complex nature of these interactions inevitably leads to complicated decision-making procedures.

SDG 9 has a direct impact on a range of goals, including enhancing food security (SDG 2), ensuring access to clean water and sanitation (SDG 6), creating jobs (SDG 8), promoting women's employment (SDG 5), improving health (SDG 3), protecting the environment (SDG 7), increasing food security (SDG 2), promoting the development of green technologies (SDG 9), and building resilient cities (SDG 11). According to Coenen et al. (2021) and Kroll et al. (2019), the research highlights the synergistic nature of SDG9, underlining its

relevance in increasing the performance of the other SDGs. This finding is highlighted by the research as well. However, according to Pradhan et al. (2017), Sustainable Development Goal 9 is one of the Sustainable Development Goals that faces trade-off situations. In these trade-off scenarios, the achievement of one target under SDG 9 may have adverse effects on another Sustainable Development Goal. There are a total of twelve indicators that correspond to the United Nations' five core goals (9.1, 9.2, 9.3, 9.4, and 9.5) and three additional aims (9.a, 9.b, and 9.c). These objectives and indicators are intended to provide guidance and assistance to those working towards the achievement of Sustainable Development Goal 9. To conclude, we may divide the goals of Sustainable Development Goal 9 (SDG 9) into numerous different action areas, as indicated in Figure 1.

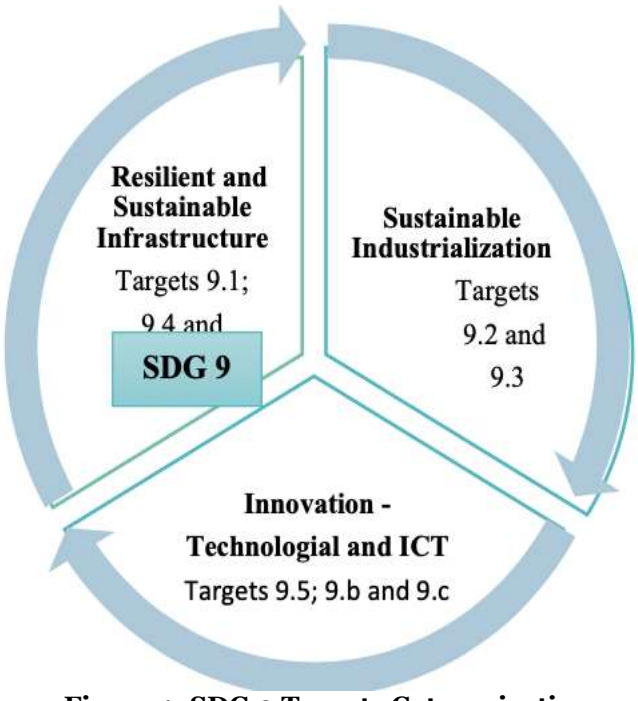

Figure 1: SDG 9 Targets Categorization

The three pillars of Sustainable Development Goal 9, namely, resilient infrastructure, sustainable industrialization, and innovation, reinforce one another in order to achieve the goal.

4.1 Robust infrastructure

The presence of resilient infrastructure is closely linked to the successful attainment of social development, economic expansion, and environmental objectives. Limited availability of essential infrastructure results in constrained opportunities for employment, education, and healthcare, so affecting the overall quality of living conditions and the welfare of the populace. Additionally, this situation presents difficulties for the functioning of enterprises. Infrastructure development, which includes railroads, roads, water systems, irrigation systems, electrical power, sanitation, and information technology, is intrinsically connected to economic progress and facilitates the attainment of interconnected goals. According to the National Institute of Building Sciences and the National Institute of Advisory Councils (NIAC), a resilient infrastructure system is one that is characterized as one that decreases its susceptibility to harm, mitigates the repercussions of threats, expedites responses and recovery, and promotes adjustment to events that are disruptive. When there is a great deal of unpredictability in the environment, a resilient infrastructure system is characterized as one that allows for adaptability. This is especially important to keep in mind within the context of the continuing digital revolutions that are being driven by technological breakthroughs. According to Sallos et al.'s 2019 research, the confluence of knowledge-intensive activities, creative efforts, and technology advances has resulted in the production of ground-breaking goods and services, which were made possible by digitally oriented tactics. As a result of the proliferation of digital transformation efforts, society as a whole and a large number of economic sectors are being put in the position of being vulnerable to a unique kind of risk that is connected to digital assets and services. Events that take place in the digital realm present major risks that are not only disruptive but also difficult to forecast or prevent, and they have the potential to have profound repercussions for the resilience of businesses and communities.

To build long-lasting infrastructure, it is vital to plan for and consider future generations during the construction process. The United Nations Disaster Reduction Report from 2022 provides a framework consisting of six interconnected ideas for the construction of resilient infrastructure: i) The process of

continuously acquiring knowledge, highlighting the difficulties in comprehending the resilience of infrastructure due to its intricate internal structure and extensive interconnections with other systems and sectors; ii) The practice of taking proactive measures to safeguard infrastructure, implying readiness for potential dangers, acknowledging that infrastructure is vulnerable to a variety of hazards, both familiar and unfamiliar, and that the characteristics of hazards can c iii) The approach is ecologically conscientious and recognizes the necessity of working proactively and in harmony with the natural environment, which includes flora, fauna, and the physical components such as land, air, and water. This is shown by the fact that the method begins with the statement "The approach is environmentally conscious." iv) It actively includes and interacts with individuals and communities to deepen their awareness of how they may contribute to avoiding and managing disruptions, and it does so in a way that encourages participation. v) It encourages collaboration in sharing data, information, and expertise, so fostering shared responsibility and promoting shared accountability. vi) It is flexible and capable of modifying the functioning of infrastructure systems as well as the outputs that are intended.

4.2 The process of developing industries and manufacturing on a large scale.

The term "industrialization" refers to a wide notion that encompasses a variety of economic and social processes that are centered on the discovery of more efficient ways to generate value. The presence of sufficient and long-lasting infrastructure is a precondition for the development of industrialization, which is an indirect consequence. (Cammarano et al., 2021) This results in the formation of job possibilities, which in turn has a positive impact on both the social and economic elements of life. It is commonly known that the manufacturing industry has a major and growing impact on the environment. In fact, a number of studies have indicated that this sector is the leading cause of environmental issues. Industrialization has resulted in economic prosperity, but it has also had negative effects on the environment, including pollution (of land, water, and air), the destruction of forests, and a loss of biodiversity. These negative effects have been created by industrialization.

4.3 Innovation

In order to solve environmental problems and achieve economic and employment growth, as well as address environmental concerns, such as increased resource and energy efficiency, innovation and technical advancement play a significant part in the process. The adoption of emerging technologies enables the establishment of a knowledge-driven economy, leading to the generation of advancements that enhance living conditions across several sectors, such as medical, transportation, industry, and energy utilization. Innovation and creativity are essential for promoting the optimal and improved utilization of resources, which is a crucial tool in reaching the Sustainable Development Goals (SDGs). Innovation and creativity are also essential for achieving the Sustainable Development Goals (SDGs). Because of the dynamic nature of business environments, which calls for production and management systems that are more flexible in order to deal with complex circumstances, innovation, and the Sustainable Development Goals (SDGs) should be tackled in a broad and flexible manner.

5. Fostering sustainable intellectual capital to bolster SDG 9:

The term "Sustainable Intellectual Capital" (SIC) refers to a relatively recent economic theory that sets an emphasis on the role that intelligence plays in sustaining growth and development. This theory was developed by the Institute for the Study of Sustainable Development. It recognizes the value of knowledge as an element in the process of attaining economically sustainable development (SD) (Meramveliotakis and Manioudis, 2021; Cabrita et al., 2016). The identification and management of an organization's intangible assets, which are capable of dictating that organization's level of success or failure, is the key to understanding the significance of this. These resources have the ability to determine whether or not the organization will be successful in its endeavors. An organization's overall performance, its capacity to compete in its industry, and its ability to generate long-term profits are all significantly impacted by the effectiveness of its SIC management, which is a vital strategic endeavor.

The term "sustainable intangible capital," which is abbreviated as "SIC," refers to the intangible assets that are housed inside an organization and which contribute to the latter's total worth while also supporting sustainable development (SD). These intangibles are essential to building a sustainable competitive advantage and growth over the long run. In light of the findings of the literature analysis, a plan for monitoring activities connected to Sustainable Development Goal 9 (SDG 9) in the form of SIC (Sustainable Industrialization and Innovation) is proposed. Figure 2 is an illustration of this framework.

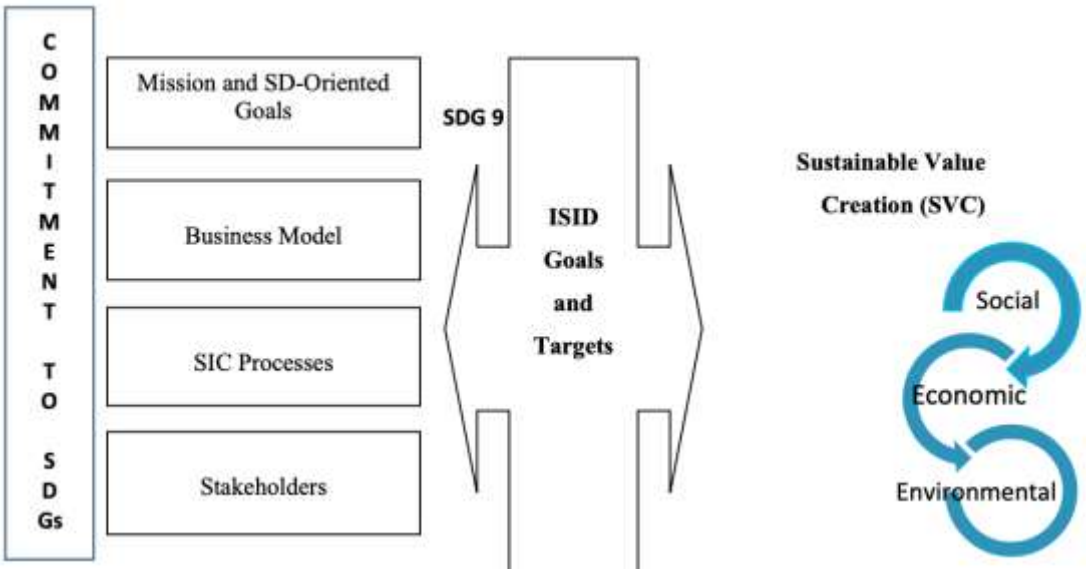

Figure 2: Managing SIC for SDGs 9

It is vital to include the commitment to SDGs into management processes, notably the SIC procedures, in order to fulfil the objectives and goals of SDG 9, which entail the simultaneous attainment of economic, social, and environmental results over a medium to long-term timeframe. This must be done in order to achieve the goals and objectives of SDG 9. According to Cabrita and Duarte (2021), the planning and implementation of a business model are directed by mission and sustainability-oriented objectives, which in turn impact the value proposition presented to a wide variety of stakeholders, including as customers, employees, suppliers, competitors, the government, and society. According to the findings of the study that has been published (Wang and Juo, 2021; Singh et al. 2020), in order for a business model to be successful and incorporate SDG 9 concerns, it is important for the model to employ a whole spectrum of SIC management practises. The protocols cover a wide range of activities, including life-cycle analysis, industry eco-design, total quality environmental management, green training, development of eco-friendly technologies, green waste management, green packaging, green customer cooperation, and encouragement of eco-friendly behaviours and lifestyles. Businesses can increase the value of their operations in terms of the economic, environmental, and social dimensions by implementing these procedures since they will enable them to make better use of their resources, talents, and core competencies. Sustainable Development Goal 9 (SDG 9) should be in charge of monitoring knowledge transfer inside businesses in order to promote equitable and sustainable industrialization, encourage the creation of strong infrastructures, and encourage innovation. These components are essential to the main goal.

6. conclusion

In this study, the SD (Social Dominance) and IC (Intergroup Conflict) theories are compared and contrasted in order to determine whether or not there are any links that can be made between these two subfields of research. The purpose of this study is to investigate the ways in which the characteristics of the IC can make it easier for the ISID to accomplish the goals of Sustainable Development Goal 9. IC's strategic perspective makes it easier to incorporate the Sustainable Development Goals (SDGs) into decision-making processes, with the end goal of producing and capitalising on organisational value. For the Sustainable Development Goals (SDGs) to be successfully achieved in any given circumstance, the preeminence of knowledge within the framework of IC is absolutely necessary. Because organisations play such a vital role as a catalyst for innovation, they have a responsibility to society to support causes that are related to sustainable development. In addition, businesses should have an all-encompassing strategy to conducting their operations, one that takes into account not just the achievement of economic success but also the social and environmental facets of sustainable growth. This method is in line with the notion of value production within ecosystems. This may be seen, for instance, in the employment of technologies that are less harmful to the environment in order to meet the objective of sustainable industrialization that is described in SDG 9. The process of industrialization and growth is dependent on giving fundamental value drivers, such as technological advancement and creative thinking, priority status. If these elements are ignored, it will slow down the industrialization process, which would in turn slow down general growth.

Following an analysis of the existing body of research, a conceptual framework was developed that proposes combining sustainable development goal (SDG)-oriented practises with intellectual capital (IC). When making choices to redesign and reorganise, this integration can provide managers with assistance in assessing the environmental effects of their operational practises in compliance with the 2030 Agenda of the United Nations. According to the research carried out by Dalwai et al. (2023), intercultural communication plays a significant

part not only in achieving a competitive advantage but also in having an effect on sustainable development. The prognosis for the future of our society is contingent on our capacity for adaptation, the recognition of possibilities, the acquisition of necessary skills and knowledge, and the transformation of these into economic assets, all the while preserving a harmonious connection with the ecosystems that we depend on. The concepts and procedures outlined in the Standard Industrial Classification (SIC) provide the basis for the industrialization process, which is propelled by activities revolving around the accumulation of knowledge.
Although there is a growing body of research on the connections between information and communication (IC) and sustainability, there is a significant gap in understanding how IC affects the attainment of SDGs (Sustainable Development objectives), particularly in relation to individual goals or their interconnections. This gap is a result of a lack of understanding of how IC affects the attainment of SDGs. The proposed framework lays a strong groundwork for putting into action actions that are specifically geared towards achieving the Sustainable Development Goals (SDGs). In the future, research may concentrate on determining how the Sustainable Development Goals (SDGs) are affected by Socially Responsible Investment (SIC), which stands for Socially Responsible Investment. It is probable that future research endeavours on the effect of SIC on knowledge-based industrialization would investigate a wide variety of potential improvements. It is essential to conduct further research on sustainable practises. The promotion of interdisciplinary research, which includes the incorporation of knowledge from other areas such as economics, natural sciences, engineering, ecology, and others, should be the major focus of the effort.

Funding:

The current work was assisted financially to the Dean of Science and Research at King Khalid University via the Large Group Project under grant number RGP 2/389/44.

Acknowledgments:

The authors extend their appreciation to the Deanship of Scientific Research at King Khalid University for funding this work through large Groups Project under grant number RGP2/389/44.

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