



## "Our most valuable knowledge-based assets": Leveraging the role of human capital for organizational sustainability

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### Abstract

Research on intellectual capital provides compelling evidence that human capital (HC) plays a critical role individually and in conjunction with sustainable-based performance. Academics' interest in HC is growing in gravity to achieve a firm's sustainability, particularly in comparison to natural, financial, and economic capital. Both developed and developing countries emphasize HC development to speed economic growth by allocating the required time and resources. There is a multitude of information about how HC can aid organizational performance, but little endeavors on how organizations become more sustainable. With this intention, the study delineates to scrutinize by proposing a conceptual framework that how the transition to a knowledge-based economy has elevated the significance of enterprises' HC and organizational sustainability perceptions. The underlying propositions of "intellectual capital-based view theory" suggest a novel "knowledge-intensive" or "intellectual-based" framework for achieving competitive advantage or sustainability in which intellectual capital, e.g., HC, is viewed as knowledge-related resources rather than intangible assets. The proposed model may spark new research agenda on how social and environmental considerations aligned with financial performance through HC in organizations. In practice, the study can enlighten top management about the diverse role of HC in its dimensions, which is imperative in any strategic situation and consequences turn into sustainable business performance.

**Keywords:** Human capital, organizational sustainability, intellectual capital-based view theory, Conceptual framework

## 1. Introduction

Sustainable development entails taking care of society in the present and, additionally, taking care of its environmental, human, and material resources (Ciuhu, 2018). According to (Ayres, 2008) sustainability is a notion that refers to how humans should act toward nature to preserve it for future generations. This development has led to an increase in terms like "green" and "organic" when

discussing sustainability. However, enterprises must use the resources available to carry out their activities. Sustainability is a path to economic growth, which means making the best use of natural resources (Lozano, 2012). Traditionally, when considering the production function, the emphasis was on labor and capital, with knowledge and technology having only a transitory effect on the actual production process. In today's economy, knowledge is now one of the symbolic factors in the competitiveness and performance of the economy, industries, and commercial organizations due to changes in technology and society (Kucharčíková et al., 2018). From the standpoint of enterprise performance, profitability, and sustainability, it is vital to focus on the input usage's effectiveness and adopt the proper steps connected to it. The contribution of HC has been considered an input to the enterprise. HC refers to the sum of people's abilities, talents, knowledge, experience, and creativity applied to accomplishing work activities that contribute to achieving an enterprise's goals (Monday, 2015). As we have forwarded to the knowledge-intensive economy, knowledge-related assets are inevitable resources for organizational sustainability than traditional tangible assets (Lasiyono, 2019). HC is a crucial constituent of intellectual capital, and its relevance is exemplified in subsections of the literature. However, the role of firm-specific HC is distinctively a source of sustained competitive advantage (Campbell et al., 2012) and sustainable business performance (Šlaus & Jacobs, 2011). There are a plethora of investigations conducted on intellectual capital and Sustainability (Akhtar et al., 2015; Gross-Gołacka et al., 2020; Lasiyono, 2019), while the specifically very scanty level of research has been conducted on how HC influences organizational Sustainability (Alola et al., 2018; Kucharčíková et al., 2018). Additionally, the literature on HC highlighted diversified academic contents, for instance, HC and financial performance (Savitri & Syahza, 2019; Widarni, 2015); innovative performance (Cabello-Medina et al., 2011; Halim et al., 2014); competitive performance (Huo et al., 2016); Job performance (Nangoy et al., 2020); organizational performance (Andersén, 2021; Budiarta, 2015; Fatoki, 2011; Felicio et al., 2014; Prajogo & Oke, 2016; Slavković & Ognjanović, 2019; Zuhir et al., 2019) with multiple findings in single dimension rather than triple dimensions focusing organizational sustainability. This study aims to look at the most recent trends in sustainability, particularly the literature that has linked HC with sustainable business performance, to provide a conceptual overview in the last few decades.

## 2. Brief Overview on recent HC research and Bangladesh:

Economic recessions and business failures have been observed in developed and developing countries (Shahinul & Bhuyan, 2018). Emerging economies like Bangladesh have maintained 6% economic growth throughout the millennium (Zheng et al., 2017). Globalization, technological advancement, growing competition, and innovation have created a new business environment while the firm significantly needs a skilled workforce or HC to face current challenges (Hossain & Uddin, 2018). As a young country with a rising frontier marketplace, Bangladesh stands to gain significantly from the influx of HC to boost the country's economic and firm performance (Chowdhury et al., 2019). According to (Ali et al., 2008) as the global economy intensifies, HC and other intellectual capital components have evolved into a critical requirement for maintaining a smooth operation. When it comes to making strategic decisions and reporting, firms will lose their competitive edge if they do not consider HC. As a result, Bangladeshi businesses face challenges in developing innovative strategies for attracting and maintaining highly competent employees.

Furthermore, organizations should devote more time and effort to developing their human resources, strengthening their HC foundation, and reporting these to create a positive impression with their stakeholders (H. Khan & Khan, 2010). Significantly, an organization can gain competitive advantages by sharing information about HC in addition to physical and financial capital. At the same time, it is particularly significant for owners and creditors because it allows them to assess the

business's profitability, growth, and sustainability (Hossain & Uddin, 2018). In these instances, enterprises' participation in intellectual capital initiatives and their successful implementation, with a strong focus on HC, are anticipated to play a substantial role in the context of Bangladesh (Mili & Hashim, 2020).

Currently, Bangladesh is going through a multi-speed transformation to become a developed country by 2041. In addition, the prospective plan (2021-41) aims to boost the economy's productive potential by developing an information age through climate-friendly programs and activities. It is necessary to make the best use of a hybrid approach that includes both automation and retraining of the permanent workforce and training of new employees. The Fourth Industrial Revolution is already on the verge of arriving at our doorsteps. Therefore, if we genuinely desire sustainable growth for our economy, we must increase our productivity and competitiveness. There is no doubt that capacity for implementing these significant policies is a constraint due to HC, high-quality institutions, and properly well-designed infrastructures (D. A. Rahman, 2022). Hence, Bangladesh's economy must place a higher premium on skill development to remain competitive and environmentally friendly. Even most well-run export-oriented industries, e.g. (the garment sector), lack the technical understanding and efficiency of human resources required to compete internationally. According to a comprehensive study on "Business Success Priorities," HC or talent management accounts for 70% of business success while technology is 57% (Textile Today, 2018). Unfortunately, Bangladesh is ranked 112th out of 138 countries in the Global Knowledge Index for 2020 (Dhaka tribune, 2021).

While there are several empirical studies on intellectual capital reporting and disclosure in Bangladesh as well as a few on HC reporting practices (Absar et al., 2014; Dey & Sarkar, 2015; Hossain & Uddin, 2018; H. Khan & Khan, 2010; Mili & Hashim, 2020); HC and organizational performance (Dhara et al., 2017; Kamal, 2019; Kamal & Begum, 2019; M. M. Rahman & Akhter, 2021). However, relatively low research has been investigated to ascertain the status of HC and organizational sustainability within a single framework from the Bangladeshi perspective. To such a degree, there is significant potential to broaden current literature by investigating the role of HC in enhancing organizational sustainability in a diverse research environment.

### 3. Literature review:

#### 3.1 Human capital (HC):

In the last years of the twentieth century, much attention was paid to intellectual capital and other intangible investments, abundantly developing HC through education and research (Rompho & Siengthai, 2012). Nevertheless, the concept of estimating the "human capital" in company assets is not groundbreaking. HC (Gary S. Becker, 1962) has evolved as a critical concept in the literature on strategic human resource management and has since become widely accepted (Richard & Johnson, 2001). Generally, HC is an ingredient of intellectual capital, which includes intangible assets such as knowledge and skills, considered the organization's intelligence promoter (Bontis, 1998). It facilitates the operation of other intellectual capital components, which directly impacts its success (Inkinen, 2015). The seminal work (G S Becker, 1993) defines HC as general and specific. General HC refers to knowledge and expertise that are easily transferable, while specific HC relates to experience and abilities that are less transferable and have a narrower range of applications. According to (Subramaniam & Youndt, 2005), the knowledge, skills, and abilities that individuals possess what is known as HC. It is the expertise when employees leave a firm; they typically leave behind in the organization.

Nevertheless, (Bontis, 1998) argues that HC is critical because it fuels innovation and strategic revitalization, which is the source of value creation in the knowledge-based era. When measuring HC,

the distinction between physical and intangible assets lies at the heart of the problem. HC is used to boost productivity to keep the organization sustainable. These types of capitals are procedures that include training, education, and other professional activities that aim to improve an employee's knowledge, experiences, capacities, beliefs, and social assets towards the firm's performance (MARIMUTHU et al., 2009). The study (Akhtar et al., 2015) defined this capital as knowledge-based assets that remain within individual employees indicate information and knowledge storage, leading to innovation and creation. Distinctively, (Sydler et al., 2014) point out teamwork efforts, ability, proficiency, training, integrity, and motivation are the persuasive determinants of HC, while (Aminu & Mahmood, 2015) added HC in dynamic capabilities form. This type of intellectual capital generates explicit and implicit knowledge in problem-solving, decision-making, or analysis to achieve organizational success. Another study (OlatunbosunEmmanuel et al., 2015) signifies HC as the most influential component for an organization's workforce and growth, including formal learning, non-certified learning, structural skills, management experience, and leadership qualities.

### 3.2 Organizational Sustainability (OS):

Traditionally, (Bebbington & Perreault, 1999) considered HC aligned with sustainable development with other organizational capital to build a theoretical framework focusing on organizational sustainability. According to (Lee & Ha-Brookshire, 2017) organizational sustainability is defined as the dynamic system needed for ensuring successful performance in the short term without jeopardizing long-term profitability. Sustainability performance is inevitable because many organizations nowadays require reporting on sustainability initiatives. The company's image, its relationships with stakeholders, and even the productivity of its employees can all benefit from a company's sustainability performance (Lourenço et al., 2012). Mainly, business sustainability refers to a firm's strategies and operations that meet the current demands of the organization and its stakeholders while also protecting, preserving, and upgrading the human and natural resources in future demand (Goyal et al., 2013). The study of (Šlaus & Jacobs, 2011) categorizes that strong sustainability demands the preservation of natural and human-made capital; weak sustainability needs the conservation of the utility of the total of all resources for future generations. Therefore, organizational sustainability and HC promptly refer to the literature. However, (Eccles et al., 2014) picked up the summary that more sustainable firms have lower volatility and higher rates of return than less sustainable ones, while sustainable performance demonstrates the triple dimensions of financial, social, and environmental-based on triple bottom line approach (Elkington, 1998). Financial performance indicates to multiple economic determinants such as return on investment, profit, cash flow from operations, and cost control rather than single dimensions (Asiaei & Jusoh, 2015). Social performance is the well-being of stakeholders, communities, consumers, and individuals (Yusliza et al., 2020) and an "environmental factor" is a performance that reduces ecological damage and resource use (Malik et al., 2020).

### 3.3 Human capital and organizational sustainability:

Although a significant stream of research argued regarding the accumulation of HC and firm performance than sustainable business performance, these associations can provide strong evidence of the prerequisites of the current study. Putting more attention on the success of small businesses (Fatoki, 2011) found that the dimensions of HC, e.g., education, managerial experience, and work-related experience, are influential in South Africa. The study of (Felício et al., 2014) focused that HC significantly impacted organizational performance, particularly the manager's cognitive ability.

Contrarily, (Budiarta, 2015) opined that Indonesian higher institutions are influenced by the existence of HC eventually on organizational performance. While (Prajogo & Oke, 2016) considered HC as an analytical and separate component of intellectual capital refers to the level of innovation, expertise, and idea creation skills that business employees possess and exploit. The study specifically emphasized HC as a strategic resource for service innovation advantage towards business performance. Another study of Swedish companies (Andersén, 2021) revealed a significant relationship between firm-specific HC and organizational performance. In the service industry context, (Slavković & Ognjanović, 2019) conclude that employees consociate through knowledge for the organization's growth and productivity in a knowledge-based economy. The results confirmed that HC has control over non-financial performance rather than financial performance while investigating 42 hotel companies of Serbia. At the same time, some of the investigations attempted to depict how well HC and financial performance work together. As a means to (Widarni, 2015) outlined that HC, e.g., education, experience, motivation is effectively aligned with the SME's financial performance such as net profit margin (NPM), return on capital employed (ROCE), earnings per share (EPS). Accordingly, (Savitri & Syahza, 2019) investigated 120 SMEs of Riau Province. The study findings have illustrated that selecting the right competitive strategy, e.g., business-level strategy and management strategy is imperative for developing HC and the company's financial performance. Numerous works of literature place a premium on HC in a different setting. By way of illustration, (Cabello-Medina et al., 2011) hypothesized that HC informs, i.e., valuable and unique, can improve innovative performance. The findings revealed that only the uniqueness of the HC affects a firm's innovativeness when conducted a study based on the innovative sector of 85 Spanish firms. While (Huo et al., 2016) obtained that HC, such as organizational commitment and multi-skilling, can influence competitive performance in the multi-country context. Unlikely, (Nangoy et al., 2020) studied 509 millennial employees of Indonesia with the conclusion that employee work has a significant relationship with job performance. As noted above, all these constructs are significantly coherent with the point of departure of organizational sustainability.

With this aim, empirical work conducted by (Alola et al., 2018) enunciated that HC can enhance the firm's productivity where front-line personnel must work directly with consumers to secure a company's long-term success, increasing the necessity of eliminating conflict in the workplace. In classic literature (Kramar et al., 2011) suggested that although HC is decisive for achieving competitive advantage and sustainable business performance, proper measurement, and management of HC functions is inevitable. However, (Fareed et al., 2016) investigated five telecom companies represented by 40 HR managers of Pakistan. The outcome depicted that HC development is the capitious source of competitive advantage while high-performance work systems and organizational culture are thoughtful. Additionally, (Delery & Roumpi, 2017) advocated that human resource management practices can contribute to the development of HC, e.g., employee capacities, providing motivation and incentives with changing demand and supply-side constraints for ensuring firms a competitive advantage. Focusing on sustainable development at the micro-macro level (Panzabekova et al., 2019) revealed that the possible connection between HC and sustainability area requires improvement compared with world standards.

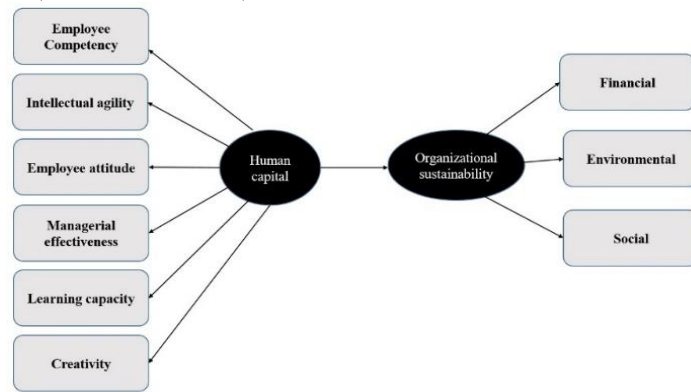
Nevertheless, only a few pieces of literature provided the clarity of importance between HC and sustainable performance. Focusing the triple bottom line approach presenting organizational sustainability (Lee & Ha-Brookshire, 2017) studied 278 US fashion retail employees. The findings have delineated that job attitude and ethical climate can influence financial, social, and environmental performance. The study noted that organizational sustainability depends on employee attitudes toward their professions and fostering an ethical work environment.

Based on the findings and arguments of preceding studies, this current study provided new insights about the paramount role of HC distinctively for enhancing organizational sustainability based on the triple bottom line approach. While the dimensions of HC can be applied in any

environment, the purpose of this study is to shed light on Bangladesh's ready-made garment sectors due to the paucity of research.

#### 4. Research Framework and Hypotheses:

The central premise of "intellectual capital-based view theory" is concerned exclusively with the knowledge generated and reserved by a firm's three capital components; human capital, structural capital, and relational capital (Reed et al., 2006). The generalized view of resource-based view theory is supplanted by this pragmatic and mid-range theory, where knowledge-related assets rather than intangible resources can aid in building hypothesis development and empirical testing (Reed et al., 2006) for creating an accurate appraisal of the firm. From this theoretical perspective, HC as knowledge-based resources may increase the organization's value, turning into the long-term or sustainable business performance without compromising social and environmental issues with financial performance (Akhtar et al., 2015).



**Figure 1: Proposed Research Framework**

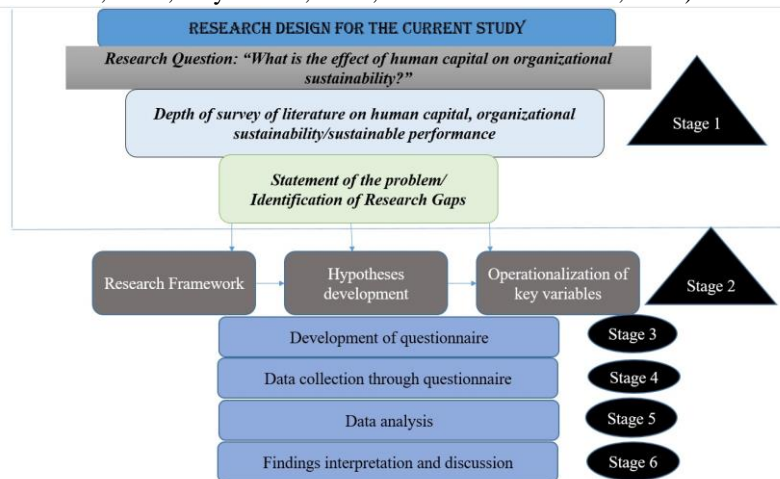
**Hypotheses 1: There is a significant relationship between human capital and organizational Sustainability**

#### 5. Research design:

This proposed research is adopted quantitative based methodology relying on prior literature convictions to compile a new insight while an ideal strategy for handling this research would be to conduct a questionnaire-based survey. The CFO/ manager of Bangladesh's ready-made garment (RMG) industries participates during the data collection process. Key decision-makers may handle data at the organizational unit level because they are the legitimate targets due to their particular position or technical knowledge (Phillips, 1981). The rationale for selecting RMG industries as a sampling frame is because economic theory implies that the earnings of exports are one of the critical drivers of economic expansion. It asserts that an economy can accelerate its overall growth rate by increasing export earnings, and hence that export earnings can act as a "game-changer" (Islam, 2021). Another justification for selecting the top most registered RMG companies is that Bangladesh Garment Manufacturers and Exporters Association (BGMEA) has kept its efforts economically, socially, and environmentally sustainable relative to other industries (BGMEA, 2020).

A standardized questionnaire will be conducted to obtain data on the firm's HC and organizational sustainability performance. The main advantages of using a questionnaire are that it is quite economical; secondly, it is free of prejudice since the responders have a list of choices. Finally, respondents are given sufficient time to answer well (Pandey & Pandey, 2015). The questionnaire's language will be majorly in English because the respondents chosen for this study are enough professionals to extract accurate and unbiased outcomes; thus, it is an effective process for the proposed research. However, the questionnaire should measure the proposed variables (Rattray & Jones, 2007).

When developing a new measurement, which scale and response format to imply is inevitable. The Likert scale method is selected based on the previous studies' investigation utilizing both positive and negative responses. This study evaluates all variables using items from the relevant literature, with slight modifications to correspond with the research context. With this aim, eight variables will be measured using seven-point Likert scale questions that solicit participants' opinions on various aspects of the primary constructs of interest. Six dimensions have been adopted to measure HC, based on pertinent earlier studies and the latest trends (OlatunbosunEmmanuel et al., 2015; Prajogo & Oke, 2016; Slavković & Ognjanović, 2019). To this end, the triple-bottom-line with three parameters has been followed because it is the most accepted approach to think about a firm's sustainability more holistically (Akhtar et al., 2015; Goyal et al., 2013; Lee & Ha-Brookshire, 2017).



**Figure 2: Research design for the current study**

Figure 2 displays the current study's research design, which outlines the distinct stages of the investigation. According to (Kilani & Kobziev, 2016), research design seeks to present a clear image of the research structure and the procedures utilized, such as data collection, research issues, and data sources. Furthermore, an empirical research design provides an outline and planning procedure about the techniques, mechanisms, and systems for accumulating and portraying the essential information for the study. The aim is to ensure that the information gleaned effectively solves the problem. The proposed conceptual intensive study inaugurated with the research question: "What is the effect of human capital on organizational sustainability?" Stage 1 of the research commences with investigating the literature to find out the statement of the problem ultimately research gaps. Following, stage 2 will construct the research framework and formulate hypotheses to operationalize key variables. However, stage 3 and stage 4 are both involved in data collection through the questionnaire. In the final analysis at stages 5 and 6, data analysis and the findings will be interpreted and discussed, respectively.

## 6. Conclusion:

This conceptual paper hypothesizes that HC is a component of intellectual capital and distinctively plays a crucial role in increasing organizational sustainability. From the vantage point of view of "intellectual capital-based theory," knowledge-based assets, such as HC, is four-star for the organization's long-term success. The justification behind conducting the study is to provide new insights that companies need to assess the value of HC in the knowledge-based era due to globalization, market demand, increasing competition, etc., for acquiring competitive advantage towards organizational sustainability.

This study possibly has some theoretical and practical implications. Preceding research relied on human capital theory (Felicio et al., 2014; Slavković & Ognjanović, 2019), with the majority on the resource-based view (Andersén, 2021; Huo et al., 2016; E. A. Khan & Quaddus, 2018; Prajogo & Oke, 2016; M. M. Rahman & Akhter, 2021; Savitri & Syahza, 2019; Seclen-Luna et al., 2020) as the theoretical contribution. To the best of the authors' knowledge, this is one of the unique endeavors to construct a model from the core conception of intellectual capital-based view that investigates HC and organizational sustainability. In the light of the possible findings, the current study has contributed to the existing literature by providing a new intuition that unique levels of HC are inevitable to enhance the firm's performance in a long way. Furthermore, sustainability is a broad and complicated area that requires knowledge and practical expertise to harmonize social, environmental, and financial performance. Therefore, the objective of the present study can be considered worthwhile. Practically, the model can provide perspectives into how practitioners and organizations select metrics that emphasize valuable information about HC as a strategic resource for gaining organizational sustainability. Briefly, the conceptual framework may assist in establishing an outline to put down the company's underlying success, which is knowledge-based resources rather than tangible assets. Previous research has found that the human capital index is shallow in the context of Bangladesh (Absar, 2016) despite stakeholders' unanimous perceptions of the importance of HC. Therefore, this study can provide stakeholders with a compelling case for the internal factors, such as HC, that can contribute to long-term business performance, the ultimate goal of today's businesses. The current literature relies primarily on theoretical analysis and does not include actual data to support the assertions.

Nonetheless, this study may result in various measures leading to the empirical support of the testable assumption. Although the literature mainly contributed to the critical role of HC in improving the company's long-term performance, namely sustainability, future research can consider the value of management, control systems as a mediating factor to the progress of the current study. Further research may employ an empirical qualitative approach to investigate the impact of HC and organizational sustainability in charismatic settings and their evolution throughout the strategic transformation. Additionally, this conceptual model can imply in any industry to generalize the findings with valuable insights. This research is also concerned with the broad concept of human capital management, while the study will provide managers with crucial foresight for designing and adapting human capital management metrics for a particular business field in the future.



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