



# The Influence of Human Capital on Construction Projects' Management

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## Abstract

Financial, physical, and intangible assets represent most of a corporation's assets. Human capital is the most valuable intangible resource, and activities aimed at increasing productivity have expanded dramatically. Several studies show a close connection between an organization's human capital and its overall performance. According to businesses, an organization's market value is less dependent on tangible than intangible resources, such as its human capital. Today, many emerging economies lack financial and human capital, despite having an adequate labor force. To overcome a human capital shortage, companies must consistently increase their investments in employee development, ensuring that their human capital procedures are in place to ensure the project's success. Knowledge, skills, and capacities are essential success criteria contributing to a project's timely completion. The project's success depends on various elements, including physical and financial capital, technology, and people. As a result, human resources receive less attention throughout the initial stages of the project, which is a design flaw on the part of the project's creator. Human capital methods may help people get the essential knowledge, skills, and capabilities. These tactics not only create human capital but also help projects run smoothly. These characteristics are crucial for project success. Even though human capital practices are critical to the project's success, they have received little attention. The interference of project management and human capital is an under-researched area. The authors review the role and impact of human capital on project management. The research links human capital and project success by examining the effect of human capital development techniques. Following a general introduction, the relationship and interaction between human capital and project success are discussed based on the most recent literature. Despite the limited literature, the authors also attempt to explore the link with the construction sector.

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## 1. Introduction

Today's construction industry values human capital. Hence, human capital is considered across industries; hence, its meanings vary. This study investigates how human capital theory has changed through time, affects industry success and competitiveness, affects construction performance, and the growth of the construction industry's success. Human capital investment boosts employee happiness, culture, and productivity.

## 2. Project Management

Customer quality expectations require better project management. The project manager must identify critical success criteria. Managing projects and operations in unconventional circumstances require project managers to learn rapidly and communicate effectively [1]. Project managers have both technical and interpersonal duties [2]. 60% of initiatives fail due to inadequate HR management, making it the most challenging issue [1].

The project manager's principal goal is speed. Each project ends. Meeting deadlines is crucial for competitive advantage, shareholder value, and revenue [3,4]. Identifying the most crucial variables means finishing a project faster and making the most of project resources. Success, efficiency, and production will all increase. Business success requires quickly identifying important success characteristics.

Management responsibilities have risen due to socioeconomic and technological advancements in the workplace. The human capital development and upkeep are crucial for project success [5]. Human capital, emotional intelligence, project manager emotional competency, and employee well-being have received minimal attention [1,2].

## 3. Human capital

Adam Smith (1776), in his book *The Wealth of Nations*, said that health care education is crucial in all cultures to develop skills and knowledge. This philosophy created the "human capital" theory, encompassing talents, knowledge, health, and creativity [2].

The building business generates new financial resources and improves infrastructure, helping governments attain socioeconomic goals [6]. For long-term growth and sustainability, expertise is required from the beginning to the end of construction projects, impacting the economy and construction [3].

A company's assets are mostly money, equipment, and intangible assets [1,3]. The most valuable intangible asset is human capital [2], with the skills of education, competence, and experience [1], which require formal education and on-the-job training.

*Banik and Bhaumik define capital* as three assets [2]: physical, economic, and human capital. Physical capital comprises land, buildings, factories, and machinery that produce goods and services [2]. Financial capital alone cannot make products. Human capital can be divided into general HC (transferable abilities) and specific HC (training and education-based skills and knowledge required for a particular occupation). Investing in this crucial component of economic activity increases the company's assets.

There is a massive labor force in emerging economies but a scarcity of human capital [2]. Completing a project requires knowledge, skills, and talents [1], and additional training is necessary to ensure the project's success [1-3]. Project management requires EQ [3]. A team's performance depends on the project manager's motivation, which influences team success [3].

Even though the employees' well-being implies emotional intelligence and skill, and team satisfaction enhances project achievement, this topic is still understudied [1,3,5]. In a reciprocal relationship, human capital enhances human resources (HR), while HR values hardworking employees [1,7]. Human capital improves employee and business productivity [1,7], and its policies and procedures encourage competitive thinking and behavior [1,7].

## 4. Leadership

Leadership influences the organization's growth and viability [8-10]. Business and academia do not comprehend what constitutes a successful project or how to lead one [1,10-12]. Even though MBTI, Belbin, and 16PF are not leadership tests, they are employed by project managers to investigate the impact that management styles have on the outcomes of their endeavors [13].

Several studies on leadership include leader traits and job performance [10,12]. More focus has been placed on leaders' activities, interactions with followers, organizational culture, emotional intelligence, and team engagement [10].

Leadership theory focuses on influential leaders [10]. Dulewicz and Higgs (2003) selected 15 leadership skills based on approaches and measures to examine this phenomenon because skills, knowledge, and personality affect performance [12]. The primary project manager skills are problem-solving, results-focused, self-confidence, and good communication [9,12,14].

Even though emotional intelligence is crucial to project performance, some authors, such as Geoghegan and Dulewicz (2008) and Maqbool et al. (2017), claim that research on the factors that contribute to a project's success undervalues the role of the project manager [15].

## **5. Project Success**

Research modifies the project success definition. This technique first prioritized the Iron Triangle (cost, time, and quality), but early in the 21st century, a project's success was determined by its contribution to achieving business objectives, focusing on the satisfaction of customers and enterprises, as well as the effectiveness of short-term and long-term projects [10].

A project's performance depends on financial, physical, and procedural factors. Since objectives and criteria influence project outcomes, managers must establish success criteria, prioritizing tasks to be completed on time and within budget [1,7].

In 1995, Wateridge discovered the requirements for success: earning money, making users happy, adhering to a budget, and having a specific goal; and in 2006, Turner and Müller founded PEM, a model with eight success criteria factors to evaluate how leadership impacts project success [10].

## **6. Project Type**

More projects require innovative methods. Various projects differ in size, complexity, and technology, among other characteristics. Classifying projects permits a comparison of how they are managed, and organizing them into categories facilitates their connection to company objectives and improves project management [5].

Some projects improve an existing product or service, bringing in more money for the business. A project manager's leadership and effectiveness are affected by the project's characteristics, and the ability to execute a project depends on its strategic significance and degree of complexity [10].

## **7. Human Capital and Construction Project Success Through Emotional Intelligence**

Project managers are confronted with a dynamic and complex environment every day. Emotional intelligence is one of the skills that, when enhanced, will significantly impact project success [9,10]. Researchers analyzed the correlation between training, teamwork, trust, and project success metrics like delivering on time and within budget [1,7].

In order to succeed in today's cutthroat trading environment, companies must complete projects on schedule and under budget. The success of a project depends on people, technology, physical space, and financial capital. Even though HC affects project success, it is disregarded early in a project [16].

Human capital is essential for optimizing other resources. Employees are the source of any organization's or project's success and profits. HC must aid in completing a project by ensuring that the team employs effective human resource procedures and has effective training programs. Businesses must modernize their human capital policies and procedures to boost employee performance and complete more tasks [1].

A combination of characteristics, including responsibility, success, charisma, and communication skills, is necessary for effective leadership [10]. The success or failure of a group or organization depends almost

entirely on its chief executive's personality and leadership abilities [1,3,10]. The administration and execution of projects necessitate managerial leadership competencies and emotional intelligence, with leadership roles requiring greater emotional intelligence levels [10].

To encourage economic progress and improve people's lives, HC invests in acquiring knowledge and expertise. Its success depends on the quality of the work performed by its employees. The human capital approach, which emphasizes education, is associated with increased productivity [9,10,16]. Knowledge, abilities, and other forms of human capital make up the HC theoretical framework. Training construction employees benefit greatly from [3]. Scientists say that people are more likely to be successful if they have more education. HC needs to be flexible, knowledgeable, and quick on its feet to keep up with the evolving construction industry. In HC's view, increased output in the business sector directly results from graduating students' acquiring the requisite skills.

## 8. Conclusion

This research looked at how the human capital theory influences employment opportunities for recent college grads in the construction industry. Industrialized nations' GDP relies on worker training, which has led to increased knowledge and productivity. HC's societal benefits have an impact on economic growth over the long term.

HC encourages individuals to expand their horizons and acquire the skills necessary to improve their quality of life, increase their income, and alleviate or avoid poverty. To combat capitalism, human forces are essential. The literature on HC growth demonstrates a connection to the construction sector as well as other consequences.

Smart investments in HC development can improve construction sector efficiency, quality, and competitiveness in developing nations. To keep up with globalization and IT, businesses and stakeholders must review and revise their people development policies.

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