



THE IMPACT OF HUMAN CAPITAL INVESTMENT ON FIRM'S PERFORMANCE: INSIGHTS FROM THE LITERATURE

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ABSTRACT

With growing globalisation, competition in the market, and oversaturation of human resources, human capital is gaining more importance. Global North countries and emerging nations prioritise the development of human capital to accelerate economic growth through the necessary allocation of time and resources. The development of human capital is one of the key strategies for leading the global market. The idea of human capital was traced in the 18th century by Adam Smith and he suggested that improving human capital through training and education leads to more profitable enterprises. The concept of human capital (HC) was coined by Theodore Schultz, who defined human capital as "skills, knowledge, and similar attributes that affect particular human capabilities to do productive work." HC directly impacts on productivity, innovation, and overall competitiveness. The efficient management of HC has become a key determinant of a company's ability to adapt, grow, and maintain a sustainable competitive advantage in the dynamic business environment. So far, firms need to invest in the development of human capital. Investments made in the improvement of skills, knowledge, and education of human resources can enhance firm performance. In this context, many studies have taken place. The current study reviews the literature available from India and outside India on the same perception. Through examining the current literature, researchers can find further scope for research in the area and enhance our understanding of the concept.

KEYWORDS: Human capital investment, skill, knowledge, firm performance, global review, further scope.

INTRODUCTION

Classical economists define four factors of production, such are land, labour, capital, and Organisation. Here Labour refers to Human resources. 4 M's of management viz. Man, Machine, Material, and Method. Which also includes man, which again describes Human resources. In both cases, human resources take a vital role, here human resources denote the level of capable manpower, who have best of the knowledge, education, skills, and expertise in their work. In the same manner the term 'Human capital' refers to the collective skills, knowledge, experience, and expertise of an organization's employees, which directly impacts its productivity, innovation, and overall competitiveness. The efficient management of human capital has become a key determinant of a company's ability to adapt, grow, and maintain a sustainable competitive advantage in the dynamic business environment.

The skills and knowledge individuals accumulate through schooling, experience, on-the-job training, etc. Human capital raises an individual's productivity in the labour market and increases his or her wage. To improve employee performance organisations, need to spend more on human capital. Spending on education and training is considered an investment in human capital. Firms invest to develop employees and make them more suitable for their work. Human capital investment includes staff hiring and recruitment, training and development, salaries, wages, incentive compensation, pension cost and retirement benefits.

The enhancement of human capital through investment in training and development leads to improvement in the performance of an organisation. Performance may be in kinds of financial as well as non-financial. The Financial performance viz. Return on Investment, Return on Equity, and Net profit margin. Non-financial performance includes the productivity and efficiency of employees. In this manner, investment in human capital impact on both the performances.

OBJECTIVES OF THE STUDY

1. To study the existing literature on human capital and its impact on firm's performance.
2. To Identify Gaps and Opportunities for Future Research.

REVIEW OF LITERATURE

In the context of shifting the economy from manufacturing to service sector, increasing the role of human resources in contributing to the economy in preparing for developing and developed economies and contributing more towards GDP and national income. Researchers need to investigate more on this valuable resource, the researcher must be knowledgeable about earlier theories and research findings in the areas of inquiry or studies. Reviewing relevant literature is necessary for the current research project to be successful. A researcher can identify the methodology, research design, concepts to be measured, study techniques, etc. with the help of a review of the literature.

A literature review on human capital investment and performance, covers a broad range of topics concern to this area are narratively provided and summarised in the paper. Reviews are differentiated on various themes and present the kinds of literature as shown in the following topics,

- A. Concept and Development of Human Capital
- B. Human Capital Management and Performance
- C. Human Capital Investment
- D. Human Capital Investment and Firm Performance
- E. Human Capital Investment and Market Performance
- F. Human Capital Investment and Employee Performance

Each review theme was included in a described analysis of the relevant studies. Though as many of literatures are reviewed some of the prominent literatures was focused in this study.

A. Concept and Development of Human Capital

Under the theme of concept and development of human capital, studies are related with providing conceptual knowledge and phases of development of a thought of human capital. The researcher reviewed the eight articles on the theme, and major articles which provide a broad awareness on the theme are presented below.

(Schultz, 1961) emphasizes the importance of investing in human capital for economic development. He highlights the long-term benefits of education, training, and healthcare, as well as the quantitative and qualitative dimensions of human resources. The study also discusses policy implications, such as tax laws, unemployment, and professional choice, providing valuable insights for policymakers and economists.

(Ming Chen & Jun Lin, 2004) discuss the importance of human capital disclosure in accounting systems. They argue that human capital investments are crucial for companies' competitive advantages, but are often treated as expenses under GAAP. They propose a two-dimensional graph to measure and disclose human capital, focusing on the value and uniqueness of employees as key factors in determining human capital expenditure.

(Khan & Khan, 2010) examines human capital reporting practices in Bangladeshi firms using content analysis. The research analysed annual reports from 32 prominent companies on the Dhaka Stock Exchange. The findings show that reporting is more extensive than previously projected, with common disclosures including employee training, number of employees, career development opportunities, and recruitment policies.

(Hossain & Roy, 2016) highlights the importance of understanding human capital and its transition from HRM to human capital management. They argue that organizations gain a competitive advantage by employing an effective human resource base, improving employee knowledge and skills, and enhancing individual and organizational performance. From an organizational perspective, human capital is the most crucial factor for creating and sustaining a competitive advantage.

B. Human Capital Management and performance

Human capital management and performance A thematic study is conducted with literature surveys, the study is related to understanding the impact of the management of human capital on the performance of a firm. The researcher reviewed the six articles on this theme, and major articles that provide a broad awareness of the theme are presented.

(Jamal & Saif, 2011) studied the relationship between human capital management and organisational performance. The study divided human capital management into five factors leadership practice, workforce optimisation,

knowledge, learning capacity, and employee engagement. Performance is segregated into profit growth, sales growth, success rate in new launches, and overall performance and success. The result of the study shows that firms' human capital management has a positive impact on organisational performance.

(Chadha & Parimoo, 2017) explored the importance of human practices in banks for human capital development. It uses a literature review and data analysis to examine the relationship between human capital management (HCM) practices, employee performance, and organizational performance. The findings suggest that HCM practices positively impact organizational performance in the banking sector, emphasizing the need for investment in human resource training and development to enhance employee effectiveness and overall organizational success.

(Jain & Ahuja, 2019) have the objective to find the impact of human capital management practice on employee performance. the scope was limited to private educational institutions of Madhya Pradesh. 138 responses were chosen from 150 respondents as a sample for the study. The researcher used hypothesis testing with descriptive statistics and chi-square for analysis. The result of the study depicts that human capital management has a significant impact on the performance of employees.

Table 1: Summary of Literature Reviews on Human Capital Management and Performance

Sl. No.	Author and Year	Sample Size	Statistical Method	Key Findings
1	(Jamal & Saif, 2011)	316 employees and 16 executives.	Pearson correlation, and linear regression were used to test the hypothesis	firms' human capital management has a positive impact on organisational performance
2	(Odhong et al., 2014)		Correlation and Regression analysis	There is a positive correlation between 'leadership practices and employee engagement', and 'knowledge accessibility and organizational performance'.
3	(Chadha & Parimoo, 2017)		Literature based	Human capital management practices have a positive impact on organizational performance in the banking sector.
4	(Zeb et al., 2018)	272 Respondents of Pakistan telecom firms	Descriptive statistics, Correlation, and regression analysis	Human capital management practices are significantly related to each other and have a positive relationship with employees' work performance.
5	(Jain & Ahuja, 2019)	138 respondents from private educational institutions in Madhya Pradesh	Hypothesis testing, descriptive statistics, and chi-square	Human capital management has a significant impact on the performance of employees.
6	(Al-Tit et al., 2022)	250 employees from IT companies	Cronbach Alpha and McDonald Omega reliability test. And Hypotheses testing.	significant impact on employee development with human capital through knowledge management

(Source: Compiled by Researcher)

C. Human Capital Investment

Under the theme of Human Capital Investment, regarding the concept of investment on human for development of skill, knowledge and expertise and effectiveness on the earning performance and productivity. Researcher found less number of literature on conceptual of the human capital investment. The studies found on concepts are presented below.

(Becker, 1962) explored the concept of investing in human capital and its impact on future earnings and well-being. He argues that individuals can increase their earning potential by investing in education, training, and skills improvement. Becker also discusses the role of employers in providing training and the impact of turnover on training analysis. The analysis emphasizes the importance of prioritizing education and training for economic growth.



(Kwon & Rupp, 2013) focused on understanding the relationship between high performer turnover and firm performance with HCI, found a significant negative relationship. And also found that HCI moderates the relationship, with firms that have higher HCI experiencing a weaker negative effect on firm performance from high-performer turnover.

D. Impact of Human Capital Investment on Firm Performance

In the purview of the theme, 'impact of human capital investment on firm performance' many studies have undergone to understand the effect on a firm's performance from the investment made on human capital. The researcher reviewed twelve articles on the theme, eight major reviews are presented below.

(Samad, 2013) aims at finding the relation between human capital and business performance, data for the study were collected from 390 managerial staff of Malaysian logistics companies. Hypotheses were tested with a t-test and a relation is found with a correlation coefficient. The findings indicated that human capital aspects influenced business performance. This implies that competency and creativity have significantly enhanced the business performance.

(Talan et al., 2017) aim at defining the relation between HR expenditure and the performance of BSE Sensex 30 firms. For the study data has been collected regarding expenditure on HR and Profit After Tax from 2007 to 2016. The result of correlation shows that expenditure of HR positively relates to firm performance. And result of regression reveals that HR expenditure has a significant effect on the financial performance of selected firms.

(Ngwakwe & Makgata, 2017) explored the relationship between human capital investment and company sales turnover. The study evaluates how investments in employee skills, development, health, and safety can improve company performance using a quantitative approach. The findings indicate a significant positive relationship between health and safety investment and sales turnover. The study recommended that companies need to invest strategically to enhance corporate sales turnover.

(Osho & Obiazonwa, 2018) studied to find relation between expenditure made on human capital and the financial performance of manufacturing companies with ROE, and ROA as key indicators of finance. The result indicated that human capital expenditure has significant relation with ROE and ROA. Researchers found that there is a positive impact on human expenditure and financial performance.

(Kamal & Begum, 2019) researchers aim to find the association between human capital and financial and non-financial performance. The study took market share, profit growth, sales growth under financial performance and employee satisfaction, employee productivity, and employee turnover under non-financial performance. The outcome of the study proved that there is a significant association between human capital on financial and nonfinancial performance of an organization.

(Olajumoke, 2020) provided a comprehensive analysis of the relationship between human resource costs and financial performance in Nigerian consumer goods companies. As a sample of the study 50 Quoted Manufacturing companies were chosen, The study examines the impact of human resource costs on return on asset. The findings of the study support the positive influence of human resource investments on financial performance. The study recommends a greater commitment to manpower development and the design of relevant retirement packages to improve performance

(Rahman & Akhter, 2021) examined the impact of human capital investment aspects on the performance of Bangladesh banks. The study used primary data, obtained by convenient sampling with a questionnaire from 261 participants. The result found that investment in training, knowledge, and skills of employees was positively connected to bank performance but employees' education level will not affect on output of banks in Bangladesh.

(Aman-Ullah et al., 2022) the researchers aim to investigate the impact of human capital capacity, human capital knowledge, and human skills on organisational performance in the hospitality industry of four districts of Saudi Arabia. Data collected through primary data from 356 managers. Data analysis made with partial least squared structured equation modelling. Results of the study clears that human capital has positive relation with organisational performance. Human capital capacity, HC knowledge, HC skill has positive impact on organisational performance.

Table 2: Summary of Literature Review on the Impact of HCI and Firm Performance

Sl N.	Author and Year	Sample Size	Statistical Method	Key Findings
1	(Ukenna et al., 2010)	25 Nigerian SSIs	Multiple Regression Model, ANOVA, t-tests, and Pearson correlation coefficient and hypotheses testing	Found a strong relationship between human capital effectiveness among both financial and non-financial performance of small-scale firms.
2	(Perera & Thrikawala, 2012)	40 companies from 20 business sectors	Hypotheses were formed and tested with F test and Correlation and Regression methods	There is a significant relationship between investment in human capital and a firm financial performance.
3	(Samad, 2013)	390 Managers	Hypotheses, t-test, and correlation coefficient	Human capital aspects of employees' competency and creativity influenced business performance
4	(Tessema, 2014)	143 sample SSI units	Correlation And Regression Analysis	Positive relation with human capital performance on a company's overall performance.
5	(Talan et al., 2017)	BSE Sensex 30 firms	Hypothesis, Correlation and Regressions	HR expenditure has a significant effect on the financial performance
6	(Ngwakwe & Makgata, 2017)	9 JSE listed companies	Correlation analysis	A significant positive relationship between health and safety investment and sales turnover
7	(Masuluke & Ngwakwe, 2018)	28 sample companies	Regression statistics and ANOVA	There is a significant relationship between human capital investment and sales turnover,
8	(Osho & Obiazonwa, 2018)	400 Respondents	Descriptive statistics and linear regression	There is a positive impact on human expenditure and financial performance.
9	(Kamal & Begum, 2019)	208 Respondents	Structural equation model (SEM), standard Multivariate analysis and Correlation and Regression	There is a significant association between human capital on the financial and non-financial performance of the organizations.
10	(Olajumoke, 2020)	50 Quoted Manufacturing Companies of Nigeria	Pooled Ordinary Least Squares Method Random Effects Model, and regression and correlation method	Positive influence of human resource investments on financial performance.
11	(Aman-Ullah et al., 2022)	356 managers	Partial least squared structured equation modelling.	Human capital capacity, HC knowledge, HC skill has positive impact on organisational performance

Source: Compiled by Researcher

E. Impact of Human Capital Investment on Market Performance

In the scope of the theme, ‘impact of human capital investment on market performance’ many studies have undergone with an intention to understand the impact of HCI on market performance. The researcher reviewed eight articles on the theme, eight major reviews are presented below.



(Yusuf, 2013) had an objective to determine the relation between human capital and EPS, human capital, and return on equity. 14 listed Nigerian banks were taken for the study; secondary data was collected for 5 years. The study found that efficient utilisation of human capital does not have any significant impact on return on equity, the size of the firm has a negative impact on ROE. And there is no association between EPS and human capital efficiency.

(Parham & Heling, 2015) explored the efficiency of human capital in value creation for Dutch production companies and its impact on their financial performance. The study uses data from 33 Dutch production companies over a period of 6 years. The data for the study is collected from the annual reports of the companies, the study uses regression analysis to analyse the relationship between HCE and corporate performance measures such as ROTA, ROE, and EP. The results show a positive relationship between human capital efficiency and all corporate performance measures.

(Sisodia et al., 2021) discussed with aim of finding a relation between human capital and firm value in Indian firms. The study utilised firm-level data from NSE-listed non-financial firms in India from 2001- 2019, data obtained from prowest database. The findings of the study suggest a positive relationship between human capital and firm value. Firms with better human capital command a better valuation in the market and impact is not influenced by firm size. Researchers recommended investing in human capital to improve performance and increase market value.

Sani Usam Gurowa and Abdulwahab (2018) in their study, investigated the relationship between financial performance and human capital efficiency, with impact of MPS, book value per share, and EPS on human capital efficiency. 7 listed companies were taken as sampling units, secondary data was used for the study and analysed data. Result reveals that an increase in human capital investment leads to an increase in book value per share but no relation between EPS, MPS, and investment in humans.

(Mohammed et al., 2022) intends to find the impact of human capital investment on the value of agribusiness firms listed in Nigeria. The study especially focuses on the influence of directors' remuneration, staff salaries, and wages on firm value, as measured by Tobin's Q from 2011 to 2020 with five sample units. The findings reveal that directors' remuneration has a negative effect on the firm value. In contrast, staff salary and wage costs are found to have negative but there is a significant impact on firm value.

(Lajili & Zeghal, 2006) aim to understand human capital disclosures' impact on firm valuation and performance in the context of knowledge-based economies. The study likely involves sampling publicly traded firms in the US. The study utilizes risk-adjusted measures for portfolio performance evaluation, such as Jensen's and Treynor's indices. The study found that higher levels of human capital, as captured by total labour expenditures and workforce productivity, are associated with higher abnormal returns.

(Onyekwelu et al., 2015) Studied the impact of human capital accounting on financial and market performance. Researchers selected five sample units. The study adopted both a survey and a descriptive approach. The study revealed that there is a positive impact on financial performance and a significant increase in firms' net worth by investment on human capital and there is a positive impact on the share price of a firm through investment on human capital.

(Olayiwola, 2016) investigated the effect of human capital accounting information on the market value of Nigerian manufacturing companies. Researcher used secondary data collected from annual reports of 50 sample companies. Pooled OLS model and fixed effect models are used for analysis. The result of study indicate that human capital cost have a significant impact on share price.

Table 3: Summary of Literature Review on Impact of HCI and Market Performance

Sl. No.	Author and Year	Sample Size	Statistical Method	Key Findings
1	(Yusuf, 2013)	14 listed Nigerian banks	Value-added intellectual coefficients approach(VAIC)	Efficient utilisation of human capital does not have any significant impact on return on equity, the size of the firm has a negative impact on ROE
2	(Parham & Heling, 2015)	33 production companies	VAIC approach. Regression Analysis	Positive relationship between human capital efficiency and corporate performance measures ROTA, ROE, and employee performance.
3	(Sisodia et al., 2021)	NSE-listed non-fin firms in India from 2001- 2019	Modified Cobb- Douglas production function model to analyse the relationship	There is a positive relationship between human capital and firm value.
4	(Sani Usamn Gurowa and Abdulwahab 2018)	7 listed companies	Multiple Regression model	An increase in human capital investment leads to an increase in book value per share but no relation between EPS, MPS
5	(Mohammed et al., 2022)	5 sample units	Ex post facto research design, Tobin's Q, Panel multiple regression.	Directors' remuneration has a negative effect on the firm value. In contrast, staff salary and wage costs are found to have negative but there is a significant impact on firm value.
6	(Lajili & Zeghal, 2006)	1165 sample units	Descriptive statistics	The results indicate that firms with stronger human capital performance indicators tend to outperform their peers in terms of portfolio performance
7	(Onyekwelu et al., 2015)	60 respondents	Percentages and Chi-square	There is a positive impact on financial performance, the share price of a firm and a significant increase in firms' net worth by HCI
8	(Olayiwola, 2016)	50 companies	Pooled OLS model and fixed effect model.	Findings indicate that human capital costs have a significant impact on share price.

Source: Compiled by Researcher

F. Impact of Human Capital Investment on employee performance

Under the theme, impact of human capital investment on employee performance, studies are related with finding the effect of employee performance through human capital investment. The researcher reviewed the five articles on the above theme, and major articles are presented below.

(Odhong et al., 2014) explore the impact of human capital management drivers on the performance of Investment among mortgage banks in Kenya. The research findings show that there is a positive correlation between 'leadership practices and employee engagement', and 'knowledge accessibility and organizational performance'. and a negative correlation between leadership practices, knowledge accessibility, and leadership practices and workforce optimization. However, there is a positive correlation between knowledge accessibility and workforce optimization. The regression analysis confirms the importance of these variables in explaining changes in organizational performance.

(Wang et al., 2008) aim at finding a relationship between human capital investment, organisational culture, and organisational performance. The researcher collected data through a questionnaire method from 150 respondents. Staff Recruitment and Selection, Inspiration, Training, and Development are considered as components of HCI. Organizational Leadership, Internal Trust Relation, Interpersonal relationships and Organizational Value, and Identification as components of Organizational Performance and Organizational Culture respectively. The study emphasized the importance of training and development for managers to enhance the potential of their followers can achieve organizational objectives.

(Bassey & Tapang, 2012) examine the influence of Expensed Human Resources Cost (HRC) on the corporate productivity of listed companies in the Nigeria Stock Exchange. 10 listed companies were selected as sample units. The study discusses the role of HRM practices in influencing employee skills, motivation, and job design, and how these factors contribute to organizational productivity. The findings of the study shows that there is a significant relation between protection cost and employee performance in an organisation.

(Rumawas, 2016) The study used factors like human resource development, compensation, and organisational performance to test the influence on employee performance. samples collected from 135 respondents. The study concluded that human resource development, organizational commitment, and compensation influence employee performance. Organizational Commitment, education, training, and compensation will improve employee performance.

Table 4: Summary of Literature Review on Impact of HCI and Employee Performance

Sl. No.	Author and Year	Sample Size	Statistical Method	Key Findings
1	(Wang et al., 2008)	150 respondents	Hypothesis testing and correlation, regression	The importance of training and development for managers to enhance the potential of their followers can achieve organizational objectives.
2	(Odhong et al., 2014)		Correlation and Regression analysis	There is a positive correlation between 'leadership practices and employee engagement', and 'knowledge accessibility and organizational performance'.
3	(Rahman & Akhter, 2021)	261 participants	Structural Equation Modelling and Correlation	Results found that investment in human capital is positively connected to bank performance but employees' education level will not effect on output of banks.
4	(Bassey & Tapang, 2012)	10 listed firms of Nigeria Stock Exchange.	Hypotheses with F test and Correlation, Regression	The findings of the study show that there is a significant relationship between protection costs and employee performance in the organisations
5	(Rumawas, 2016)	135 Respondents	F test, and regression coefficient	Human resource development, organizational commitment, and compensation influence employee performance.

Source: Compiled by Researcher

For this study, the researcher reviewed 39 existing articles relating to human capital, human capital investment, and the impact of human capital expenditure on firm performance, market performance, and employee performance. Many of the reviews are from outside India. The results of the studies are shown in the table presenting the summary of the literature review, with the sample selections and tests used. Based on the key findings of existing studies researcher tried to find the research gaps for further studies relating to the area of human capital investment.

Potential Research Gaps Based on Review of Earlier Studies.

On the bases of a wide range of reviews on earlier literature, researchers can suggest the area untouched by the human capital perspective. The following are the major gaps for further research around human capital investment.

- Sector-Specific Analysis in India- further studies can be made on different sectors in India. such as banking, healthcare, hospitality etc.
- Cross-sectoral comparative study - a comparative study of human capital investment in service companies and manufacturing companies.
- Longitudinal Study - Conducting a longitudinal study over a more extended period could provide insights into the long-term effects of human resource investments on financial performance.



- Geographic Comparison - Expanding the research to include companies from other regions or countries could offer a comparative analysis
- Detailed HR Cost Components – differentiate the costs into more specific components (e.g., training, recruitment, employee benefits) to determine which investments have the most significant impact on financial performance.

CONCLUSION

In conclusion, the review paper enlightens on the crucial role of human capital investment and highlights its role in enhancing firm performance, market performance, and employee performance. Strategic investments increase productivity, innovation, and financial success while enhancing employee skills, knowledge, and the reputation of firm. The study suggests further areas for future research on investment in human capital, constructed on the ideas and knowledge gained from the present literature in the field of human capital, the study ends with outlining important topics for further studies.

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