

# Development of Human Capital Indicators to Improve Employee Performance

Rizka Apriani Daulay<sup>1</sup>, Dimas Anggi Restu<sup>2</sup>, Mohammad Hamidul Haqqe<sup>3</sup>

UIN Fatmawati Sukarno Bengkulu<sup>1,2</sup>

American International University of Bangladesh, Bangladesh<sup>3</sup>

e-mail:

<sup>1</sup>daulayrisk24@gmail.com

<sup>2</sup>skywhy104@gmail.com

<sup>3</sup>mohammadhamidulhaqqe@aiub.edu

**ABSTRACT.** This article provides a review of various theories, models, and methods used to measure, develop, and utilize human capital. The review evaluates and compares different approaches, theories, and methodologies used in human capital research. The authors aim to identify trends and areas of research that require further exploration. The article also discusses the difference between human capital and human resources and various methods used to measure human capital. The research methodology used in the study involved a three-way approach, including field research, literature review, and open-ended questionnaires. The article discusses the importance of developing and measuring human capital indicators for organizations to improve their effectiveness and productivity. It highlights three stages of research to identify key human capital indicators, including employee competence, job accountability, professional experience, employee commitment, teamwork, skills, creativity, professional knowledge, organizational tenure, and education level. The article also emphasizes the importance of managing and measuring human capital sustainably to improve organizational effectiveness. The study concludes that education and health play a vital role in developing human capital and contributing to regional economic growth.

**Kata kunci:** Indicator; Human Capital; Employee Performance;

## INTRODUCTION

In the era of globalization and intense competition, attention to human capital management is increasing. Human capital, namely the knowledge, skills and abilities of individuals in an organization, has been recognized as a very valuable asset in achieving competitive advantage. This literature review was conducted to review and compare various theories, models and methods used in measuring, developing and utilizing human capital. It is hoped that this review will provide deeper insight into effective human capital management strategies.

This literature review was conducted to evaluate and compare various approaches, theories and methodologies used in research related to Human Capital. By looking at the body of research, we hope to identify trends and areas of research that still require further exploration. We reviewed research articles conducted by Tzu-Shian Han, Carol Yeh-Yun Lin of National Chengchi University and Mavis Yi Ching Chen of Taiwan's Ming Chuan University. They researched the development of human capital indicators using a three-way approach in research entitled "Developing Human Capital Indicators: A Three-Way Approach." The method used in this research used field research and literature review. In the 3 approaches used, 2 approaches used observational research techniques using research instruments in the form of questionnaires given to selected respondents. We reviewed research articles conducted by Tzu-Shian Han, Carol Yeh-

Yun Lin of National Chengchi University and Mavis Yi Ching Chen of Taiwan's Ming Chuan University. They researched the development of human capital indicators using a three-way approach in research entitled "Developing Human Capital Indicators: A Three-Way Approach." The method used in this research used field research and literature review. In the 3 approaches used, 2 approaches used observational research techniques using research instruments in the form of questionnaires given to selected respondents. (Han, Lin, & Chen, 2008)

Human resources are considered one of the most important resources of a company today. To achieve desired performance, organizations must understand the expectations of their workforce. Understanding employee expectations allows them to demonstrate desired behavior in the organization. Some of the outcomes an organization desires when managing its workforce are: competence, employee-manager cooperation, employee-employee cooperation.

The term 'human capital' originates from human capital theory, which refers to knowledge, attitudes and skills that are developed and valued primarily for their economic productive potential. (Han et al., 2008). Human capital is the knowledge, skills, experience and abilities of individuals in an organization. Human capital is individual and related to the employee's ability to produce added value for the organization. Human capital can be increased through education, training, employee development and work experience (Adriani, 2019).

Sumber daya manusia (SDM) adalah istilah yang digunakan untuk merujuk pada individu-individu yang merupakan tenaga kerja dalam suatu organisasi atau masyarakat. SDM mencakup semua orang yang berkontribusi pada kegiatan dan tujuan organisasi. Ini melibatkan aspek-aspek seperti pengetahuan, keterampilan, pengalaman, kompetensi, kepemimpinan, motivasi, dan hubungan interpersonal individu tersebut.

Perbedaan antara modal manusia dan sumber daya manusia terletak pada konsep dan penggunaannya dalam konteks yang berbeda. Modal manusia mengacu pada pengetahuan, keterampilan, pengalaman, dan kemampuan individu dalam suatu organisasi. Modal manusia bersifat individu dan terkait dengan kemampuan karyawan dalam menghasilkan nilai tambah bagi organisasi. Modal manusia dapat ditingkatkan melalui pendidikan, pelatihan, pengembangan karyawan, dan pengalaman kerja. Sedangkan Sumber daya manusia (SDM) merujuk pada fungsi manajemen yang berhubungan dengan pengelolaan tenaga kerja dalam organisasi. SDM melibatkan perencanaan, perekrutan, seleksi, pelatihan, pengembangan, kompensasi, dan manajemen kinerja karyawan. (Setiorini, MM, 2018)

There are several methods for measuring human capital. (Hidayat, 2013) in his research citing Bong (2009) stated that there are two main methods, the first is the Conventional Measurement Method of Human Capital, and the second is the Demerits of the Conventional Measurement and New Possibilities. Conventional methods include, among others, Output-Based Approach, Cost-Based Approach, Income-Based Approach, Based on OECD Measures. The choice of method is related to the procedure or process for carrying out measurements.

Output-Based Approach is an approach that focuses on measuring human capital based on the results or output produced by individuals or groups. Examples include measuring human capital based on productivity, the quality of products or services produced, or the impact of individual performance on organizational goals. The Cost-Based Approach is an approach that involves measuring human capital based on the costs incurred to recruit, train, develop and retain employees. Income-Based Approach is an approach based on the potential income generated by individuals or groups as a result of their knowledge, skills and experience. This method involves calculating potential future earnings based on factors such as education, work experience, and previous income levels. Based on OECD Measures: OECD (Organization for Economic Cooperation and Development) or measurements based on the Organization for Economic Cooperation and Development provide a framework for measuring human capital which involves aspects of education, skills, health and participation in economic activities. This approach attempts

to combine various aspects of human capital and provides a comprehensive framework. (Hidayat, 2013)

## METHOD

Researchers use secondary literature or literature reviews to compare theories, methods and research results from journals that researchers review with other reference sources related to the same research topic, namely Human Capital. Secondary literature is secondary literature which refers to sources that interpret or analyze primary sources. This is a type of scientific or academic work that provides an overview, analysis, or evaluation of primary sources, rather than presenting original research or direct observations. Secondary literature can include books, review articles, literature reviews, textbooks, and scholarly articles that summarize, critique, or provide context to primary sources. (Suryana, 2010)

The main literature in this research is research conducted by Tzu-Shian Han, Carol Yeh-Yun Lin from National Chengchi University, and Mavis Yi Ching Chen from Taiwan's Ming Chuan University. They researched the development of human capital indicators using a three-way approach in research entitled "Developing Human Capital Indicators: A Three-Way Approach." Other research that is a reference source in this literature review includes research conducted by Evi Adriani in 2019 in her research entitled "Human Capital Measurement (A Literature Study)." It states that initial abilities (whether acquired or innate) and skills are acquired through formal training in the workplace. There are 2 streams of human capital literature. The first is to estimate human capital investment related to the internal rate of return and the second is related to lifetime income

The two studies were conducted by Cecep Hidayat in 2013 in "Analysis of Human Capital Measurement Models in Organizations." which discusses several approaches to measuring human capital indicators. The dimensions of human capital measurement can be grouped into individual, human capital, and production-oriented aspects. Determining the dimensions and indicators for measuring human capital is also influenced by the situation, conditions, and scope of the research.

## RESULTS AND DISCUSSION

The results of research by Carol Yeh Yunlin and friends in analyzing human capital indicators in Taiwanese companies using 3 approaches obtained the following results:

**Table 1. Stages of Capital Indicator Analysis**

THE FIRST STAGE	SECOND STAGE	THIRD PHASE
Employee Competency	Employee Competency	Employee competency
Job Accountability	Job accountability	Professional tenure
Professional Tenure	Professional tenure	Employee commitment
Employee Cohesive Strength	Employee commitment	Employee cooperation
Organization Identification	Employee cooperation	Employee skills
Employee Cooperation	Employee skills	Employee creativity
Management Team Leadership	Employee creativity	Employee professional
Skills	Employee Professional Knowledge	knowledge
Job satisfaction	Communication skills	Organizational tenure
Professional Tenure	Personal characteristics of	Level of education
Level of education	employees	

Based on the IPO framework (Input Process, Output) Ten final practical human capital indicators are examined based on the three issues above. The table above reveals that five human

capital indicators are included in 'input', two indicators are included in "process" and five indicators are included in "Output". Employee skills and employee professional knowledge simultaneously fall into 'input' and 'process', as professional skills and knowledge can be acquired before the employee enters the company or enhanced through comprehensive development within the company.

Based on the journal, the top 5 indicators for company employees in Taiwan include; Employee competency, work accountability, professional tenure, employee commitment and employee cooperation.

In Indonesia research on Human Capital is also carried out. Based on research conducted by Evi Adriani in 2019 in her research entitled "Measurement of Human Capital (A Literature Study)." He put forward another approach to measuring human capital, namely the education-based approach. The education-based approach estimates human capital by measuring educational output through indicators of literacy rates, enrollment rates, dropout rates, repetition rates, average years of schooling in the population ( average years of schooling in the population), and test scores. Education can improve well-being not only by opening up wider economic opportunities, but also through non-market benefits such as improved health, nutrition, fertility, parenting, children, opportunities for self-fulfillment, enjoyment and development of individual abilities.

Research conducted by Anwar (2017) in his research entitled "The Role of Human Capital in Regional Economic Growth on the Island of Java" states that education and health have a positive contribution to regional economic growth. This indicates the important role of education as one of the main sources for achieving better economic development. (Anwar, 2017)

Amanda Setiorini (2018) in her research also explains that human capital is a scarce resource that must be developed, education and health are considered key variables in explaining economic development in the 20th century. These resources were finally overlooked because the commonly understood production function could not explain the growth caused by technological progress which required human capital in.

Based on the statement above, in Indonesia education has a very important role in developing human capital. Some of the roles of education in building human capital include; a. Knowledge and Skills Improvement provides opportunities for individuals to obtain the knowledge and skills needed in the world of work. Through formal education such as school and college, individuals can gain academic knowledge, technical skills, and understanding of various disciplines; b. Development of Thinking and Analysis Skills. Education helps individuals develop critical thinking, analytical and problem-solving skills. Through education, individuals learn to collect, analyze, and evaluate information systematically and rationally; c. Increased Social Mobility: Education can play a role in increasing an individual's social mobility. With a good education, individuals have a greater opportunity to improve their social and economic status, overcome existing social limitations, and achieve greater success in life.

## CONCLUSION

In this article, the author discusses various theories, models, and methods used to measure, develop, and utilize human capital. The main focus is on a study conducted by Tzu-Shian Han, Carol Yeh-Yun Lin, and Mavis Yi Ching Chen, who developed human capital indicators using a three-pronged approach. This article highlights the importance of developing and measuring human capital indicators for organizations to improve their effectiveness and productivity.

This study shows that education and health play an important role in developing human capital and contributing to regional economic growth. This article also emphasizes the importance of managing and measuring human capital on an ongoing basis to improve organizational

effectiveness. This study provides three research stages to identify key human capital indicators, including employee competency, job accountability, professional experience, employee commitment, teamwork, skills, creativity, professional knowledge, years of service in the organization, and education level. In conclusion, this article provides useful insights for organizations to develop and measure their human capital effectively and sustainably.

## REFERENCES

- Adriani, E. (2019). Pengukuran Modal Manusia (Suatu Studi Literatur). *J-MAS (Jurnal Manajemen Dan Sains)*, 4(1), 176. <https://doi.org/10.33087/jmas.v4i1.86>
- Anwar, A. (2017). Peran Modal Manusia Terhadap Pertumbuhan Ekonomi Regional Di Jawa. *Jurnal Economia*, 13(1), 79. <https://doi.org/10.21831/economia.v13i1.13323>
- Han, T. S., Lin, C. Y. Y., & Chen, M. Y. C. (2008). Developing human capital indicators: A three-way approach. *International Journal of Learning and Intellectual Capital*, 5(3–4), 387–403. <https://doi.org/10.1504/IJLIC.2008.021018>
- Hidayat, C. (2013). Analisis Model Pengukuran Human Capital dalam Organisasi. *Binus Business Review*, 4(2), 879–885. <https://doi.org/10.21512/bbr.v4i2.1403>
- Setiorini, MM., A. (2018). Pengelolaan Modal Manusia Dalam Kaitannya Dengan Manajemen Kinerja. *Jurnal Manajemen Bisnis Krisnadwipayana*, 6(1), 48–57. <https://doi.org/10.35137/jmbk.v6i1.173>
- Suryana. (2010). Metodologi Penelitian. Universitas Pendidikan Indonesia.