
IMPACT OF CHANGES TO THE DIGITALIZATION SYSTEM ON EMPLOYEE PERFORMANCE: LITERATURE REVIEW STUDY

Egit Fahri Gunawan¹

¹Pascasarjana Manajemen,
Universitas Negeri Malang, Indonesia
E-mail: egit.fahri.2204138@students.um.ac.id

Sopiah²

²Pascasarjana Manajemen,
Universitas Negeri Malang, Indonesia
E-mail: sopiah.fe@um.ac.id

Article History:

Received:

18 March 2025

Revised:

13 April 2025

Accepted:

20 April 2025

Keywords: *digitalization,
employee performance, human
resources*

Abstract: *Digitizing changes in employee performance. In this digital era, Human Resources (HR) is very important or very much needed. Management of Human Resources (HR) must be integrated with technological developments to achieve effectiveness and efficiency. Employees are the most important people in realizing the vision, mission and goals of an organization. Employee performance is one of the metrics that companies must consider. Creating a company with superior quality requires improving employee performance by improving skills. This is an opportunity for the organization or company to increase the productivity of others, such as employee work assignments. This research method adopts a literature search method. The method used is a literature survey using secondary data, where the authors collect data on a related topic and extract information from various Scopus indexed journals. This article aims to review the effect of digitization on employee performance. The results of this literature review section suggest that changes in digitization can affect employee performance in organizations or companies.*

INTRODUCTION

In the era of digitalization, the Human Resources (HR) factor is a major issue that can affect all areas of life. This is because technological advancements are occurring at a relatively rapid rate, which means that in order for humans to maintain their viability and maintain their ability to compete in the global labor market, they need to remain current with regard to existing trends and master digital skills (Baharrudin et al. 2021). The arrival of the digital age has also meant the replacement of some older technologies with ones that are both more advanced and more useful for modern life (Baharrudin et al. 2021). To deal with it properly, we therefore prepare very

mature Human Resources (HR).

In this digital era, Human Resource Management (HR) is very crucial or really needed. To achieve the effectiveness and efficiency of the management of Human Resources (HR) needs to be integrated with technological developments (Ritter and Pedersen 2020). Collaboration from all stakeholders (Management, Employees) is one of the keys in implementing digital-based HR management. In addition, the digital strategy in HR management requires technology support that is not only developed by the company internally, but involves the development of technology from external companies as a provider of digital platform services or the company's backbone for company operations and customer involvement in company development.

It is impossible to overstate the significance of human resources to any institution or business (Azahary and Pradana 2021). Human resources are the key to company development. In addition to other elements such as capital, human resources are among the most significant aspects of a company. This is due to the fact that human resources (HR) need to be managed effectively in order to boost the organization's overall effectiveness and efficiency (Suswardji, Aziz, and Wulandari 2020). Human resources are the individuals who work in an organization and are responsible for promoting it, thinking it through, and planning how to attain its goals (Maksum and Fitria 2021).

Employees are not only resources, but they are a form of capital and assets of an organization or company. Therefore, a new term appears besides human resources, namely human capital. Human resources are seen not only as a great asset, but on the contrary as an asset that can be developed by multiplying (compared to an investment portfolio) not as a burden (cost). Here we focus on the human resource perspective as an investment in institutions and organizations.

So that in the end it can be concluded that the change in the digitalization system is where the process of utilizing information and communication technology to transform the activities of the community, the business world, and the government in conducting business processes so that their needs can be met more quickly, easily, and comfortably. One of the changes in digitization discussed in this article is how changes in the digitization system affect employee performance. The change in the digitization system here is a process of change that occurs in analog technology to digital technology. The term "digital transformation" refers to a more general phenomenon whereby businesses drastically alter how they operate by integrating new forms of human interaction and digital tools (Maksum and Fitria 2021).

Based on the description that has been described above, the authors suspect that there is an Impact of Changes in the Digitalization System on Employee Performance. Therefore, the authors conducted a literature review on the impact of changes in the digitization system on employee performance. Because the phenomenon of digitalization change is an interesting topic to study.

METHOD

In compiling scientific papers should be arranged according to the system, sequentially or from beginning to end. This research method adopted the literature search method. The method used was a literature survey using secondary data, where the authors collect data on a related topic and extract information from various Scopus

indexed journals. The collected articles were read and carefully scrutinized to determine whether they met the researcher's criteria for use as literature for writing a literature review. Search was limited to 2018 to 2022 and could be accessed in full text in the PDF form. The sources referred to in this article could be used as the basis for efforts to develop human resources through the influence of changes in the digitalization system in improving employee performance.

Based on the formulation of the problem in writing this article and literature review studies from various related articles, the form of the framework for this article can be seen as follows:

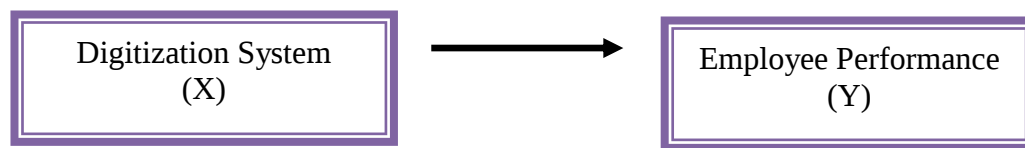


Diagram : Digitization System (X) Against Employee Performance (Y)

Author and Year	Title	Publisher
Mergel, I., Edelmann, N., & Haug, N. (2019).	Expert interviews ☆. Government Information Quarterly, 36(4), 101385.	Elsevier
Heredia et al (2022)	Journal of Innovation. Journal of Innovation & Knowledge, 7(2), 100171.	Journal of Innovation & Knowledge
Blanka, Krumay, and Rueckel (2022)	Technological forecasts and social change Interplay between digital transformation and employee capabilities : A design science approach. technology prediction and social change, 178(February), 121575.	Elsevier
Ritter and Pedersen (2020)	Digitization Skills and Digitization of Business Models in Business-to-Business Enterprises: Past, Present and Future of Industry Marketing Management,86(August 2019), 180–190.	Elsevier
Opland et al. (2022)	Employee-Centric Digital Innovation: systematic reviews and research questions. Journal of Economic Research,143(December 2020), 255–271.	Elsevier
Kindermann et al. (2021)	Digital Orientation: Envisioning and Operationalizing New Strategic Orientation. European Management Journal,.	Elsevier

Stief et al. (2018)	A new methodology to analyze the functional and physical architecture of existing products for an assembly oriented product family identification	Elsevier
Hole, Hole, and McFalone-Shaw (2021)	International Journal of Pharmaceutics: X Digitizing the Pharmaceutical Industry: What should be noted in the digital implementation process? International Journal of Pharmaceutics: X, 3, 100095.	Elsevier
Fogoros et al (2020)	Research on employee performance evaluation methods associated with digitalization.	Sciendo
Ilyas and Bahagia (2021)	Dampak Digitalisasi Pelayanan Publik Terhadap Kinerja Pegawai Selama Pandemi di Lembaga Diklat Pendidikan dan Pelatihan	<i>Research & Learning in Education</i>
(Sulistianingtiyas and Djastuti 2022)	Impact of Workplace Digitalization on Employee Performance Through Employee Retention (Study of Product Processing Research Center and Marine Aquatic Biotechnology Employees, Central Jakarta). 2019, 15121–15136.	(BIRCI-Journal)
Mahmud, Sopiah.(2022)	The effect of transformational leadership on employee performance: literature review	Syntax Literate
Azhary and Pradana (2021)	The Influence of Digital Organizational Culture on Employee Performance With Business Digitization And The Development Of Digital Technology Values As Intervening Variables (Case Study At PT Pegadaian (Persero) Regional Office X Bandung)	ISSN
Suswardji, Aziz, and Wulandari (2020)	Intervening Variables in Public Company Money Printing of the Republic of Indonesia (Perum Peruri) Directorate of Human Resources and General Affairs. 8(1).	ISSN
Ribeiro-Navarrete et al. (2021)	The effect of digitalization on business performance : An applied study of KIBS. 126(July 2020), 319–326.	Elsevier
Biswas (2009)	Organizational Culture & Transformational Leadership as Predictors of Employee Performance	JSTOR
Jannah, Syukri, and Mesiono (2021)	The impact of digitizing education programs on the performance of education personnel in private schools throughout North Tapanuli Regency	ISSN
Bahas and Yamit (2022)	The impact of digitization on organizational practices and operational	ISSN

	performance at PT . Yogyakarta International IGP. 01(03), 16–23.	
Etanim (2022)	The Effect of E-Commerce Utilization and Tax Digitization on MSME Performance in West Jakarta With Tax Incentives During Covid-19 As Moderating Variables	ISSN
Pertiwi and Nurhikmah (2018)	The Effect of Changes in the Digitalization System on Employee Performance	ISSN

FINDINGS AND DISCUSSION

Digitizing System

All-electronic devices are now an integral part of everyday life, and as technology continues to advance at a fast pace, tasks that were formerly laborious and time-consuming are now simple and quick (Putri and Ferdian 2021). The rapid development of digital technology has brought various cutting-edge technologies that allow anyone, anywhere, anytime, to process, generate, send and receive communication messages in any form, as if they knew no boundaries. Furthermore, with the development of digital devices and access to information in digital form, it presents challenges as well as opportunities. Therefore, digital skills are indispensable for every individual. An individual's digital literacy is measured by their familiarity with and competence in the usage of various pieces of computer technology (Putri and Ferdian 2021). According to Hadiono and Santi (2020) there are four factors driving digital transformation. These factors are a) regulatory changes, b) changes in the competitive landscape, and c). Shifts/changes in the digital economy d). Changes in consumer behavior and expectations.

New difficulties arise when trying to boost employee engagement in an increasingly digital workplace, as well as the need for speed in adapting to technological changes, the promotion of novel approaches to cutting costs and boosting profits, and the introduction of new projects (Sulistianingtiyas and Djastuti 2022). The continuity of technological developments that have continued from time to time throughout human history essentially shows that there will always and surely be changes and developments in time, sooner or later. Technological advances which are summarized in digital terms have provided new values while also indirectly erasing old values in life, especially in the efficiency of human work. Of course, with the above statement, almost all economic sectors in companies inevitably have to adapt to these developments in order to maintain the running of their business.

Furthermore, with the development of digital transformation carried out by organizations and companies, transformations and changes in organizational management also need to be balanced with the placement of organizational strategies. There needs to be a way for existing companies to communicate with one another at all time, regardless of location, and the digital transformation must be able to increase staff productivity (Pertiwi and Nurhikmah 2018). All of these are linked to other aspects of the organization which aim to increase customer satisfaction, increase company profits and accelerate the reach of the target market. According to Ananda Ibnu (2021) incorporating digital transformation into business strategies will result in positive outcomes, namely:

a. Improve customer satisfaction

The development of digital change makes it easier for customers to access all information

about the products and services offered. Customers can get information services that update the latest information and customer service in real time, and of course provide peace and customer satisfaction.

b. Can find out changes in consumer behavior

Hence, with the development of digital technology today, it is easier for organizations and businesses to detect changes in consumer behavior in existing market segments. In this way, organizations or companies can easily offer innovative solutions to consumer needs.

c. Save time and budget

Companies use digital technology to ensure all documents are in digital format without the need to buy paper or have a storage budget. In addition, it saves time in terms of coordination between units, there is no distance or time limit, and all activities can be carried out simultaneously between units within a company. Employees can see and act together without waiting for messages from other units, making employee performance more effective and efficient.

From the discussion above, it is clear that digital change is not just the application of technology to organizations and business activities. Instead, to realize their vision and accomplish their goal, businesses need to be able to use the digital tools at their disposal to effect wholesale, systemic change and development (Pangandaheng et al. 2022).

Digital orientation is an organization's guiding principle for pursuing digital technology-enabled opportunities to achieve competitive advantage. This includes the dimensions of digital technology scope, digital capabilities, digital ecosystem coordination, and digital architecture configuration (Kindermann et al. 2021). Furthermore, Nylen and Holmström in (Opland et al. 2022) stated that digital technology is very important in achieving business goals, and its pervasive effect has enabled the transformation of entire industries.

Employee performance

When working, employees create what is called performance. The performance that a person achieves in carrying out his duties is the notion of performance (Suwondo and Sutanto 2015). The level of success of an individual in completing a task as a whole within a certain period of time is also called performance, and the completion of tasks and responsibilities by a group of people in an organization is also called performance (Sulistianingtiyas and Djastuti 2022). Performance is the effort of an employee over a period of time that does not include contingencies i.e., goals, or mutually agreed upon goals or standards (Bahas and Yamit 2022). Mangkunegara in (Bahas and Yamit 2022) states that performance is the work that will occur, the quality and quantity achieved by an employee in carrying out their duties in accordance with the responsibilities given. Furthermore, employee performance is a manifestation of one's ability in the form of real work or work achieved by employees from the results of working on a task and work given by the company (Putri and Ferdian 2021).

Creating a company that has superior quality is certainly needed with employee performance through improving skills which will be an opportunity for the organization or company to increase its productivity, such as creating communicative harmony about common goals and being able to contribute to increasing a broad view of each other's tasks. employee. In addition to providing a series of benefits for the company, employee performance through skill improvement also essentially provides personal benefits to the employees themselves such as,

they can assess their own strengths and weaknesses and employees can be more observant and thorough in seeing the context of their work. Based on the reasons above, it can be underlined that assessing performance is very mandatory for an organization or company in order to create a company that excels in both internal and external quality.

Impact of Changes in Digitization on Employee Performance

Digital technology is the transition from a manual operational system to a fully automated and sophisticated operating system (Sulistianingtiyas and Djastuti 2022). Evidence of technological developments with the presence of a number of advanced communication tools that anyone can use, producing and receiving and even sending information whenever and wherever they want (Ribeiro-Navarrete et al. 2021). This certainly has certain impacts on the company and employees. However, in order to keep the company running and winning the increasingly fierce competition, they must accept and adapt to the developments of this era (Pertiwi and Nurhikmah 2018). The use of information technology in the work process of employees, the progress of people in the field of information technology is something we should appreciate. Because with these advances it will make it easier for humans to do the work and tasks they have to do (Again et al., 2022).

Changes in the use of digital media from generation to generation are very dependent on technological developments on one side of technology adoption in the context of society, especially for an employee (Ilyas and Bahagia 2021). Complex changes and rapid technological growth have made many organizations or companies digitalize, namely the process of becoming digital (Ribeiro-Navarrete et al. 2021). With changes, employee performance absolutely will change. Companies that previously still used traditional methods and have now become digital, the employees needed are employees who are digitally savvy, or who have the ability to use technology (Mursid et al. 2022).

With the use of technology, businesses can now forge advantages that will give them a leg up in the marketplace (Heredia et al. 2022). Enhancing an organization's digital capabilities is crucial for driving innovation and capitalizing on the moderating power of technological resources to boost business outcomes (Heredia et al. 2022). This means that the degree to which an organization embraces digitization impacts the productivity of its employees (Baharrudin et al. 2021). This model of changing the digitalization system also provides many opportunities for companies to be more successful and can increase the speed in responding to something. Furthermore, we assume that individuals are not only affected by digitization but can also actively shape it (Blanka, Krumay, and Rueckel 2022). So that the impact of digitalization changes can have a significant impact on employee performance.

CONCLUSION

Based on the relevant articles and discussions, it can be concluded that changes in the digitization system affect performance. The better the digitization system, the more comfortable and good it is for employees to work productively and efficiently in doing their jobs.

REFERENCES

Ananda, Ibnu. 2021. "Literatur Review: Implementasi Strategi Transformasi Digital Pada

- Organisasi Internasional." *Computer Based Information System Journal* 9(1): 1–13.
- Azhary, Muhamad Haikal, and Mahir Pradana. 2021. "Pengaruh Budaya Organisasi Digital Terhadap Kinerja Karyawan Dengan Digitalisasi Bisnis Dan Pengembangan Nilai Teknologi Digital Sebagai Variabel Intervening (Studi Kasus Pada Pt. Pegadaian Persero Kantor Wilayah X Bandung)." *eProceedings of Management* 8(5).
- Baharrudin, Sofwan et al. 2021. "Pengaruh Kompetensi Digital Dan Keterikatan SDM Terhadap Kinerja Dispermades Provinsi Jawa Tengah." In *E-Prosiding Seminar Nasional Manajemen Dan Akuntansi STIE Semarang (SENMAS)*, , 51–59.
- Bahas, Mathilda Putri Russel, and Zulian Yamit. 2022. "Manajemen Pengaruh Digitalisasi Terhadap Praktik Organisasi Dan Kinerja Operasi Pada PT. IGP Internasional Yogyakarta: Pengaruh Digitalisasi Terhadap Praktik Organisasi Dan Kinerja Operasi Pada PT. IGP Internasional Yogyakarta." *Selekta Manajemen: Jurnal Mahasiswa Bisnis & Manajemen* 1(3): 16–23.
- Biswas, Soumendu. 2009. "Organizational Culture & Transformational Leadership as Predictors of Employee Performance." *Indian Journal of Industrial Relations*: 611–27.
- Blanka, Christine, Barbara Krumay, and David Rueckel. 2022. "The Interplay of Digital Transformation and Employee Competency: A Design Science Approach." *Technological Forecasting and Social Change* 178: 121575.
- Etanim, Frialdo. 2022. "Dampak E-Commerce Dan Digitalisasi Perpajakan Terhadap Kinerja UMKM Yang Dimoderasi Insentif Pajak." *Media Akuntansi Perpajakan* 7(1): 27–35.
- Fogoros, Teodora Elena, Mihaela Maftai, Gabriela Elena BIȚAN, and Bastian L Kurth. 2020. "Study on Methods for Evaluating Employees Performance in the Context of Digitization."
- Hadiono, Kristophorus, and Rina Candra Noor Santi. 2020. "Menyongsong Transformasi Digital." In *Proceeding SENDIU 2020*, <https://www.unisbank.ac.id/ojs/index.php/sendiu/article/download/7964/2927>.
- Heredia, Jorge et al. 2022. "How Do Digital Capabilities Affect Firm Performance? The Mediating Role of Technological Capabilities in the 'New Normal.'" *Journal of Innovation & Knowledge* 7(2): 100171.
- Hole, Glenn, Anastasia S Hole, and Ian McFalone-Shaw. 2021. "Digitalization in Pharmaceutical Industry: What to Focus on under the Digital Implementation Process?" *International Journal of Pharmaceutics: X* 3: 100095.
- Ilyas, Anita, and Bahagia Bahagia. 2021. "Pengaruh Digitalisasi Pelayanan Publik Terhadap Kinerja Pegawai Pada Masa Pandemi Di Lembaga Pendidikan Dan Pelatihan." *Edukatif: Jurnal Ilmu Pendidikan* 3(6): 5231–39.
- Jannah, Roihatul, Makmur Syukri, and Mesiono Mesiono. 2021. "Pengaruh Digitalisasi Program Pendidikan Terhadap Kinerja Tenaga Kependidikan Di MTs Swasta Se-Kabupaten Tapanuli Utara." *Jurnal Islami: Manajemen Pendidikan Islam & Humaniora* 1(2).
- Kindermann, Bastian et al. 2021. "Digital Orientation: Conceptualization and Operationalization of a New Strategic Orientation." *European Management Journal* 39(5): 645–57.
- Maksum, Ali, and Happy Fitria. 2021. "Tranformasi Dan Digitalisasi Pendidikan Dimasa Pandemi." In *Prosiding Seminar Nasional Program Pascasarjana Universitas PGRI Palembang*.
- Mursid, Mansur Chadi, Nadhifatul Amnisa, Fahmi Abdillah, and Imahda Aljihah. 2022. "Pengaruh Perubahan Komunikasi Melalui Teknologi Informasi Digital Terhadap Kinerja Karyawan Akibat Dampak Covid-19." *JMBI UNSRAT (Jurnal Ilmiah Manajemen Bisnis dan Inovasi Universitas Sam Ratulangi)*. 9(2).
- Opland, Leif Erik, Ilias O Pappas, Jostein Engesmo, and Letizia Jaccheri. 2022. "Employee-Driven

- Digital Innovation: A Systematic Review and a Research Agenda." *Journal of Business Research* 143: 255–71.
- Pangandaheng, Fony et al. 2022. "Transformasi Digital: Sebuah Tinjauan Literatur Pada Sektor Bisnis Dan Pemerintah." *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi* 10(2).
- Pertiwi, Wike, and Fika Nurhikmah. 2018. "Pengaruh Perubahan Sistem Digitalisasi Terhadap Kinerja Karyawan." In *Prosiding Seminar Nasional Multidisiplin*, , 187–91.
- Putri, Septy Rosnita, and Ary Ferdian. 2021. "Pengaruh Budaya Digital Terhadap Kinerja Karyawan Di Astra Credit Companies Pekanbaru." *eProceedings of Management* 8(5).
- Ribeiro-Navarrete, Samuel, Dolores Botella-Carrubi, Daniel Palacios-Marqués, and Maria Orero-Blat. 2021. "The Effect of Digitalization on Business Performance: An Applied Study of KIBS." *Journal of Business Research* 126: 319–26.
- Ritter, Thomas, and Carsten Lund Pedersen. 2020. "Digitization Capability and the Digitalization of Business Models in Business-to-Business Firms: Past, Present, and Future." *Industrial Marketing Management* 86: 180–90.
- Stief, Paul, Jean-Yves Dantan, Alain Etienne, and Ali Siadat. 2018. "A New Methodology to Analyze the Functional and Physical Architecture of Existing Products for an Assembly Oriented Product Family Identification." *Procedia Cirp* 70: 47–52.
- Sulistianingtiyas, Indrihastuti, and Indi Djastuti. 2022. "The Effect of Digitalization in the Workplace on Employee Performance Mediated By Employee Attachment (Study on Employees of the Center for Product Processing Research and Marine and Fisheries Biotechnology, Central Jakarta)." *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences* 5(2).
- Suswardji, Edi, Syaefudin Aziz, and Rysmi Wulandari. 2020. "Analisis Optimalisasi Kinerja Karyawan Melalui Digitalisasi Bisnis Dengan Budaya Organisasi Sebagai Variabel Intervening Pada Perusahaan Umum Percetakan Uang Republik Indonesia (Perum Peruri) Direktorat SDM Dan Umum." *EKBIS (Ekonomi & Bisnis)* 8(1): 11–20.
- Suwondo, Diah Indriani, and Eddy Madiono Sutanto. 2015. "Hubungan Lingkungan Kerja, Disiplin Kerja, Dan Kinerja Karyawan." *Jurnal manajemen dan kewirausahaan* 17(2): 145–54.