


**MANEUVERING OF DIGITAL TRANSFORMATION: ROLE OF ARTIFICIAL INTELLIGENCE IN EMPOWERING LEADERSHIP - AN EMPIRICAL OVERVIEW**

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ARTICLE INFO	ABSTRACT
<p><b>Article history:</b></p> <p><b>Received</b> 20 February 2023</p> <p><b>Accepted</b> 18 May 2023</p>	<p><b>Purpose:</b> Digital transformation introduces businesses to the risks of changing strategic initiatives and adapting to technological advances such as AI (AI). AI is expected to revolutionize the future workforce. This study examines how Artificial intelligence Empowering Leadership.</p>
<p><b>Keywords:</b></p> <p>Digital Transformation; Organization; Artificial Intelligence; Empowering Leadership.</p>	<p><b>Theoretical framework:</b> The examination and quantitative method were used to develop a research design. A self-administered questionnaire was used to collect data from companies' leaders that used AI systems to empower their Leadership. Companies have increased empowering their employees as necessary in today's business environment. The role of Leadership has shifted in tandem with the trend-forward into organizational empowerment.</p>
	<p><b>Design/methodology/approach:</b> The study sample consisted of all 150 leaders, chosen by random sampling. The current study was conducted using a quantitative methodology. To achieve the study's objectives, the researcher created a questionnaire with (10) items divided into three categories: usage of AI, Leadership oriented questions and demographics.</p> <p><b>Findings:</b> The results of the literature analysis are used to develop the questionnaire. The main participants in this study were the leaders of the organization.</p> <p><b>Research, Practical &amp; Social implications:</b> According to interviews, empowering Leadership, specifically autonomy and innovation assistance, is beneficial in navigating AI-induced change.</p> <p><b>Originality/value:</b> The value of the study to expected to revolutionize the future workforce by exploring the role of AI in empowering leadership.</p> <p>Doi: <a href="https://doi.org/10.26668/businessreview/2023.v8i5.1838">https://doi.org/10.26668/businessreview/2023.v8i5.1838</a></p>

**MANOBRAS DE TRANSFORMAÇÃO DIGITAL: PAPEL DA INTELIGÊNCIA ARTIFICIAL NA CAPACITAÇÃO DA LIDERANÇA - UMA VISÃO GERAL EMPÍRICA**

**RESUMO**

**Objetivo:** a transformação digital apresenta às empresas os riscos de mudar as iniciativas estratégicas e se adaptar aos avanços tecnológicos, como a IA (inteligência artificial). Espera-se que a IA revolucione a força de trabalho do futuro. Este estudo examina como a inteligência artificial fortalece a liderança.

**Estrutura teórica:** O exame e o método quantitativo foram usados para desenvolver um projeto de pesquisa. Um questionário autoadministrado foi usado para coletar dados de líderes de empresas que usaram sistemas de IA para capacitar sua liderança. As empresas aumentaram a capacitação de seus funcionários conforme necessário no ambiente de negócios atual. O papel da liderança mudou em conjunto com a tendência de avanço na capacitação organizacional.

**Projeto/metodologia/abordagem:** A amostra do estudo foi composta por 150 líderes, escolhidos por amostragem aleatória. O estudo atual foi conduzido usando uma metodologia quantitativa. Para atingir os objetivos do estudo,

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o pesquisador criou um questionário com (10) itens divididos em três categorias: uso de IA, questões orientadas à liderança e dados demográficos.

**Resultados:** Os resultados da análise da literatura são usados para desenvolver o questionário. Os principais participantes deste estudo foram os líderes da organização.

**Implicações sociais, práticas e de pesquisa:** De acordo com as entrevistas, a capacitação da liderança, especificamente a autonomia e a assistência à inovação, é benéfica para navegar pelas mudanças induzidas pela IA.

**Originalidade/valor:** Espera-se que o valor do estudo revolucione a força de trabalho futura ao explorar o papel da IA na capacitação da liderança.

**Palavras-chave:** Transformação Digital, Organização, Inteligência Artificial, Capacitação da Liderança.

## MANIOBRAS DE TRANSFORMACIÓN DIGITAL: PAPEL DE LA INTELIGENCIA ARTIFICIAL EN LA POTENCIACIÓN DEL LIDERAZGO - UNA VISIÓN EMPÍRICA

### RESUMEN

**Propósito:** La transformación digital plantea a las empresas los riesgos de cambiar las iniciativas estratégicas y adaptarse a los avances tecnológicos, como la IA (inteligencia artificial). Se espera que la IA revolucione la mano de obra del futuro. Este estudio examina cómo la inteligencia artificial potencia el liderazgo.

**Marco teórico:** Se utilizaron el examen y el método cuantitativo para desarrollar un diseño de investigación. Se utilizó un cuestionario autoadministrado para recopilar datos de líderes de empresas que utilizaban sistemas de IA para potenciar su liderazgo. Las empresas han aumentado la capacitación de sus empleados según las necesidades del entorno empresarial actual. El papel del liderazgo ha cambiado paralelamente al avance de la tendencia hacia la capacitación organizativa.

**Diseño/metodología/enfoque:** La muestra del estudio consistió en 150 líderes, elegidos por muestreo aleatorio. El presente estudio se llevó a cabo utilizando una metodología cuantitativa. Para alcanzar los objetivos del estudio, el investigador creó un cuestionario con (10) ítems divididos en tres categorías: uso de IA, preguntas orientadas al liderazgo y datos demográficos.

**Resultados:** Los resultados de la revisión bibliográfica se utilizan para elaborar el cuestionario. Los principales participantes en este estudio fueron los líderes de la organización.

**Repercusiones sociales, prácticas y para la investigación:** Según las entrevistas, la potenciación del liderazgo, en concreto la autonomía y la ayuda a la innovación, es beneficiosa para navegar por el cambio inducido por la IA.

**Originalidad/valor:** Se espera que el valor del estudio revolucione la futura fuerza de trabajo al explorar el papel de la IA en el empoderamiento del liderazgo.

**Palabras clave:** Transformación Digital, Organización, Inteligencia Artificial, Habilitación del Liderazgo.

### INTRODUCTION

Digital transformation is now a vital component of the modern-day business environment (Brock, & Von Wangenheim, 2019). It is the process of developing new or updating internal practices with digital technologies to meet customer needs, employee quality, and changing business needs. Employee productivity is a central focus of the organization in the business world. This argument contends that digital technologies are reconfiguring everything, from client behaviours and expectations to organizational and efficiency with a company, business models, marketplaces, and society.

The world has undergone a paradigm change due to rapidly evolving economies and technologies. Companies must align their procedures with emerging technologies like artificial

intelligence (AI). The way that Leadership fulfils its responsibilities will change. AI will play a significant part in roles involving strategic decision making, cognitive processing, and data-related decisions, such as analysing team performance and improving production and service-based operations (Bughin, et al., 2017). Business leaders can use AI to boost flexibility and assist in implementing advanced new methodologies within businesses.

These roles will make it easier for leaders to accomplish their jobs. However, AI will need to be combined with the human element/soft parts of leaders, such as the ability to critically assess each decision, for motivation, abilities like stability and serenity, and humility. It can uncover remedies to more complex and difficult strategic dilemmas within an organization, which are commonly obscured in a plethora of data. The goal of AI is to swap some of the decision-making that used to be done by corporation managers and leaders. This will strengthen and streamline decision-making processes. Leadership decisions are about to change.

Leaders will use AI to focus less on the cognitive functioning of data and details. According to a study by Infosys , forty five percent of Leadership organizations in the Age of AI implementations surpass the accuracy and productivity of similar human influence (Patil & Patel, 2020). The paper's main focus is to determine AI's role in empowering Leadership.

One of the most crucial areas for management research and discussion is Leadership. Our economy and working methods have undergone a profound upheaval because of artificial intelligence (AI). But artificial intelligence-driven Leadership is still a relatively unexplored area or a new field that has received little scholarly attention. Notwithstanding, there are lots of articles in magazines that address this subject. A few concentrates on the connections between AI and Leadership, but these are limited papers that do not characterize the change in Leadership.

Our findings should also make it possible to do more studies in this area. Additionally, practitioners will gain from the findings because they may significantly affect how they approach AI in Leadership and what adjustments they make. This study seeks to analyse and record the changes in business environments as AI technology improves, making it valuable to academics and practitioners. Besides, these findings can help businesses and researchers create and evaluate fresh digital marketing approaches. Companies should be informed of potential changes before applying AI to certain sectors. The theoretical and managerial aspects of the findings are discussed in the paper's conclusion. As per study below is the mentioned research questions,

- How does Artificial intelligence empower Leadership?
- How the transformation of Leadership occurs through Artificial intelligence?

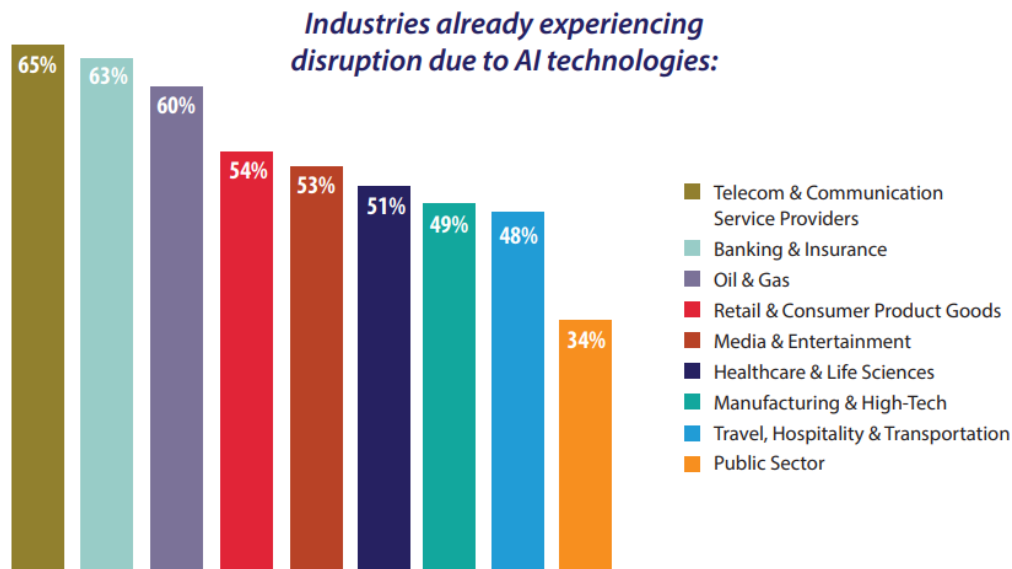
## LITERATURE REVIEW

The constant need for companies to change their practices and improve strategic plans to keep up with rapidly changing markets caused by consumer demands and the tempo of new advanced technologies is referred to as digital transformation. (Alasiri et al; 2022) mentioned that Using digital technology is referred to the process of using digitized information to make founded methods of working clarity of thought and more efficient (Ebert & Duarte, 2018). Give focus on the phrase used in that definition: The digital revolution isn't about creating new or modifying existing business models.

It's about continuing, but more promptly and professionally now that Data is instantly accessible and not kept locked away in a stale archive filing system. Digital transformations have changed the way businesses approach to service to customers (Frick, et al., 2021). The old model was to put it on hold for clients to browse visitors, either in person or by dialling a phone number. However, digital transformations have altered service in the same way it has altered marketing, brand management, and even sales departments. Progressive businesses see digital transformations as an opportunity to broaden their product offerings by targeting the customers on their preferred platforms. Artificial intelligence is a technology that simulates human intelligence by allowing computer, machine, and software applications to acquire knowledge through iterative processing and computational mentoring (Cox Pinfield, & Rutter, 2018). AI systems become cleverer with each effective round of information processing because each interplay allows the system to test and measure solutions and develop skills in the assigned task.

"Artificial intelligence" is characterized in this research paper as "software technologies that enable a computer or robot to undertake equal to or better than regular human algorithmic ability in precision, ability, and tempo." Natural Language Processing, Knowledge Representation, Automated Reasoning, Deep Learning, Automation, Rational Agents, and Chatbots are some instances (Dauvergne, 2022).

Figure 1: Impact of AI in different industries



(Source: Patil & Patel, 2020)

([Delponte & Tamburrini, 2018](#)) states making the right decisions at the right time is essential for good Leadership. In this context, AI plays its role, such as it aids decision-making by transforming huge amounts of data into meaningful intelligence. It assists leaders in steering clear of terrible decisions and more towards decent options; that is precisely what people anticipate leaders to do with as almost 50 % of respondents revealed that their firm's AI deployment outpaces the precision and efficiency of similar human activity; it's evident that AI has been meeting or exceeding human capabilities in some areas like Leadership. ([Goralski & Tan, 2020](#)) Leadership is required to concentrate on the large aspects, but specifics often weigh them down. A huge amount of work that sometimes expends one of most time when decision-making can be automated or accelerated by AI. Higher authority executives revealed that their employees are particularly worried that AI technologies will end up replacing them; corporate leaders are very well aware of AI's significant ethical and sentient dilemmas. ([Haleem, et al., 2020](#)) contends that far too little emphasis is placed on intelligence and far too much is placed on the artificial in the AI discussion. The collaboration that AI can foster, not the effort it can replace, is what it really offers. Therefore, even though leaders are entirely responsible for practically everything that goes on below the surface of an organization, it's simple to get stuck in analysis paralysis. When decision-makers take so long to decide what to do, nobody takes action. AI acts as a guidepost, sifting through data to identify the issues (both positive and negative) that necessitate the most consideration. [Lee, Singh & Azamfar, \(2019\)](#) states that Artificial Intelligence (AI) has already become crucial for organizational management and is

preparing for a long term in which people and machines can collaborate and work around each other peacefully. AI can simplify complex judgement tasks while still emphasizing the significance of artistic expression and discovery. Another research of Matsunaga, (2022) suggests that Artificial intelligence is the incorporation of human intelligence into machines for them to function with the same capability and rational approach. Most AI-related technology ranges in various aspects. It will help the leaders work with Computational Linguistics and Learning Techniques, from a simple Bot service to aeronautical achievements. These technologies allow a computer system to be received training to perform a specific task by big data processing and analysing its patterns. Employee evaluation and advancement; Managers can obtain bias-free additional insight from constant, real-time evaluations via various sources using AI performance analytics states Matt, Hess & Benlian, (2015). Forecasting Leadership analytics can identify areas where a worker may have problems and recommend tailored skill development. Since AI analytics can manage huge amounts of data, it can assess numerous facets of an individual's or dispersed team's performance and make recommendations to improve cooperation and coordination. Employee wellness can be improved using AI analytics in various ways, including eliminating routine or low-value duties and offering guidance and consultations for emotional or physical well-being. Sentiment classification and wearable electronics are propelling an expanding industry. These AI-powered monitoring tools and recommendation systems track and analyse usage patterns to deliver personalized recommendations and insights using IoT sensors and machine learning to leaders that will help them in their business. In addition, Robert, (2019) reports that As AI becomes a more integral part of business strategy, its widespread adoption fundamentally alters how Leadership entails, enlist, train, and encourage their teams. They require their employees to use AI and human resources collectively to accomplish their organization's values and drive productivity and creativity. In the views of Chen & Decary, (2020), in the age of AI, Leadership is nonetheless rapidly evolving. It is also actively promoting transformations across the organization to bridge the gap between old and new business environment changes. Employees are now even more self-assured that their senior executives comprehend and highlight the benefits of AI. Smith & Green, (2018) argues in this culturally diverse society, bringing together diverse teams and making good decisions are two factors that promote better leadership skills. Positive treatments for AI implementation are driven by optimized decision-making. As a result, the role of Leadership is now essential to the vast amounts of money businesses buy shares in AI for innovative solutions. In addition, Sreejesh, Mohapatra & Anusree, (2014) states that despite

the hype of 'AI increasing automation,' leaders must recognize that human talent will become more valuable as technology advances. They must bring around each other teams and machines by intuiting, mentoring, and empowering. AI leaders must also improve their flexibility to remain ready for advancement while responding to opportunities and challenges that arise along the way. Further, they added that guiding team cohesion and human-machine communication skills will be sufficient to meet industry demands. They must be more open to new experiences and viewpoints while putting aside their preconceived notions and ego. Leaders must demonstrate effective communication between many of their teams to revise, reinvent, and re-imagine. Moreover, if evolving one's mind results in improved decision-making, one should remain steadfast even if it means being perceived as insufficient or lacking a guilty verdict. As a result, they must be able to unlearn because the knowledge gained through experience will quickly become obsolete. In the midst of this, they could expect to carry on to outdated ideas.

Future is one of the most powerful tools of a leader, and it has taken on new meaning in the age of AI. They must consider where their team and the organization will head while leaving room for frequent changes in the future roadmap. In a more advanced and AI-driven world, today's agile idealists will form the strong Leadership of tomorrow. Their flexible AI strategies must adapt to the fast-changing company, organization, socio-demographic, and political environments. (Shrivastava, R., 2023) explained in the study that through executing the first move, several districts have established a strong foundation for this innovation. The use of technology. On the other hand, this foundation continues to address computers and other is a distinct subject area within the curriculum, technologies. This viewpoint needs to change if the years' worth of work are to have a positive impact on future technology use and if we are to realise how technology has affected other facets of our culture. The blend of components deemed essential for the growth of teaching and learning must include technology.

The previous decade has demonstrated how challenging it is to foresee when technology will be used and how it will impact workers' skills. (Strusani & Hounghonon, 2019) states that not everything will be foreseen or planned for; changes can occur at any time, and leaders need to be flexible to cope with and grow from them. With the help of AI, Leaders in the modern generation must, however, be able to present risk models that are grounded in facts, figures, variables, and correlations rather than gut instinct. They must be able to conduct stress testing in various scenarios and act shrewdly and safely even in unexpected conditions. Corporate leaders can identify fresh opportunities and fend off dangers before they become severe issues or damage the company's brand, customers, or staff. In the modern world, businesses produce,

share, and make a vast amount of data available daily. In a couple of seconds, AI and various applications may assist in organizing and visualizing that Data. They may even offer insights when studying information. Still, ultimately it is up to the leaders to be ready and more flexible to translate those insights into better decision-making intelligence. However, they may even offer insights when studying information. Still, ultimately it is up to the leaders to be ready and more flexible to translate those insights into better decision-making intelligence. Data is a crucial component in any business sector. In the report Titareva, (2021) discuss how AI has improved accuracy and stability for all routine tasks. A foundation of qualitative data and the accompanying computational capacity are essential to get there. Companies can directly benefit from AI and related programming techniques like deep learning by automating processes, such as when combined with robotics, enabling more accurate and cost-effective forecasts through data analysis, or easily by socially interacting with staff members or clients in the form of a chatbot. Leaders must have the flexibility to let go of some widely used and tested organizational development principles to prepare for the deployment of AI. The attitude that fosters AI is crucial since it serves as the cornerstone for all subsequent ideas. Leaders must rethink how they operate and how business processes are completed in addition to the conventional strategy of merely optimizing business processes (Winston, 1984). Further, they add that to achieve business objectives, executives in the age of AI must further determine where to spend. For instance, employing AI might boost worker productivity, which speeds up innovation. Zhang, Frank Wang & Liu, (2018) reports that it is necessary to adapt to an open AI culture. This includes establishing a working partnership between AI and staff members. Transparency, trust, and openness are essential qualities. A leader is responsible for making this shift: describing the benefits and drawbacks of AI integration. Defining the associated culture will aid in maximizing the implementation, but AI may also be used to improve culture by, for instance, identifying stress. Culture must also exist for the application of AI in business processes, where processes can or must be recalculated or rescoped, according to Eubanks, (2022)

## **HYPOTHESIS OF THE STUDY**

H1: There is significant relationship between Artificial Intelligence and leadership empowerment.

H0: There is no significant relationship between Artificial Intelligence and leadership empowerment



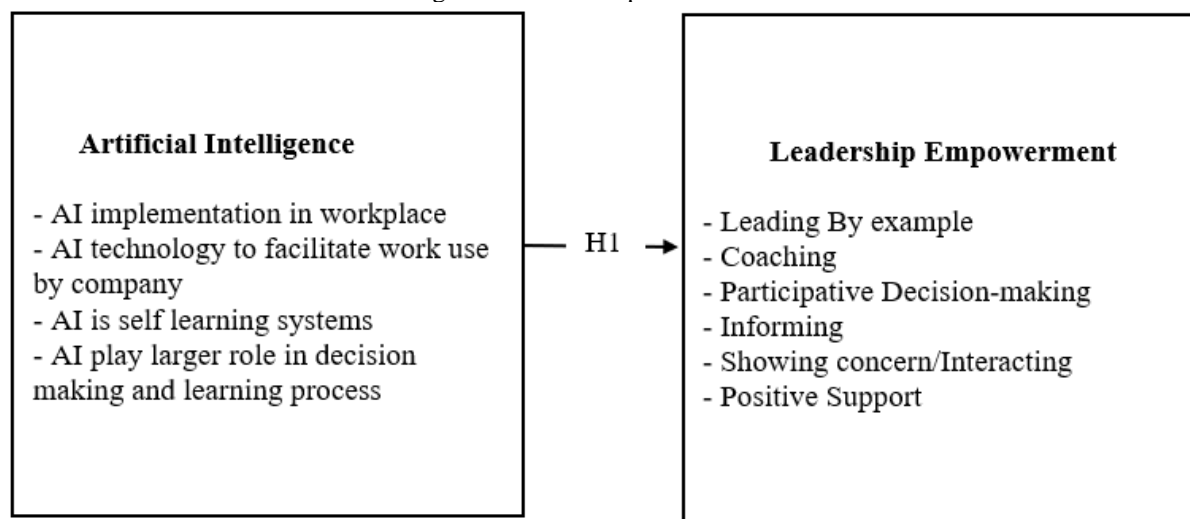
## MATERIALS AND METHODS

This paper will address these two objectives through the quantitative methodology. For this elaboration, several theoretical grounds have been taken into account. Finally, Mayring's (2014) quantitatively oriented content analysis is employed. It was chosen because the analysis's defined principles make it clear, understandable, and intersubjectively verifiable. To draw conclusions from the interviews and provide answers to the research questions is the purpose of the quantitative content analysis. For this explanation, professionals in the leadership sector from big and small businesses who are active leaders are sought out. A few examples are managers of personnel, directors of personnel, and department heads. The following recommendations from Sreejesh, Mohapatra & Anusree (2014) are considered when choosing the questions. The questions must considerably improve the relevance of the answers while having no negative effects on the answers to the other questions. The questions are then all examined to see which ones need to be divided up so that the desired answer may be gathered more quickly. It's important to structure the questions such that the respondents can grasp them. Therefore, the investigators make an effort to keep them brief and direct. There are two probable paths for the survey depending on whether AI is used or not in the companies. If AI is used; consideration is given to its benefits and drawbacks. If AI is not implemented, it aims to ascertain the relevant causes. In both situations, the same opening questions and demographic and potential inquiries are posed. The interview subjects can easily understand the language because each word has a specified frame of reference. Open-ended questions are posed because the study's subject is still largely unexplored. These don't include any possibilities for answers; therefore, the respondents' responses are not constrained to what the investigator knows. Besides, since there are no specifications, they also prevent partiality. Lead-in questions are used at the beginning to get the conversation going. These inquiries must be straightforward and susceptible to the following level is less open than the first and has more specific questions pertinent to answering AI's role in empowering Leadership. The demographic questions are asked at the conclusion.

In the study as per the aim of research framing of two variables. Artificial Intelligence is the independent variable and Leadership is the dependent variable.

The framework is as shown below:

Figure. No. 2 Conceptual Framework



Source: Prepared by the authors (2023)

## Methods

This paper will address these two objectives through the quantitative methodology. For this elaboration, several theoretical grounds have been taken into account. Finally, Mayring's (2014) quantitatively oriented content analysis is employed. It was chosen because the analysis's defined principles make it clear, understandable, and intersubjectively verifiable. To draw conclusions from the interviews and provide answers from questionnaire to the research questions is the purpose of the quantitative content analysis. For this explanation, professionals in the leadership sector from big and small businesses who are active leaders are sought out. A few examples are managers of personnel, directors of personnel, and department heads. The items in the questionnaire were not originally created; rather, they were modified from those that had already been created and utilised by other research authors. Due to its simple construction, appealing design, adaptability, and relative reliability, the study used a Five- point Likert scale to collect respondents' perceptions regarding the claims, ranging from strongly disagree to strongly agree, V. E. Vinzi, C. Lauro, and M. Tenenhaus (2003). As Likert scale responses. The scaling used by the previous published authors in the article by Isabell Björkman & Sebastian Johansson, (June 2018). AI scaling used for this study as "AI1", "AI2", "AI3" and "AI4" having sub-constucts as "AI implementation in workplace", "AI technology to facilitate work use by company", AI is "self learning systems", "AI play larger role in decision making and learning process". And for leadership empowerment variables already been created and utilised by Josh Arnold, Fritz Drasgow (May 2000), implemented "LDR1", "LDR2", "LDR3", "LDR4", "LDR5", "LDR6" as "Leading By example", "Coaching", "Participative Decision-making", "Informing", "Showing concern/Interacting", "Positive Support respectively" as sub-

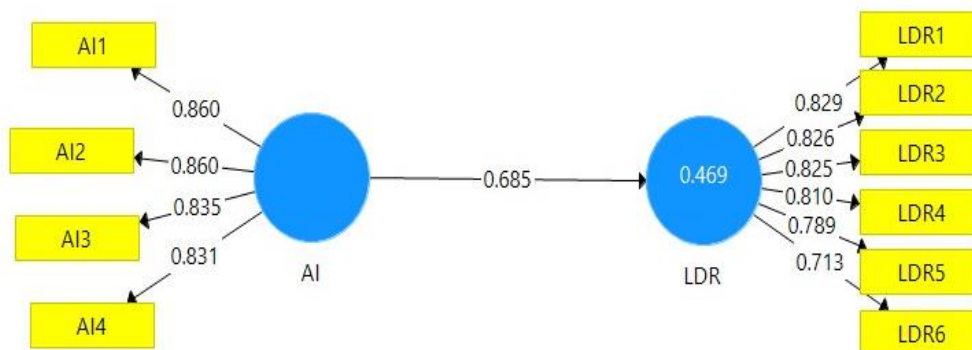
construct. There are 15 overall items in the questionnaire, 04 of which are connected to artificial intelligence and 06 are about leadership empowerment. The remaining 5 items were generated using the respondents' demographic data.

The analysis used for this study is Partial least squares structural equation modeling (PLS-SEM). Analysis for the study evaluated by the measurement model and structural model to assess the outer loadings and path coefficient values to find out reliability and validity of the latent variables. The variables used for the study id direct method.

### ANALYSIS AND FINDINGS

In PLS-SEM path modelling, measurement model assesses the latent constructs of the study. The latent constructs of the research are evaluated using the latent constructs of this modelling and measuring model. The constructs of this modelling, measurement model has multiple items with reflective nature. The construct of the study framed as artificial intelligence and leadership empowerment of the study.

Fig. 3 Measurement Model



Source: Prepared by the authors (2023)

Table 1: Loadings, Reliability, and Validity- Composite Reliability and Convergent Validity

	Outer Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
AI1	0.860	0.869	0.910	0.717
AI2	0.860			
AI3	0.835			
AI4	0.831			
LDR 1	0.829	0.887	0.914	0.640
LDR 2	0.826			
LDR 3	0.825			
LDR 4	0.810			
LDR 5	0.789			
LDR 6	0.713			

Source: Prepared by the authors (2023)

The study used Cronbach's Alpha and Composite Reliability as part of the measurement model evaluation to test the constructs' reliability (CR). All of the CRs exceeded the suggested value of 0.700. (Wasko and Faraj, 2005). Each construct's Cronbach's alpha was higher than 0.700, at 0.869 for AI and 0.887 for LDR, respectively.

Convergent validity was acceptable because the extracted average variance (AVE) was greater than 0.500. Table 1 shows the reliability and validity results, as well as the factor loadings for the items.

By using the Fornell-Larcker criterion to determine discriminant validity, the table demonstrates that the square-root of AVE for the construct was higher than the inter-construct correlation. Heterotrait-Monotrait ratio of correlations (Henseler et al. 2015) with values below the cutoff of 0.90 was also used to evaluate discriminant validity. Consequently, discriminant validity is confirmed (see table).

Table 2: Fornell-Larcker criterion

	Artificial Intelligence	Leadership Empowerment
AI	<i>0.847</i>	
LDR	<i>0.685</i>	<i>0.800</i>

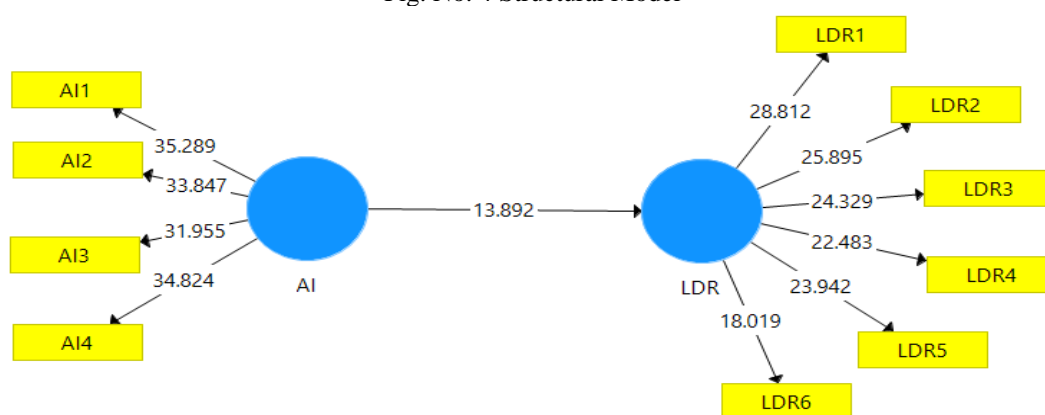
Source: Prepared by the authors (2023) Note: Values in *Italic* is square-root of AVE

Table 3: HTMT Ratio

	AI	LDR
AI		
LDR	<i>0.758</i>	

Source: Prepared by the authors (2023)

Fig. No. 4 Structural Model



Source: Prepared by the authors (2023)

Table 4 Assessing p values

	Original Sample	Standard Deviation	T Statistics	P Values
AI -> LDR	0.685	0.049	13.892	0

Source: Prepared by the authors (2023)

Table 5 Assessing Coefficient of relevance

	<b>R<sup>2</sup></b>	<b>Q<sup>2</sup></b>	<b>F<sup>2</sup></b>
AI			0.883
LDR	0.469	0.280	

Source: Prepared by the authors (2023)

The paths proposed in the research framework are reflected in the structural model. Based on the coefficient of relevance R<sup>2</sup>, Q<sup>2</sup>, F<sup>2</sup>, and significant routes, a structural model is evaluated. According to Briones Penalver et al. (2018), The goodness of the model is determined by the intensity of each structural path, and the result for R<sup>2</sup> should be equal to or greater than 0.1. (Falk & Miller, 1992). The results in Table 3 indicate that R<sup>2</sup> is more than 1, or 0.469. Consequently, the ability to predict is established. The intrinsic components' inferential usefulness was further illustrated in Q<sup>2</sup>. The model has predictive relevance when the Q<sup>2</sup> is greater than 0. The findings demonstrate the importance of the constructs' prediction. (see table 3). Furthermore, SRMR was used to measure the model's fit. The SRMR value was 0.0883, which is greater than the necessary value of 0.10 and signifies that the model fit (Hair et al; 2016).

In order to determine the importance of the association, hypotheses were developed in order to examine the goodness of fit. H1 assesses if AI significantly affects leadership empowerment. The findings showed that leadership is significantly impacted by AI. ( $\beta=0.680$ ,  $t=13.699$ ,  $\rho=0.00$ ). H1 was therefore supported.

As seen in Table 3, this study's 150 samples consisting internals with a 95% confidence level. When the confidence interval is not zero, there is a meaningful association. Outcomes of testing hypotheses are listed in Table 5.

Table 6: - VIF values- Collinearity Assessment:

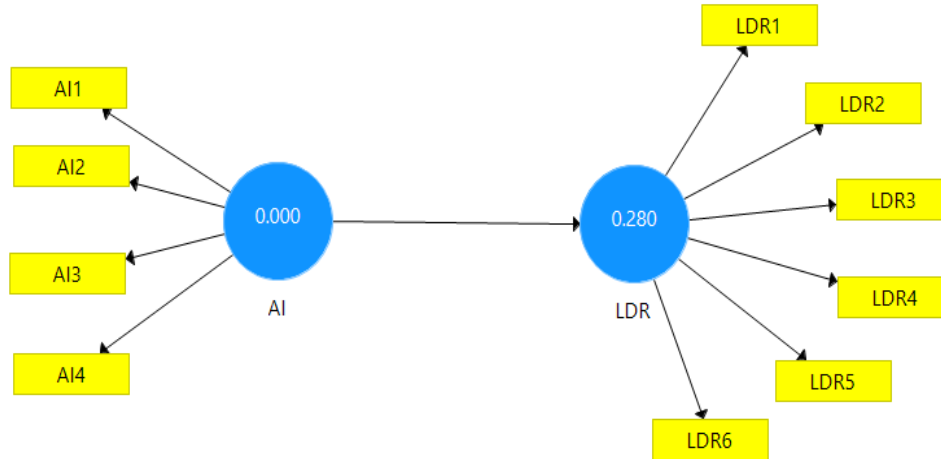
	<b>VIF</b>
AI1	5.573
AI2	5.611
AI3	2.294
AI4	2.257
LDR1	1.980
LDR2	2.283
LDR3	2.277
LDR4	2.198
LDR5	2.015
LDR6	1.571

Source: Prepared by the authors (2023)

To appraise collinearity, the same techniques as in the study of formative measurement model need to be implemented. For each structural model subpart, a separate evaluation of each set of predictor constructs is required.

Blindfolding Procedure:

Fig No. 5 Blindfolding Model



Source: Prepared by the authors (2023)

Results of Hypothesis:

Table 7: Hypothesis - decision

<b>H1</b>	H1: There is significance relationship between Artificial Intelligence and leadership empowerment.
<b>Result</b>	<b>Accepted</b>

Source: Prepared by Authors(2023)

## DISCUSSION - PRACTICAL IMPLICATIONS

According to the findings, numerous concepts concerning the change of Leadership through the application of AI may be found, Data, mentality, culture, and more. There are three use-cases for the AI application in the field of Leadership, according to the current research findings: First, by fulfilling the criteria established by knowledge management as a source of expert knowledge to be applied in decision-making processes to improve the relevant capabilities and productivity along with all organizational levels. Second, AI may directly support judgments by assessing business heuristics to be applied to the work responsibilities still at hand. The third suggested solution is to classify leadership styles and tactics using AI. However, those categories may be used to enhance present Leadership practices.

The first query is based on the discovery that 61 per cent of the organizations polled in a prior study indicated that they anticipated AI to have a significant impact on them. Everyone

who responded to the study claimed that AI is already influencing their own organization. In addition, almost 90% of respondents said their companies are already adopting AI. The sectors in which AI is used are; sales, marketing, monitoring, consulting, performance evaluation, training measures, consulting, and product development. Overall, it can be said that most respondents are currently utilizing AI in their organizations, proving that the technology is neither unknown nor will be outright disregarded.

The interviewees are then asked if, independent of the department where it is used, AI is actively used in their organization. To learn more about how familiar the organization is with AI in general, it is also interesting to inquire about those domains of use in question.

The possibilities and the questions in this part specifically address the subject of Leadership.

Through question, numerous advantages have been determined named, such as using AI in Leadership can result in the creation of optimized teams by assessing teams and potential candidates to find the best possible combination of skills and attributes. Here, as previously said, data security notes and technical skills for digitizing employee data are crucial. Demonstrating unnoticed links between data that humans cannot see, facilitating the management of big teams, and demonstrating that the real benefits of AI coexistence are other benefits of AI responded by participants. However, those social connections are crucial to Leadership, as noted by one participant and already implied by the concept of Leadership employed in this paper. Conversely, via question , participants mentioned how challenging it was to balance gender-related data during the recruitment processes. Second, utilizing AI in Leadership may result in fewer interpersonal interactions, which are crucial to Leadership.

It has been determined that Artificial intelligence can be fully programmed to respond to a company's priorities, adapting its algorithms to collaborate with a vast range of data sources, including project system integration; internal designs; financial records; data from production plants; Employee management and recruitment; supplier data; agreements and deliberations among other things. It implies that using AI tools creates new opportunities for identifying employee strengths and aligning people development processes with corporate objectives.

Through considering the participants' answers, it has been found that AI helps leaders empower Leadership in digitalization.

The demographic information addresses no research question. They are crucial for the research to categorize the respondents and businesses and maybe allow for generalization.

Additionally, future studies could use this anonymized data to identify potential target demographics.

## CONCLUSION

From the research conclusion, it can be said that the nature of labour is evolving and growing AI, as is the connection between humans and machines. It is anticipated that this would lead to a rise in work efficiency and make it easier for leaders and employees to use their time more effectively. Besides, leaders and employees will be able to focus on more complex needs because some jobs will be automated. This is true. However, despite being more elegant than a human agent, AI lacks interpersonal or soft abilities. It is determined that business leaders are urged to investigate the problems that need to be solved, use AI's strength and capacity for data analysis to find answers, and work toward the day when AI can take decisions without being placed in a decision-making situation. Conversely, AI becomes more integrated into organizational operations, the essential parts of Leadership should be streamlined at multiple levels, such as overarching plan, customer satisfaction, and utilizing skills and people capital. Acknowledging this shift in governance, executives polled stated that possibilities given access to AI technology would notify their future business model.

## REFERENCES

- Alasiri , N. ., & AlKubaisy , Z. . (2022). Exploring the role of leadership, work environment, it alignment and company performance on the digital transformation: a study on the private sector companies in western region, Saudi Arabia. *International Journal of Professional Business Review*, 7(2), e0500. <https://doi.org/10.26668/businessreview/2022.v7i2.500>
- Brock, J. K. U., & Von Wangenheim, F. (2019). Demystifying AI: What digital transformation Leaders can teach you about realistic artificial intelligence. *California Management Review*, 61(4), 110-134.
- Bughin, J., Hazan, E., Ramaswamy, S., Chui, M., Allas, T., Dahlstrom, P., & Trench, M. (2017). Artificial intelligence: the next digital frontier?.
- Chen, M., & Decary, M. (2020, January). Artificial intelligence in healthcare: An essential guide for health leaders. In *Healthcare management forum* (Vol. 33, No. 1, pp. 10-18). Sage CA: Los Angeles, CA: SAGE Publications.
- Cox, A. M., Pinfield, S., & Rutter, S. (2018). The intelligent library: Thought leaders' views on the likely impact of artificial intelligence on academic libraries. *Library Hi Tech*.
- Dauvergne, P. (2022). Is artificial intelligence greening global supply chains? Exposing the political economy of environmental costs. *Review of International Political Economy*, 29(3), 696-718.



- Delponte, L., & Tamburrini, G. (2018). European Artificial Intelligence (AI) leadership, the path for an integrated vision. European Parliament.
- Ebert, C., & Duarte, C. H. C. (2018). Digital transformation. *IEEE Softw.*, 35(4), 16-21.
- Eubanks, B. (2022). Artificial intelligence for HR: Use AI to support and develop a successful workforce. Kogan Page Publishers.
- Frick, N. R., Mirbabaie, M., Stieglitz, S., & Salomon, J. (2021). Maneuvering through the stormy seas of digital transformation: the impact of empowering leadership on the AI readiness of enterprises. *Journal of Decision Systems*, 30(2-3), 235-258.
- Goralski, M. A., & Tan, T. K. (2020). Artificial intelligence and sustainable development. *The International Journal of Management Education*, 18(1), 100330.
- Haleem, A., Vaishya, R., Javaid, M., & Khan, I. H. (2020). Artificial Intelligence (AI) applications in orthopaedics: an innovative technology to embrace. *Journal of clinical orthopaedics and trauma*, 11(Suppl 1), S80.
- Henseler, J., Ringle, C.M. & Sarstedt, M. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *J. of the Acad. Mark. Sci.* 43, 115–135 (2015). <https://doi.org/10.1007/s11747-014-0403-8>
- Isabell B., Sebastian J., (June 2018). What impact will Artificial Intelligence have on the future leadership role? A study of leaders expectations, School of Economics and Management.
- Josh Arnold, Fritz Drasgow (May 2000), The empowering leadership questionnaire: The construction and validation of a new scale for measuring leader behaviors. *Journal of Organizational Behavior*, DOI: 10.1002/(SICI)1099-1379(200005)21:33.0.CO;2-#
- Lee, J., Singh, J., & Azamfar, M. (2019). Industrial artificial intelligence. arXiv preprint arXiv:1908.02150.
- Matsunaga, M. (2022). Uncertainty management, transformational leadership, and job performance in an AI-powered organizational context. *Communication Monographs*, 89(1), 118-139.
- Matt, C., Hess, T., & Benlian, A. (2015). Digital transformation strategies. *Business & information systems engineering*, 57(5), 339-343.
- Mayring, P. (2014). Qualitative content analysis: theoretical foundation, basic procedures and software solution.
- Patil, A., & Patel, A. (2020). HOW ARTIFICIAL INTELLIGENCE(AI) CAN HELP TACKLE COVID-19 - AN ANALYSIS. *International Journal Of Advanced Research*, 8(9), 825-829. doi: 10.21474/ijar01/11729
- Robert, N. (2019). How artificial intelligence is changing nursing. *Nursing management*, 50(9), 30.

Shrivastava, R. (2023). Role of Artificial Intelligence in Future of Education. *International Journal of Professional Business Review*, 8(1), e0840. <https://doi.org/10.26668/businessreview/2023.v8i1.840>

Smith, A. M., & Green, M. (2018). Artificial intelligence and the role of leadership. *Journal of Leadership Studies*, 12(3), 85-87.

Sreejesh, S., Mohapatra, S., & Anusree, M. R. (2014). *Business research methods: An applied orientation*. Springer.

Strusani, D., & Hounghonon, G. V. (2019). The role of artificial intelligence in supporting development in emerging markets.

Titareva, T. (2021). *Leadership in an Artificial Intelligence Era*.

Wasko, M. M., & Faraj, S. (2005). Why Should I Share? Examining Social Capital and Knowledge Contribution in Electronic Networks of Practice. *MIS Quarterly*, 29(1), 35–57. <https://doi.org/10.2307/25148667>

Winston, P. H. (1984). *Artificial intelligence*. Addison-Wesley Longman Publishing Co., Inc..

Zhang, S., Ke, X., Frank Wang, X. H., & Liu, J. (2018). Empowering leadership and employee creativity: A dual-mechanism perspective. *Journal of Occupational and Organizational Psychology*, 91(4), 896-917.