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The Role of AI for Business and Companies' Leadership and Internationalization in Globalization: A Background with Analysis

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Abstract. *This paper analyzes and describes an analytical approach on the role of Artificial intelligence for business and companies leadership within the outlines of globalization**.*** *The research methodology focused first on a literature review by reviewing some previous relevant articles to the research topic and focusing on the relevant points. The reviewed articles provided in the part of references below were from different databases. The literature review was followed by a descriptive analysis that based on data interpretation and analysis according to the illustrations of the available data in the created figures that are showed in the part of analysis and results. The results showed that the potential of artificial intelligence may help companies to control their internal and external systems to bid and trade well in the markets. Artificial intelligence can help companies advance with their businesses by offering their services, products, operations or whatever offers in forms of e-sales with the help of artificial intelligence. Under the outlines of globalization and digitalization that are intertwined, competitiveness becomes increasingly stronger because companies business holders compete with companies that apply technology and innovation, delivering increasingly better products, operations, services and offers with the possibility of high costs for the third world countries and lower costs for developed countries and the Companies that internationalize their processes greatly need artificial intelligence, which has already become a leader in leading some businesses. In conclusion, many companies are clear that artificial intelligence is the next step in digital transformation for business and companies' leadership since AI is needed for their services, offers and internationalization processes to compete strongly in the foreign markets.*

Keywords: globalization, AI, business, companies, leadership, outlines, internationalization, implementation.

Introduction

Globalization is a phenomenon based on the continuous increase in interconnection between the different economies of the world at the economic, political, social and technological levels. The globalization process officially began in the 20th century, where there was a change in the geopolitical strategy of different economic powers worldwide. The barriers to international trade began to be eliminated together with the appearance of international agreements, organizations and

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unions such as the creation of the European Union (EU), the United Nations (UN), the World Trade Organization (WTO) and other world organizations.

In fact, the emergence of digitalization and technological advances such as artificial intelligence made an economic integration that provokes an increase in the volume of exchange of goods and services. Globalization has made markets internationalized, the thing that makes any producer compete with producers from the world in international markets. Moreover, the artificial intelligence (AI) that makes a large part of the digital and virtual innovation helps a lot in this by interconnecting businesses and clients together. Nowadays, companies think a lot about implementing artificial intelligence in their systems, but due to the possible risks and high cost of artificial intelligence, its innovation and development, they are sometimes afraid to find out how to implement artificial intelligence (AI) to achieve business leadership that will help them resist more in international markets and compete with quality and quantity to exist more.

Within the outlines of globalization and digitalization that are intertwined, competitiveness becomes increasingly stronger because companies and business holders compete with companies that apply technology and innovation, delivering increasingly better products, operations, services and offers with the possibility of high costs for third world countries and lower costs for developed countries, the Companies that internationalize their processes greatly need artificial intelligence that has already become a leader in leading businesses.

Regarding the implementation of artificial intelligence (AI) for business and companies' leadership within the context and outlines of globalization, there are not such results of other authors about the results of implementing AI for business and companies leadership since AI is considered a challenging step for business and companies but some companies and researchers are already studying the relevance of AI and the possibility of a lead in business and companies at the business and global levels.

The purpose of this full paper is to analyze, describe and present a background and an analytical approach about the role of Artificial intelligence (AI) for business and companies' leadership within the outlines of globalization.to help reader find more details about our analysis in accordance to some available data and related literature. The paper provides a background and an analytical approach about the conducted research and it will help readers understand the topic but it will be step for further research.

Related literature

Artificial intelligence (AI), business, human leadership and organizations

The accelerated advancement of technology, in particular Artificial Intelligence (AI), is expected to transform every industry. Moreover, the growing popularity and appeal of integrating AI into our daily lives and business operations is sometimes leading organizations to try to find use cases for existing AI tools upon getting exposure, opposed to seeking exposure once a use case has been identified such as has been suggested by respondents in studies on Primary Care Physicians and their attitude towards AI adoption (Allen *et al*., 2024). Naturally, ethical, moral and safety concerns accompany the AI revolution and the need for effective leadership to navigate this evolving landscape becomes paramount.

However, amidst this technological revolution, the essence of human-centric leadership remains indispensable (Aslam *et al*. 2020). This article explores the significance of human-centered leadership in an AI-driven world, delving into its principles, challenges, and strategies to foster an effective and productive relationship between humans and technology in the workplace (Baumgart et al., 2024).

Artificial intelligence (AI) can represent a broad spectrum of technologies that simulate human cognitive functions, enabling machines to perform tasks that traditionally required human intelligence. Examples range from machine learning algorithms to natural language processing systems (Dubinski *et al*., 2024). With considerable investment across various sectors, including IT, healthcare, finance, manufacturing, and transportation, leaders across industries are confronted with the challenge of navigating this transformative landscape. They must understand the capabilities and limitations of AI technologies (Baumgart *et al*., 2024), as well as their implications for organizational strategy, operations, and workforce dynamics. Moreover, leaders recognize that AI is not merely a tool but a paradigm shift that demands new approaches to leadership and decision-making (Agudo *et al*., 2024).

Globalization has been a key of innovation and new perspectives for business, energy and economy, the cost of sustainability will need more ways to boost its implementation at the international level, especially for the emerging market, developing countries and low income countries that find difficulties to balance their economies during the transition of Globalization and its impacts. (Benabed and Boeru, 2023). Applying a sustainable strategy in businesses leads to sustainable and business values. The main commodities that drive world's industries and productions are still Oil and Natural Gas. The transition to renewables is still slow. (Benabed and Boeru, 2023).

The emergence of Artificial intelligence and Shifting Leadership Paradigm

The emergence of AI in this area requires a departure from traditional leadership models towards more adaptive and agile approaches (Baumgart *et al*., 2024). While hierarchical structures and command-and-control leadership styles may have sufficed in the past, the complexity and rapid pace of change in the AI era place pressure on leaders to be flexible, to innovate and to embrace uncertainty and ambiguity (Balahurovska, 2023). As a leader, few of the most important standards nowadays, cover areas such as earning customers loyalty, creating the future for the team and the business, experiment and learn fast while getting it done together as a team and a critical prerequisite for this role to work within organizations adopting AI is heaving a leadership that really understands and provides the support and commitment for artificial intelligence.

AI technologies introduce new variables and unforeseen challenges, being at the same time a huge source of evolutionary benefits. Leaders must foster a culture of experimentation and learning, encouraging their teams not only to attempt but to fail fast and then attempt again, pushing towards scaling up all projects to full production releases, materializing these benefits. AI will lead to changes in how the work is done or how decisions are taken and going a step further on how organizations are harnessing the knowledge and information to achieve their goals. Furthermore, the pace of execution in an AI driven world dictates that employees must be empowered to take calculated risks (Allen *et al*., 2024). Leadership in an AI driven world will mean that leaders cannot be a bottleneck for decision making without jeopardizing the efficiency expected from AI adoption. Instead, leaders can harness the collective intelligence of their organizations and adapt to evolving market dynamics.

Replacing traditional hierarchical structures and top-down decision-making in a world where AI systems augment human capabilities will mean that effective leadership must transcend technical expertise. It will require a deep understanding of the relationship between technology, human behavior, and ethical considerations (Aslam *et al*., 2020). Leaders must navigate the delicate balance between harnessing the potential of AI for innovation and productivity while safeguarding against its unintended consequences, such as job displacement, bias, and loss of privacy (Chu *et al*., 2023), (Buck *et al*., 2022), (Agudo *et al*., 2024). Most companies adopting AI involve an augmentation, meaning people will be working in joint efforts with intelligent machines. Leaders

must be proactive in fostering a culture of continuous learning and adaptability, equipping employees with the skills and mindset to thrive in a dynamic environment characterized by technological disruption. Preparing the people for this journey is one of the most important attributes for any AI-driven leader (Davenport and Foutty, 2018). This requires a shift from a command-and-control mentality to one that emphasizes collaboration, empowerment, inclusivity, and growth.

Critically, leaders must foster a sense of psychological safety where employees feel empowered to experiment, take risks, and learn from failure (Balahurovska, 2023). Cultivating this safe environment where employees are able to thrive alongside intelligent machines (Shukla, *et al*., 2017) will enable the future leaders to understand the complexity of all the flows within the organization and how AI could provide the important information and connect all the dots in assisting them as future digital leaders (Brock and Wangenheim, 2019). If AI is viewed as an important technological adjuvant, remodeling the work and the workforces to incorporate robotics and AI technologies is a complex evolving opportunity for all industries and roles.

Furthermore, ethical leadership is paramount in guiding the responsible development and deployment of AI technologies. Leaders must uphold principles of fairness, transparency, and accountability, ensuring that AI systems and their use are aligned with ethical standards and societal values. The need to implement robust governance frameworks and conduct regular and increasingly complex ethical impact assessments (Polyportis *et al*., 2024). Furthermore, leaders must open an ongoing and meaningful dialogue with stakeholders about the implications of AI adoption (Polyportis *et al*., 2024). Ultimately, leadership in an AI-driven world requires a holistic approach that integrates technological acumen with human-centric values. It is not enough for leaders to simply understand the technical intricacies of AI; they must also possess emotional intelligence, empathy, and a genuine concern for the well-being and development of their employees (Buck *et al*., 2022). By championing a human-centered approach to leadership, grounded in empathy, inclusivity, and ethical stewardship, leaders can navigate the complexities of the AI era and unlock the full potential of technology to drive innovation, prosperity, and collective well-being.

Ethical Dilemmas in AI Leadership for business and organization

As AI systems become increasingly integrated into various levels of society, leaders are confronted with profound ethical considerations that demand careful navigation and principled decision-making. One of the foremost ethical dilemmas pertains to the issue of bias inherent in AI algorithms (Chu *et al*., 2023), (Gao *et al*., 2023). Machine learning algorithms rely on enormous datasets to make predictions and draw conclusions (Allen *et al*., 2024), (Akour *et al*., 2024). Importantly, these same datasets often reflect and possibly perpetuate societal biases and inequalities reason why it is critical to establish universally perceived ethical norms in the sphere of artificial intelligence (AI), and leaders must efficiently develop the landscape of arising regulatory and legal frameworks (Uddin, 2023).

For instance, facial recognition algorithms trained on predominantly white faces may exhibit higher error rates when identifying individuals from racial minority groups, leading to discriminatory outcomes. Moreover, AI algorithms used in hiring, lending, and criminal justice systems may inadvertently perpetuate systemic biases against marginalized communities, exacerbating social inequalities rather than mitigating them (Allen *et al*., 2024), (Gao *et al*., 2023). Ethical leadership requires a commitment to addressing bias in AI systems through rigorous data collection, algorithmic transparency, and continuous monitoring for discriminatory outcomes.

Another ethical dilemma in AI leadership revolves around the issue of privacy and data protection. Conventional systems approach we are talking about the standard learning where data is being manually put into programs offering limited results. Meanwhile, AI technologies rely on vast amounts of personal data to train algorithms and deliver personalized experiences, raising concerns about surveillance, data exploitation, and the erosion of privacy rights (Baumgart *et al*., 2024). At this point we are discussing creating a learning model, taking even historic data in consideration and with an automatic feedback loop we are getting predictions as a result. Leaders must grapple with questions about how to balance the benefits of AI-driven insights with the protection of individual privacy rights, particularly since a significant number of countries delegate the responsibility of data protection to users (Boerman, Kruikemeier and Zuiderveen Borgesius, 2021). For instance, AI-powered surveillance systems may enhance security and public safety, they also pose risks to civil liberties and personal freedoms. Ethical leadership entails implementing robust data protection measures, such as anonymization, encryption, and informed consent, to safeguard against privacy violations and ensure that individuals retain control over their personal information. To ensure the safety and security of user information, it is crucial for the leadership inside any AI-driven organization to prioritize the enforcement of well-rounded data protection measurements, encoded techniques, and access controls (Floridi *et al*., 2018).

Moreover, AI leadership faces ethical dilemmas related to transparency and accountability (Boerman, Kruikemeier and Zuiderveen Borgesius, 2021), (Buck *et al*., 2022). AI algorithms often operate as black boxes, making it difficult to understand the underlying decision-making processes and to hold responsible parties accountable for their outcomes. This lack of transparency can undermine trust in AI systems and erode public confidence in their fairness and reliability (Agudo *et al*., 2024). The issue of accountability grabs significant meaning within the field of AI systems, as they face the difficulty of making critical decisions, often not in presence of direct human arbitration. Ethical leaders recognize the importance of algorithmic transparency and accountability in building trust with stakeholders and fostering responsible AI deployment. They advocate for transparency measures, such as algorithmic explainability, auditability, and accountability mechanisms, to ensure that AI systems are accountable for their decisions and actions (Buck *et al*., 2022).

Furthermore, ethical dilemmas in AI leadership extend to questions of autonomy and human agency. As AI technologies become increasingly autonomous and capable of making decisions independently of human intervention, leaders must grapple with concerns about the ethical implications of delegating decision-making authority to software and indirectly to the designers (Buck *et al*. 2022), (Chu *et al*., 2023). Successful ethical leadership is needed due to the ethical dilemma between the possibility of discrimination in self-ruling algorithms and consignment of AI with life-critical conclusions (Bryson, 2018). In a practical example, autonomous vehicles equipped with AI systems raise questions about moral decision-making in life-and-death situations, such as determining who to prioritize in the event of an unavoidable collision. Ethical leadership requires thoughtful consideration of the ethical principles guiding AI decision-making, such as the prioritization of human safety, the minimization of harm, and the preservation of individual autonomy (Risser *et al*., 2023). Leaders must establish clear ethical guidelines and governance frameworks to ensure that AI systems operate in alignment with these principles and respect human dignity and rights. (Chu *et al*., 2023), (Risser *et al*., 2023).

In addition to these ethical dilemmas, AI leadership must also contend with challenges related to accountability and liability (Buck *et al*., 2022). As AI systems become more autonomous and capable of independent decision-making, questions arise about who bears responsibility for

their actions and outcomes. In cases of AI-related harm or misconduct, it may be difficult to assign accountability to specific individuals or entities, leading to legal and ethical ambiguities (Buck *et al.*, 2022), (Allen *et al*., 2024). Ethical leaders advocate for clear lines of accountability and liability in AI deployment, ensuring that responsibility is appropriately assigned to those who design, develop, and deploy AI systems. They champion the implementation of legal and regulatory frameworks that hold stakeholders accountable for the ethical and legal implications of AI technologies.

Human-Centered Leadership in the age of AI transformation

Navigating the AI transformation inevitably leads to an increased focus towards the human aspect of the economy, human values, well-being, and empowerment amidst technological advancement. (Polyportis *et al*., 2024) (Balakrishnan and Dwivedi, 2024) As artificial intelligence modifies industries and re-evaluates the nature of work, effective leadership must prioritize the holistic development and fulfillment of individuals within the organization. At its core, human-centered leadership embodies a set of principles rooted in empathy, inclusivity, and ethical stewardship, guiding leaders in navigating the complexities of the AI era while fostering a culture of trust, collaboration, and innovation. (Buck *et al*., 2022), (Balahurovska, 2023).

Leaders must possess the ability to understand and empathize with the experiences, perspectives, and emotions of their employees, recognizing their diverse backgrounds, strengths, and aspirations. In an era characterized by rapid technological change and uncertainty, empathetic leadership fosters safety, resilience, and trust, enabling employees to feel valued, understood, and supported in their personal and professional growth. By cultivating empathy, leaders can bridge the gap between technology and humanity, creating a workplace culture that prioritizes human connection, compassion, and well-being. (Allen *et al*., 2024), (Chu *et al*., 2023).

In an increasingly diverse and interconnected world, leaders must embrace diversity and inclusion as essential drivers of innovation, creativity, and resilience. In the context of AI transformation, inclusivity dictates the need to create opportunities for individuals from all backgrounds. Those individuals bringing their unique perspectives, talents, and experiences to the organization can mitigate ethical challenges such as AI biases by ensuring diversity can be the counterweight to models based on possibly biased data (Buck *et al*., 2022). Checks and balances can be ensured and a diverse organization has the ability to ensure a robust ethical governance is applied to what would otherwise be an AI driven framework.

Another crucial facet of human-centered leadership is transparency. In the age of AI, where algorithms and automated decision-making systems play an increasingly prominent role in organizational processes, transparency is essential to building trust and accountability. Leaders must strive to be open, honest, and transparent in their communication with employees, stakeholders, and the public about the use and implications of AI technologies. This includes providing clear explanations of how AI systems work, the data they use, and the potential impact of their decisions on individuals and society. By prioritizing transparency, leaders can foster trust, mitigate fears of job displacement or surveillance, and promote ethical decision-making in the development and deployment of AI technologies.

Moreover, in a rapidly changing technological landscape, leaders must be agile, flexible, and responsive to emerging opportunities and challenges. This requires a willingness to experiment, take risks, and learn from failure, as well as the ability to adapt strategies, processes, and priorities in light of new information and changing circumstances. In the context of AI transformation, adaptability entails embracing a growth mindset, encouraging experimentation and

innovation, and supporting employees in developing the skills and resilience needed to thrive in a dynamic environment. By fostering adaptability, leaders can position their organizations for success in the face of technological disruption and uncertainty.

There are vast opportunities in leadership, including fostering collaboration, enabling innovation independence, enhancing adaptability, focusing on usability, gaining leadership support, and facilitating co-design and flexibility (Hogg *et al*, 2023). AI empowers leaders to observe employee progress, provide task-related advice, and effectively structure work processes, while also assisting them in anticipating strategic changes and mitigating talent attrition risks through AI-powered dashboards, recommendations, machine learning, and eye tracking (Quaquebeke and Gerpott, 2023).

AI, human leadership and economic optimization

The integration of AI in leadership holds considerable promise in contributing to economic growth by optimizing operational efficiency and productivity. Furthermore, it offers avenues for fostering global collaboration, transcending geographical boundaries through streamlined communication and coordination. Additionally, AI serves as a catalyst for technological innovation, propelling advancements through the development and application of sophisticated AI-driven solutions (Ailia *et al*., 2022). While AI opens doors to promising opportunities in leadership, it simultaneously introduces significant challenges: the shift to collaborative leadership requires new skills; resistance to leaving familiar non-technological leadership styles may hinder collaboration; concerns arise about job displacement with AI-powered tools; understanding AI algorithms is crucial for effective leadership; ethical considerations demand careful implementation of safeguards; and the need for new, reliable metrics arises to evaluate AI-assisted leadership effectiveness, surpassing traditional self-assessments (Quaquebeke and Gerpott, 2023). The incorporation of AI in leadership introduces a spectrum of challenges, including the inherent risk of abandonment, concerns regarding interoperability, potential distrust among stakeholders, formidable barriers to adoption, discernible impacts on organizational culture, public hesitancy, and a landscape marked by legal uncertainties (Hogg *et al*, 2023).

Another driving principle of human centered leadership is ethical stewardship, as elaborated on in this article. As AI technologies become increasingly integrated into organizational processes and decision-making (Buck *et al*., 2022), leaders bear a responsibility to ensure that these technologies are developed and used in a manner that aligns with ethical principles and societal values. This requires a commitment to ethical decision-making, integrity, and accountability in all aspects of AI development, deployment, and governance. Leaders must prioritize the ethical implications of AI technologies and conduct thorough ethical impact assessments. By upholding ethical standards and promoting responsible AI stewardship, leaders can build trust, mitigate risks, and ensure that AI technologies contribute to the collective well-being and prosperity of society. In the midst of AI's proliferation, human-centered leadership takes on heightened significance. At its core, human-centered leadership prioritizes the well-being, development, and empowerment of individuals within the organization. It emphasizes empathy, inclusivity, and collaboration, recognizing that people are the driving force behind innovation and success (Buck *et al*., 2022). In an AI-driven world, where machines augment human capabilities and redefine job roles, effective leadership must bridge the gap between technology and humanity.

Methodology and research questions

The research methodology focused first on a literature review by reviewing some previous relevant articles to the research topic and focusing on the relevant points. The viewed articles provided in the part of reference below were from data bases such as Science direct, Scopus and Web of Science. This research paper needed to include an overview to the prior research that had been conducted on some of the main points of the specific research topic. The literature review was followed by a descriptive analysis that was based on data interpretation and analysis according to the illustrations of the available data in the created figures that are shown in the part of analysis and results.

The literature review set the stage for later reading about the conducted research. In other words, it provides a helpful background and context for further research. The literature review mainly focused on identifying and defining the suitable information and details, the review part served as a reference to perform and conduct the research further. Identifying the research questions could help out as a guide to focus on the topic, the research is neither overgeneralized nor stringent. In short, reviewing some papers and articles focused more on checking and viewing first if the abstracts were relevant then the contents by going through the methods, results and discussion.

The literature review helped structure thoughts and begin the analysis by ensuring the coverage of the main important points to this paper and research. The next step after collecting data was data analysis and interpretation. In general, it is not easy to draw the line between the analysis and Interpretation since both parts and processes are merged imperceptibly, the interpretation and analysis of data are inextricably intertwined.

The set research questions for this research and paper are:

RQ1: Could AI be connected to companies and lead business as a result of globalization?" and "How important is artificial intelligence for the companies' internationalization processes?"

RQ2: "What are the main challenges that companies face to achieve leadership in case they implement AI in the services and business processes?"

This paper will help readers understand what is relevant and achieved in the conducted research topic by following some sources of data to reach the analysis and result part.

Analysis and result

The helpful potential of AI for companies' leadership and internationalization

Many companies are clear that artificial intelligence is the next step in digital transformation. However, there are myths around it and expectations about AI are perhaps very high. Unfortunately, artificial intelligence is not just about robots, it is about cognitive analysis, pattern recognition, learning systems, virtual assistants and robotics for process automation among many other things. Artificial intelligence is not just a technological issue because the human factor is at the center of the transformation and digital strategy. The potential of artificial intelligence can help companies to control their internal and external systems to bid and trade well in the markets. Artificial intelligence can help companies to go far with their businesses by offering their services, products, operation or whatever offers in forms of e-sales with the help of artificial intelligence.

The first use of "Artificial intelligence" (AI) was by computer scientist McCarthy in 1954 (Cukier, 2019). In the conference organized by him and his colleagues, he stated that every aspect of learning and intelligence could be described in a way that a computer can simulate. AI is the ability to mimic the cognitive functions of humans, such as learning and problem-solving which are distinct features of the human mind (Benabed, 2023), (Schalkoff, 1990). AI is a vast and

expanding area that is penetrating all scientific fields. It is currently being used in many areas, including marketing, banking, agriculture, healthcare, security, robots, speech recognition, chatbots, manufacturing, and many other areas (Faisal et al, 2021), (Benabed, 2023).

AI important implemented applications and processes in business

Those companies that simply seek to use robots to replace human labor will eventually stagnate while those companies that seek to extend human capabilities will become industry and market leaders. The field of artificial intelligence is very extensive and there are still not many details and data about the results and expectations of AI in business and companies because this concept is very new and current. However, some of the important applications in business can be mentioned.

✓ **The automation of processes:** Through the use of artificial intelligence, many tasks that were previously carried out manually and routinely will now be able to be programmed and automated to be carried out in the shortest time and with fewer resources. (See figure 1).

✓ **Data analysis**: Companies that work with large amounts of data information from which they can obtain information that they had never thought of before. So, use artificial intelligence systems to manage, organize and analyze unstructured data. (See figure 1).

✓ **Virtual assistance:** In the e-commerce sectors, companies that integrate a Chabot on their website to offer assistance services are becoming more and more common; a large part of the efforts of some companies are focusing on perfecting their tools and digital customer service.

✓ **Innovation and digitalization**: Today, thanks to time savings in operational tasks and the integration of artificial intelligence platforms, companies will be able to have more resources to dedicate to other tasks such as innovation itself. (See figure 1).

Therefore, it is very important that the company begins to get involved in the area of artificial intelligence, regardless of its size, for true competitiveness in foreign markets, its business leadership and its internationalization processes. (See figure 1).

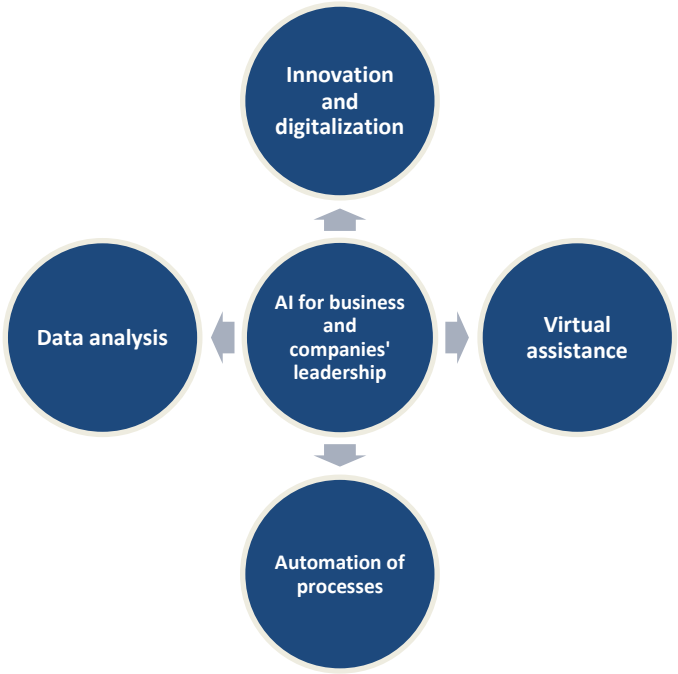

Figure1. Main AI tasks for Business and companies' leadership

Source: Authors' research and design, 2024.

From 2017 to 2020, according to respondents regarding the AI business strategy in organizations worldwide and the illustrated data on figure 2, there was a 20 % increase in strategy development of artificial intelligence (AI), if we compare it to 2017 where there was 39% and 2020 where it increased to 59%. There was also an increase in understanding that AI would change the ways organizations generate business values from 57% to 71%. Furthermore, there was an increase of deployed AI solutions in businesses over those same years from 46% in 2017 to 57% in 2020. (See figure 2).

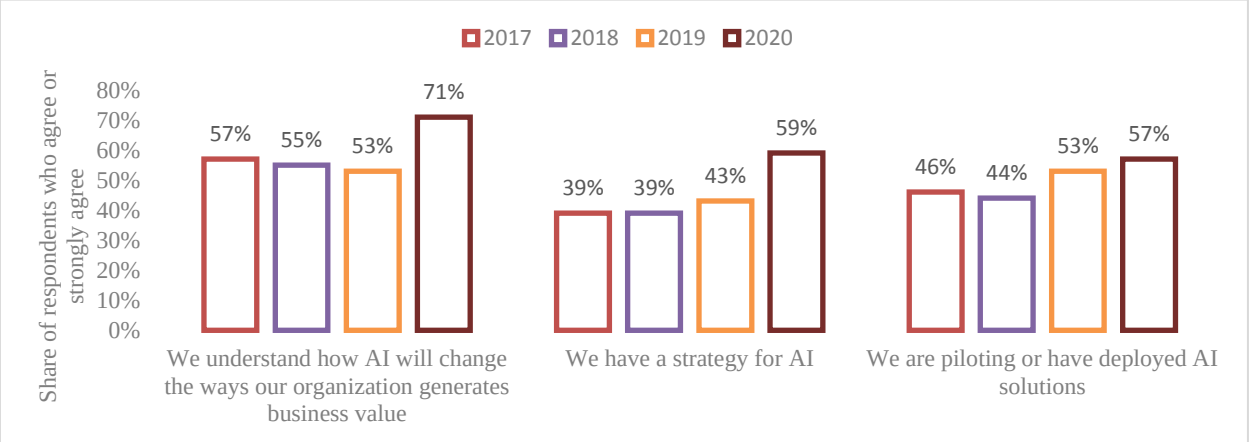

Figure 2. AI business strategy in organizations worldwide 2017-2020

Source: Authors' contribution, 2023, MIT Sloan Management Review data, BCG, Statista data, 2020.

According to the data provided by MarketingCharts in 2024 and 2023 conducted survey with 1,247 respondents regarding the business adoption of artificial intelligence, according to global CEOs and global CMOs. More Global CEOs have the intention to explore options for adoption in the future with 43% compared to 39% CMOs. (See figure 3).

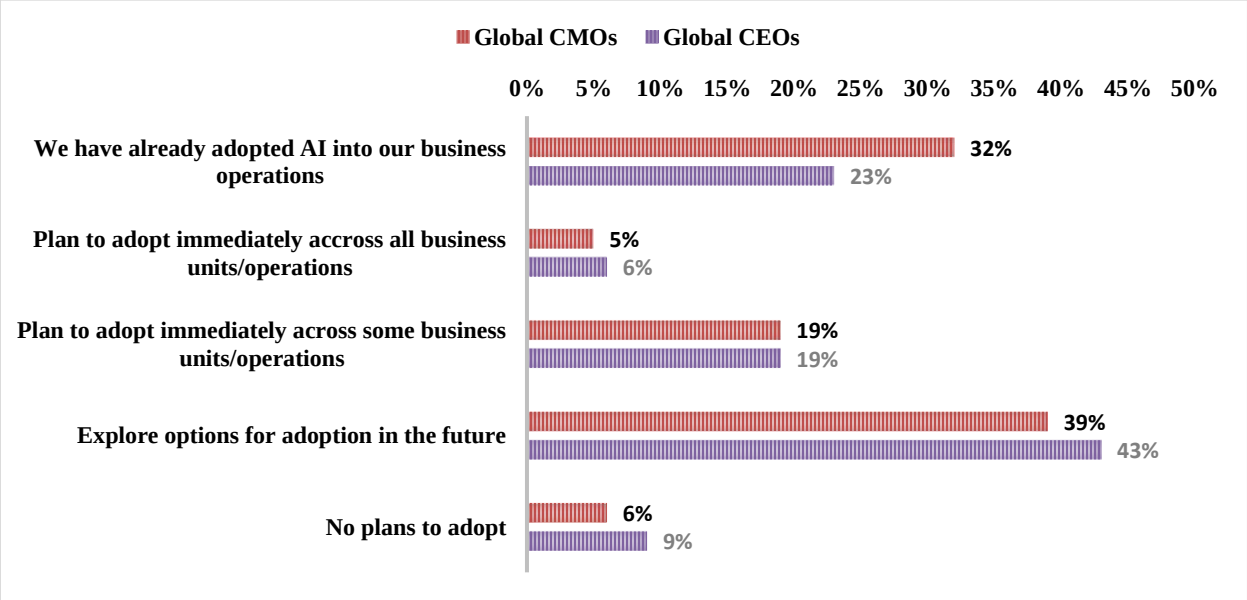

Figure 3. Business adoption levels of AI globally according to CEOs & CMOs 2023

Source: Authors' contribution, 2024, The Conference Board and MarketingCharts data, Statista data, 2024.

As opposed to 39% of CMOs stating the same. 13% of both CEOs and CMOs decided to adopt AI immediately but only through some business units/operations. However, there were only 9% of CEOs and 6% of CMOs with no plan to adopt AI into their business levels. (See figure 3). Whereas, 32% of CMOs have already adopted AI into their business operations compared to 23% of CEOs. (See figure 3).

Figure 4 illustrates the leading 3 challenges in starting AI projects in business worldwide in 2022 according to the AI index report 2023 data by Stanford University from page 213 in 2023.

The most difficult challenge of starting and taking up a new artificial intelligence (AI) project within an enterprise is the difficulty in proving its business value (37%). This can step from a variety of reasons. However, most often it is due to the fact that AI projects take time to show their value and every individual program may impact each business in slightly different ways. Approximately 40% of respondents believed this to be their main challenge in beginning a new AI project. 33% confirmed that choosing the right AI technologies could be in leading challenge in starting AI projects in business globally, while 34% responded and confirmed and chose the fact that the lack of executive commitment could be a leading challenge to business as well in case of implementing AI. (See figure 4).

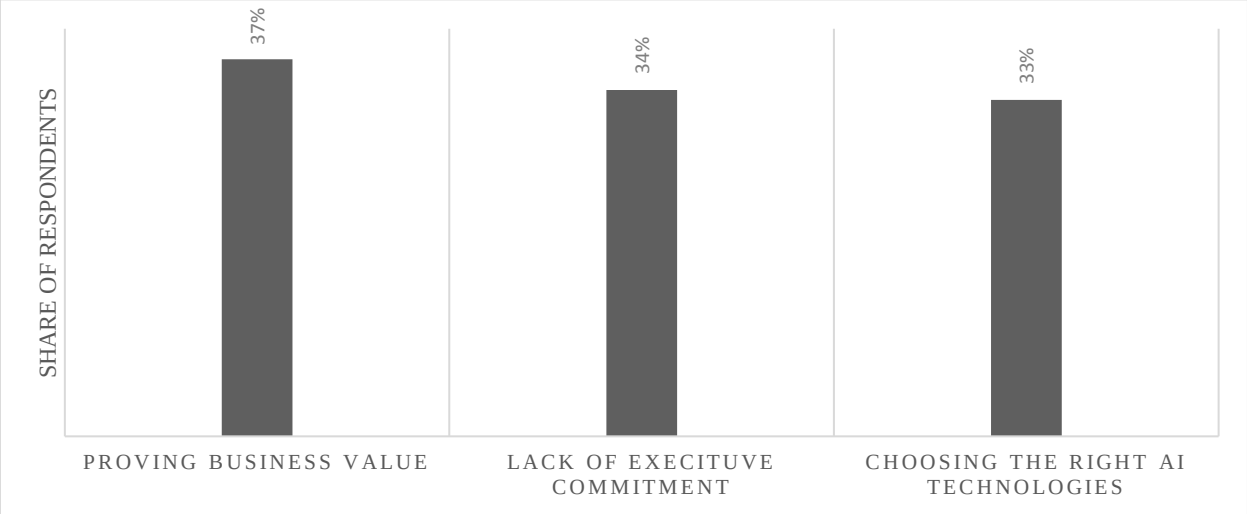

Figure 4.Leading three challenges in starting AI projects in business worldwide in 2022
Source: Authors' contribution, AI index report 2023 data, Stanford University data, p 213, 2023.

According to PwC data and a conducted survey from May to July 2023 with a number of 3,876 respondents about Business, technology and security executives' views on Generative AI worldwide 2023. (See figure 5). In 2023, when asked about their views on the highlighted statements about generative artificial intelligence (AI), 77 % of respondents worldwide confirmed that this AI would help their organization develop new lines of business within the next three years. A similar share of respondents stated that their company's focuses more on ethical and responsible use of generative AI. Whereas, nearly 70 % of respondents reported that their organization or company would deploy generative AI tools and processes for cyber defense within the next 12 months. (See figure 5).

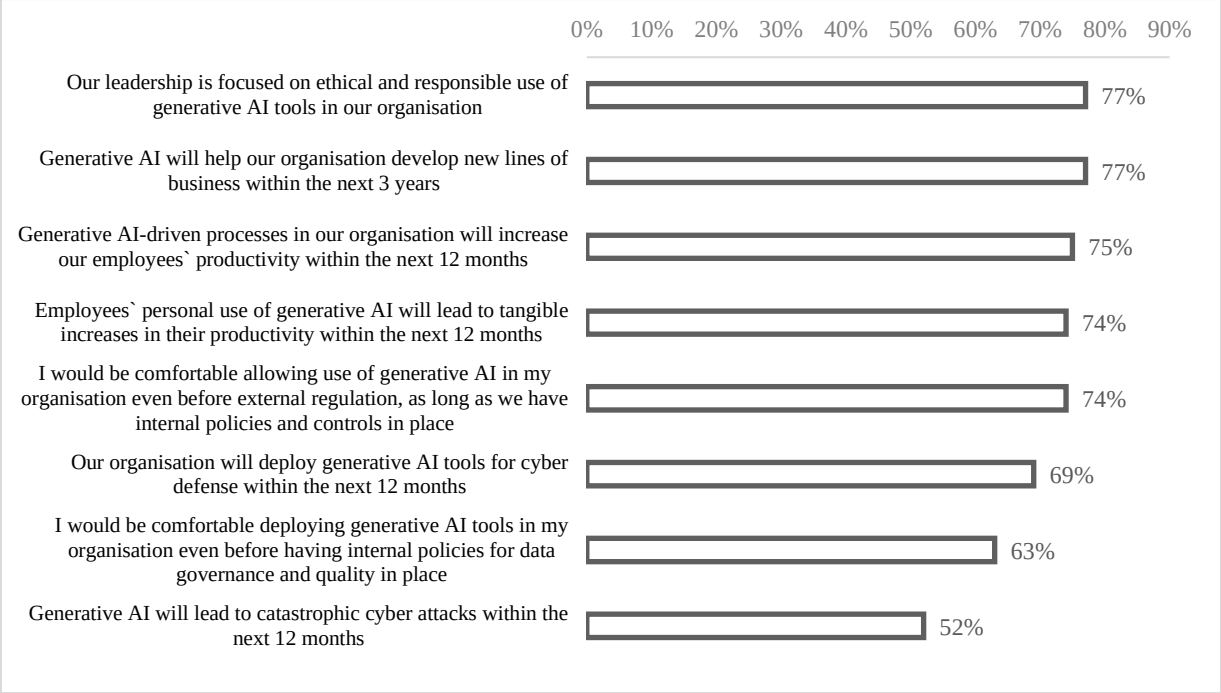

Figure 5. Business, technology and security executives' views on Generative AI worldwide 2023

Source: Authors' contribution 2024, PwC data, Statista data 2023.

74% confirmed that employees' personal use of generative AI would lead to tangible increases in their productivity within the next 12 months, while 74% confirmed that they would be comfortable with allowing the use of generative AI in their organization even before external regulation, as long as they have internal policies and controls in place. (See figure 5).

According to a total number of nearly 993 of respondents worldwide and the provided data by "Capgemini" in 2017 illustrated in figure 5 below, we see that in figure 4 that shows the benefits of implementing artificial intelligence (AI) in organizations; as of 2017 approximately 19% of companies with a dedicated AI lead reported that greater benefits from the implementation of AI from the point of regulatory compliance at lower cost compared to those 9% of firms with disparate initiatives without clear AI leadership. (See figure 6).

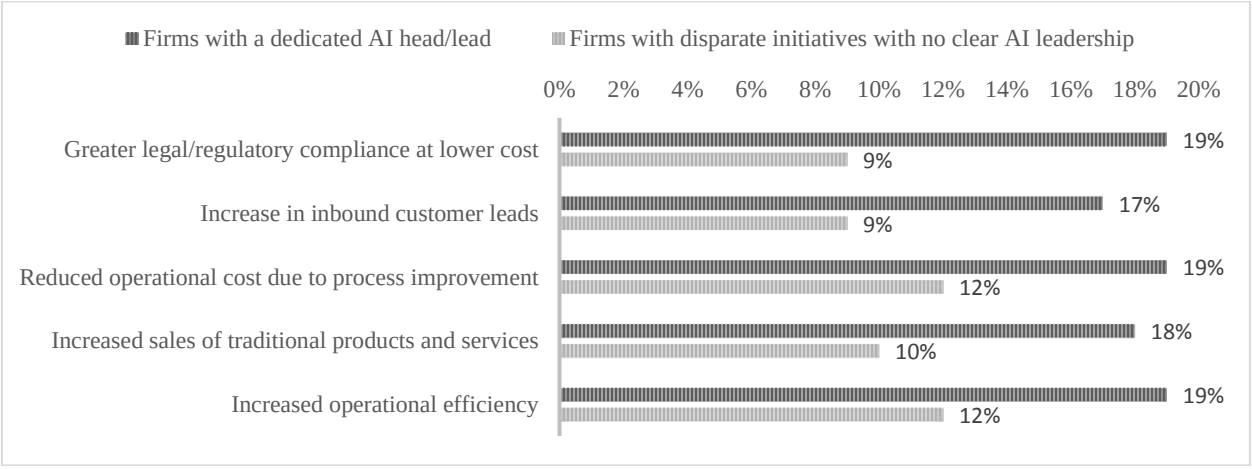

Figure 6. Benefits of implementing AI in organizations worldwide 2017 (Share of respondents %)

Source: Authors' contribution 2024, Capgemini data, 2017.

Furthermore, 19 % of firms with a dedicated AI lead said they benefited from increased operational efficiency compared to 12% of companies or firms with disparate initiatives and without clear AI leadership. (See figure 6).

17% of companies with a dedicated AI lead (head) reported an increase in inbound customer leads compared to 9% of firms with disparate initiatives with no clear AI leadership.

Therefore, we observe that AI leadership has already good considerable results in this comparison between the types of firms, we observe as well that 19% of companies with a dedicated AI lead (head) reported that they had reduced operational costs due to the process improvement compared to 12% of firms with disparate initiatives without clear AI leadership. (See figure 6).

Conclusions

In conclusion, ethical dilemmas in AI leadership present multifaceted challenges that demand careful consideration and principled decision-making. From bias and privacy concerns to transparency, accountability, and equity issues, leaders must navigate a complex ethical landscape shaped by the intersection of technology, ethics, and human values. Ethical leadership entails a commitment to addressing these dilemmas through rigorous ethical analysis, stakeholder engagement, and the implementation of responsible AI governance frameworks. By upholding ethical principles and promoting the responsible development and deployment of AI technologies, leaders can navigate the ethical complexities of the AI era and ensure that AI systems contribute to a more just, equitable, and humane society.

According to our research and analysis, artificial intelligence is not just about robots, it is about cognitive analysis, pattern recognition, learning systems, virtual assistants and robotics for process automation among many other things. Artificial intelligence is not just a technological issue because the human factor is at the center of the transformation and digital strategy. The potential of artificial intelligence can help companies to control their internal and external systems to bid and trade well in the markets. Artificial intelligence can help companies to go far with their businesses by offering their services, products, operation or whatever offers in forms of e-sales with the help of artificial intelligence.

To sum up, it is very important that the company begins to get involved in the area of artificial intelligence, regardless of its size, for true competitiveness in foreign markets, its business leadership and its internationalization processes. So, the fear of using artificial intelligence and data and how it can be implemented to transform businesses are points that need resilience and strategies with training to overcome it. Business and companies' leadership need AI for their services, offers and internationalization processes to compete strongly in the foreign markets. In the results and analysis we reached the fact that there are three leading challenges globally in implementing AI in business and companies operations such as proving business values, the lack of executive commitment and difficulties in choosing the right AI technologies. Moreover, there were benefits from implementing AI in firms that consider AI as heads and companies without worldwide 2017 and the percentage of the first category were higher than the second one and results in the section of analysis and results. (See figures 1, 2, 3, 4, 5 and 6).

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