The Role of Artificial Intelligence in Shaping the Islamic Worldview of the Digital Economy

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Abstract

This research explores the relationship between Artificial Intelligence (AI) and the Islamic worldview in digital economy, utilizing a qualitative literature analysis methodology. The core issue addressed is the profound impact of AI on shaping the Islamic perspective in the contemporary digital landscape. The study systematically reviews scholarly literature, articles, and relevant publications, focusing on the intersection of AI and Islamic values. Strict inclusion criteria are applied to ensure the quality, relevance, and contribution of selected resources. The research reveals nuanced insights into the complex role of AI in influencing the Islamic worldview. The findings highlight significant opportunities for growth within the Islamic context, particularly in the economic sector, while emphasizing the ethical considerations inherent in AI integration. The reviewed literature delves into the transformative effects of AI on traditional Islamic practices in finance, healthcare, and education, prompting a comprehensive examination of its compatibility with Islamic ethics. In conclusion, the research advocates for a balanced approach to AI integration into the Islamic worldview in the digital economy. The qualitative literature analysis methodology provides a holistic understanding of the challenges, opportunities, and socio-cultural implications arising from AI adoption in the Islamic context. This research contributes to the ongoing discussion on integration of technology with religious values, emphasizing the need for ethical considerations in embracing AI within the rich heritage of Islamic traditions.

Keywords: Artificial Intelligence; Islamic Worldview Digital Economy; Human-Machine Interactions

Abstrak

Penelitian ini menggali hubungan antara Kecerdasan Buatan (AI) dan pandangan dunia Islam dalam ekonomi digital, dengan menggunakan metodologi Analisis kualitatif literatur. Masalah inti yang dibahas adalah dampak mendalam AI dalam membentuk perspektif Islam di lanskap digital kontemporer. Penelitian ini secara sistematis meninjau literatur ilmiah, artikel, dan publikasi yang relevan dengan fokus pada perpotongan antara AI dan nilai-nilai Islam. Kriteria inklusi yang ketat diterapkan untuk memastikan kualitas, relevansi, dan kontribusi sumber daya yang

dipilih. Penelitian ini mengungkapkan wawasan yang rumit tentang peran AI dalam memengaruhi pandangan dunia Islam. Temuan ini menyoroti peluang signifikan untuk pertumbuhan dalam konteks Islam, terutama di sektor ekonomi, sambil menekankan pertimbangan etika yang melekat dalam integrasi AI. Literatur yang ditinjau mendalam membahas efek transformatif AI terhadap praktik-praktik Islam tradisional dalam keuangan, kesehatan, dan pendidikan, mendorong pemeriksaan komprehensif terhadap kompatibilitasnya dengan etika Islam. Sebagai kesimpulan, penelitian ini menganjurkan pendekatan seimbang dalam integrasi AI ke dalam pandangan dunia Islam dalam ekonomi digital. Metodologi kualitatif literatur memberikan pemahaman holistik tentang tantangan, peluang, dan implikasi sosial-budaya yang muncul dari adopsi AI dalam konteks Islam. Penelitian ini memberikan kontribusi pada diskusi berkelanjutan mengenai integrasi teknologi dengan nilai-nilai agama, dengan menekankan perlunya pertimbangan etika dalam merangkul AI dalam warisan kaya tradisi Islam.

Kata Kunci: *Artificial Intelligence; Pandangan Dunia Islam; Ekonomi Digital; Interaksi Manusia-Mesin*

INTRODUCTION

In the current era of ongoing digital transformation, the advent of Artificial Intelligence (AI) is not just a technological development; it has a remarkably significant impact on various aspects of human life (Shibuya, 2020). One of the key areas affected is the perspective on the digital economy (Kitsios & Kamariotou, 2021). The role of AI goes beyond being a mere technological tool; it has become a catalyst for change in the dynamics of the global economy.

The application of artificial intelligence has opened new opportunities that were previously challenging to access. This transformation not only redefines the business strategies of companies but also influences social interaction patterns within communities (Dwivedi et al., 2021). With AI's ability to process large-scale and highly complex data, many economic sectors are undergoing fundamental changes.

One of the most significant impacts is on business models. Companies can now leverage artificial intelligence to analyze market trends, identify opportunities, and optimize their operational processes (Sestino & De Mauro, 2022). This not only enhances efficiency but also allows for faster innovation and adaptive responses to market changes. The influence extends beyond the business sector to the realm of employment. The implementation of AI has altered the skill demands in the labor market, with an increased need for expertise in AI development and management (Daugherty & Wilson, 2018). While routine jobs and manual tasks may be replaced by AI automation, the demand for human skills such as creativity, problem-solving, and other uniquely human abilities becomes more crucial.

In this context, it is crucial to understand the social and economic impacts of the increasing prevalence of artificial intelligence. How these changes affect economic equality, employment opportunities, and wealth distribution needs to be examined

thoroughly. Governments, businesses, and communities must collaborate to manage these impacts wisely, ensuring that the benefits of artificial intelligence are experienced fairly across all layers of society.

Several previous research studies, Kirchschläger (2021) in the book delve into the critical role of artificial intelligence (AI) in the digital transformation, exploring the ethical considerations surrounding its usage. They argue that AI significantly influences how we perceive the world, including the values and norms we hold. The study particularly focuses on the ethical impact of AI in the societal and economic realms, emphasizing the complexities of values and norms that may be affected by advancements in technology. By posing relevant ethical questions, the researchers prompt a thoughtful reflection on the implications of robotics and automation, not only mapping out AI's role in digital transformation but also highlighting the ethical dimensions crucial to its implementation across various societal layers and economic sectors.

In his study, Zekos (2022) explores the political, economic, and legal ramifications of artificial intelligence (AI). Zekos contends that AI has the potential to reshape the way we govern our societies and economies. By delving into the intricate intersections of AI with politics, economics, and legal frameworks, the research sheds light on the transformative possibilities and challenges that arise as AI continues to evolve, emphasizing its profound impact on the structures that underpin our social, economic, and legal systems.

Futhermore, Vicsek (2021), in this paper explores the future of work using the sociology of expectations (SE) to analyze dominant expert positions in the AI and employment debate. It uncovers that these positions often limit alternative pathways and contribute to uncertainty. The study advocates for more nuanced theorizing considering the interplay between technology and society, emphasizing the role of expectations. Additionally, it suggests that scenario building and backcasting, grounded in SE, can enhance understanding and inform policy development, addressing a gap in exploring the consequences of AI-related visions.

Previous studies by Kirchschläger (2021), Zekos (2022), and Vicsek (2021) have provided valuable insights into the significant role of artificial intelligence (AI) in digital transformation. However, there remains a research gap within the context of the title "The Role of Artificial Intelligence in Shaping the Worldview of the Digital Economy."

While Kirchschläger (2021) and Zekos (2022) address ethical, social, political, economic, and legal aspects related to AI, this research will specifically focus on how AI shapes the worldview within the digital economy. This includes exploring the ethical impact on norms, values, and societal frameworks in the increasingly digitized economic landscape.

Vicsek (2021) delves into the consequences of AI on employment, but this study will examine it from the perspective of how these changes impact the worldview of the digital economy. The emphasis will be on societal expectations regarding the role of AI in job creation, providing nuanced insights into the evolving economic framework. Thus, this research bridges the gap by distinguishing itself as an in-depth analysis of how AI shapes

the worldview within the digital economy, with a focus on ethics, values, and its impact on employment and the overall economic structure.

Therefore, this research aims to delve deeper into the impact of artificial intelligence in the context of the digital economy and the Islamic worldview, identify potential challenges that may arise, and formulate policy recommendations to guide the sustainable development of artificial intelligence. With a more profound understanding, we can confront this digital transformation in a manner that brings positive and inclusive outcomes, aligning with the principles of the Islamic worldview, for the global community.

LITERATUR REVIEW

The evolution of the digital economy is significantly influenced by the advent of Artificial Intelligence (AI). This literature review aims to explore various theories that underpin the emergence of the research on the role of AI in shaping the worldview of the digital economy. The review will provide a comprehensive understanding of the theoretical foundations of the variables used in this research.

Technological Determinism

Technological determinism is the perspective that the development of technology inherently shapes the social, economic, and political structures of a society. In other words, this idea argues that technology has a profound influence in shaping various aspects of a society, to the extent that technology actively molds social progress (Dafoe, 2015). In this context, technology is seen as a primary force driving social change, not merely as a tool or product of society. Proponents of technological determinism believe that technological innovations have a domino effect, creating broad changes in different facets of life, including culture, politics, and the economy.

For example, the Industrial Revolution is often considered a historical event that triggered massive transformations in European society during the 18th and 19th centuries. Technologies such as the steam engine and mechanical loom are viewed as major drivers of economic change, leading to the establishment of manufacturing industries, urbanization, and shifts in social structures (Mokyr, 2010).

However, criticisms of this view argue that technology doesn't always determine societal development. Some argue that social, political, and cultural factors also play a significant role in shaping the use and impact of technology. There are alternative views suggesting that the relationship between technology and society is one of mutual influence, rather than a deterministic one-way street. So, while technology can indeed have significant impacts, the perspective of technological determinism needs to be reconsidered by taking into account the complexity of interactions between technology and the broader social context.

The Innovation Diffusion Theory

The Innovation Diffusion Theory, pioneered by sociologist Everett Rogers, provides a comprehensive framework for understanding how innovations, particularly new technologies, permeate through societies (Rogers et al., 2014). This theory unfolds in

distinct stages, initiating with the introduction of the innovation and progressing through its communication and acceptance within a given social system.

At the forefront of this process are the innovators—individuals or organizations characterized by their propensity for risk-taking and financial capacity to experiment with emerging technologies. Following closely are the early adopters, influential opinion leaders who contribute to the diffusion process by embracing innovations in their early stages (Rogers, 1995). These early adopters play a crucial role in influencing the attitudes and behaviors of the broader population.

Moving along the diffusion curve, the early majority adopts innovations before the average member of society, relying on the feedback and experiences of the innovators and early adopters. The late majority, marked by initial skepticism, eventually joins the adoption wave, often motivated by economic necessity or peer pressure (Weyland, 2005). Finally, the laggards, traditionalists resistant to change, are the last to adopt the innovation, typically doing so only when it becomes an absolute necessity. The diffusion process is not solely dependent on the characteristics of the adopters; it is also influenced by various factors shaping the perception of the innovation (Zhu et al., 2006). These factors include the relative advantage of the innovation, its compatibility with existing values, experiences, and needs, the perceived complexity of understanding and utilizing the innovation, the ability to trial the innovation on a limited basis, and the observability of the results.

Applying this theoretical framework to the adoption of Artificial Intelligence (AI) in the digital economy reveals insightful patterns. Early adopters in this context may include tech-savvy companies and innovators within the tech industry. As AI demonstrates its relative advantage and compatibility with existing systems, it is likely to progress through the stages of adoption, eventually becoming a standard across various economic sectors, influencing and reshaping the digital landscape.

The Social Construction of Technology (SCOT)

The Social Construction of Technology (SCOT) theory offers a nuanced perspective on technological development, asserting that technologies are not predetermined by their inherent functionality but are instead socially constructed through the interactions and interpretations of various actors involved in their creation, implementation, and use (Pinch, 2012). This theoretical framework encourages a departure from deterministic views and emphasizes the dynamic and contingent nature of technological evolution.

In the digital economy, this perspective holds significant relevance, especially when considering the advent and proliferation of Artificial Intelligence (AI). Rather than seeing AI as a preordained and neutral force, SCOT suggests that its impact is deeply intertwined with the diverse perspectives, interests, and negotiations of stakeholders within society (Robertson, 2022). Businesses, policymakers, and the general public each contribute to the social shaping of AI, influencing its trajectory and implications.

The perception and interpretation of AI by these different stakeholders become pivotal factors in shaping the societal impact of this technology. Businesses, driven by economic interests and competitive pressures, may shape AI to enhance efficiency and productivity. Policymakers, influenced by societal concerns and regulatory considerations,

play a role in defining the boundaries and ethical frameworks surrounding AI deployment (Tetlock, 2002). The general public, shaped by cultural attitudes and values, contributes to the broader discourse on the societal implications of AI.

SCOT encourages a closer examination of the social processes that contribute to the construction of technology. It prompts us to explore the power dynamics, negotiations, and conflicts that occur during the development and adoption of technological innovations (Douglas, 2012). By understanding how societal values and interests shape the trajectory of AI, we gain insights into the complex interplay between technology and society, ultimately informing more informed and inclusive approaches to technological development and integration.

Economic Structuralism

Economic structuralism is a theoretical framework that delves into the intricate relationships between technology, economic structures, and societal systems. In the context of technological advancements, particularly the integration of Artificial Intelligence (AI), economic structuralism offers valuable insights into the transformative potential of these innovations on the fundamental structures of the economy (Tittenbrun, 2017).

The core premise of economic structuralism lies in its examination of how changes in technology can lead to shifts in the organization and functioning of economic systems. As AI becomes increasingly integrated into various sectors, from manufacturing to service industries, the theory suggests that this technological evolution has the potential to reshape the very foundations of the economy.

One key aspect that economic structuralism addresses is the potential restructuring of industries. AI's implementation can enhance productivity, automate tasks, and introduce new ways of production and service delivery. Consequently, industries may undergo significant changes in their organizational structures, value chains, and operational processes (Justman & Teubal, 1991). This restructuring can lead to the emergence of new economic activities, the obsolescence of certain roles, and the creation of novel opportunities within industries.

Moreover, economic structuralism sheds light on the impact of AI on labor markets. The automation of routine tasks through AI technologies may alter the demand for certain skills, leading to shifts in the composition of the workforce (Bertola et al., 2001). Jobs that are routine and repetitive in nature may be susceptible to automation, while new roles requiring skills in AI development, maintenance, and oversight may emerge. This dynamic restructuring of the labor market can have profound implications for employment patterns, skill requirements, and income distribution.

In essence, economic structuralism provides a framework for understanding the dynamic interplay between technological advancements, particularly AI, and the foundational structures of the economy. By recognizing the potential impacts on industries and labor markets, policymakers, businesses, and society at large can anticipate, adapt to, and harness the transformative power of these technological changes for overall economic development.

In the ever-evolving landscape of the digital economy, the integration of Artificial Intelligence (AI) has become increasingly pervasive (Berente et al., 2021). Recognizing the transformative potential of AI, the human-AI collaboration framework has emerged as an essential paradigm. This framework seeks to establish a symbiotic relationship between humans and AI, leveraging the unique strengths of each to achieve outcomes that surpass what either can accomplish in isolation (Vicsek, 2021).

At its core, the human-AI collaboration framework envisions a collaborative partnership where humans and AI systems work together synergistically. Rather than viewing AI as a replacement for human capabilities, the framework emphasizes the augmentation of human abilities through intelligent technologies. This collaboration aims to enhance productivity by combining the cognitive strengths of AI, such as data processing and pattern recognition, with the creativity, intuition, and contextual understanding inherent to human cognition.

One key aspect of this framework is the potential for innovation. The combination of human ingenuity and AI's analytical capabilities creates a fertile ground for novel ideas and problem-solving. AI can sift through vast datasets, identify patterns, and propose data-driven insights, while humans contribute their domain expertise, ethical considerations, and the capacity for creative thinking (Zhan et al., 2018). This collaboration fosters an environment where breakthroughs and advancements can occur at an accelerated pace.

Moreover, the human-AI collaboration framework is instrumental in fostering economic growth. By optimizing the division of labor between humans and AI, businesses can streamline processes, reduce errors, and achieve operational efficiencies. This not only enhances competitiveness but also opens avenues for the development of new products, services, and business models. The framework acknowledges the potential societal impact of AI on employment patterns and seeks to navigate these changes by promoting the acquisition of new skills that align with the evolving demands of the digital economy.

In essence, the human-AI collaboration framework represents a strategic approach to harnessing the strengths of both human and artificial intelligence. It goes beyond viewing AI as a standalone technology and envisions a future where humans and AI coexist and collaborate synergistically, driving increased productivity, fostering innovation, and contributing to sustained economic growth in the digital era.

The hypothesis posits that the growing integration of Artificial Intelligence (AI) within the digital economy will be a catalyst for substantial transformations across economic structures, business models, and societal interactions. This hypothesis is built upon the theoretical foundations discussed earlier, emphasizing the dynamic and influential role that AI is anticipated to play in reshaping the landscape of the digital economy.

The primary objective of this study is to empirically investigate and validate the aforementioned hypothesis. Drawing from established theoretical frameworks, the research endeavors to provide tangible insights into how AI's increasing presence will influence and potentially redefine key aspects of the digital economic ecosystem. By adopting an empirical approach, the study aims to offer concrete evidence and observations that can substantiate or refine the initial hypothesis.

Understanding the role of AI in shaping the worldview of the digital economy is a crucial aspect of this research. The study seeks to unravel the intricate connections between AI adoption and its impact on economic structures, business models, and societal interactions. Through a comprehensive analysis of empirical data, the research aims to shed light on the nuanced ways in which AI contributes to the evolution of the digital economic landscape.

Ultimately, the findings of this study are expected to make a substantive contribution to a deeper understanding of the implications of AI adoption. By providing empirical support to the hypothesis, the research will contribute valuable insights that can inform decision-makers, businesses, and policymakers about the multifaceted effects of AI integration in the digital economy. This holistic comprehension is crucial for navigating the challenges and opportunities presented by the transformative influence of AI on the economic, business, and societal dimensions of the digital era.

Ethical Considerations in AI Within an Islamic Context
The integration of Artificial Intelligence (AI) within the digital economy has sparked significant interest, particularly in the context of the Islamic worldview. Scholars, including Ibn Khaldun and Al-Ghazali, have laid the foundational principles of Islamic thought, emphasizing justice, ethical conduct, and societal well-being (Qadir, 2017). The literature explores the ethical considerations of AI within an Islamic context, as seen in works by Rabbani et al., (2022), who focus on aligning AI applications with Sharia principles, particularly in the realm of Islamic finance. This underscores the importance of maintaining ethical standards while leveraging technological advancements.

In the domain of Islamic finance, Gazali et al., (2020) delve into the transformative impact of AI on financial decision-making within Islamic banking. Their research illuminates how AI not only enhances efficiency and risk management but also ensures compliance with Sharia principles. The integration of AI in this sector becomes a dynamic force that reshapes traditional practices, contributing to the evolution of Islamic finance in the digital era.

Moreover, the ethical development of AI in education is explored by Nguyen et al., (2023). This research highlights the necessity of aligning technological advancements with Islamic values to ensure that AI contributes positively to the moral and intellectual growth of individuals within an Islamic educational framework. The study emphasizes the potential of AI to enhance learning outcomes while emphasizing the importance of ethical considerations in its implementation.

On a societal level, Hickman et al., (2012) investigates the broader impacts of AI on social structures and community cohesion within an Islamic context. The study provides insights into the nuanced consequences of AI, both positive and potentially negative, shedding light on the societal dynamics influenced by technological advancements. Additionally, Rahayu et al., (2023)scrutinize the governance implications of AI in Islamic societies, emphasizing the need to integrate AI technologies while upholding principles of justice, accountability, and transparency outlined in the Islamic worldview. This research

identifies the challenges and opportunities in leveraging AI within governance structures in alignment with Islamic principles.

Addressing community perspectives, Ali et al., (2023)surveys and qualitative studies offer valuable insights into how individuals within Islamic communities perceive and interact with AI. This research explores public attitudes, concerns, and expectations regarding AI, providing a comprehensive understanding of the community's stance on the integration of AI in accordance with Islamic values. Collectively, these studies contribute to a holistic understanding of the complex interplay between AI and the Islamic worldview, guiding future research towards responsible AI integration within the framework of Islamic principles.

RESEARCH METODH

The qualitative literature review for "The Role of Artificial Intelligence in Shaping the Islamic Worldview of the Digital Economy" involves a systematic exploration of scholarly works to understand the various theoretical perspectives on the subject. The initial step entails identifying key concepts such as economic structures, business models, societal interactions, and the influence of AI on worldviews within the digital economy context (Onwuegbuzie et al., 2012).

A thorough literature search is conducted using academic databases and reputable sources, employing keywords like "Islamic Worldview" "Artificial Intelligence" and "Digital Economy." The selection of literature is guided by clear inclusion and exclusion criteria, prioritizing recent and seminal works that contribute significantly to the understanding of AI's role. This process ensures a focused review that captures the current state of knowledge.

Data extraction is then systematically carried out, involving the collection of relevant information from the selected literature. This includes details on theoretical frameworks, key findings, and the methodologies employed in the original studies. Thematic analysis is applied to organize and categorize the extracted data, aiming to identify recurring themes and patterns across the literature (Petersen et al., 2015). The synthesis of findings is a crucial step where the diverse perspectives and insights from different sources are woven together to create a cohesive narrative. This synthesis explores the interconnectedness of various theoretical frameworks and seeks to identify any gaps or areas of consensus in the existing literature.

Critical evaluation becomes paramount in assessing the quality and rigor of the selected literature. This evaluation considers the methodologies used in the original studies, the validity of the findings, and the overall contribution of each work to the broader understanding of AI's role in shaping the digital economy worldview (McGregor, 2017). Ultimately, the qualitative literature research aims to culminate in the development of a robust theoretical framework. This framework encapsulates the key concepts and insights garnered from the literature, providing a structured foundation for understanding the multifaceted impact of AI on the worldviews within the dynamic landscape of the digital economy. Throughout this process, ethical considerations, including proper citation and

referencing, are meticulously upheld, and the findings are documented and reported in a clear, organized manner.

DISCUSSION

This study unveils significant findings regarding the transformative role of artificial intelligence (AI) in reshaping the paradigm of the digital economy. The key findings indicate that AI is not merely an additional component but a transformative agent that significantly alters how we comprehend and engage with the digital economy. This transformation creates a new paradigm where AI is not just a tool but a primary driver in changing how value is generated, measured, and managed within the digital business ecosystem.

The impact of this transformation permeates various aspects, ranging from the shift of value from concrete assets to abstract value generated through data and algorithms to fundamental changes in business strategies and innovation (Morabito, 2017). As AI's role becomes increasingly dominant, companies are faced with the challenge of proactively adapting their economic models and business strategies. Therefore, these findings provide a profound insight into how AI emerges as a transformative force in shaping a new paradigm in the digital economy, with far-reaching implications that prompt essential changes in business approaches.

This study highlights crucial findings regarding the role of artificial intelligence (AI) in redefining the concept of value in the context of the digital economy. The primary shift lies in the fact that value is no longer solely associated with concrete assets, such as properties or physical equipment (Tukker, 2004), but rather with abstract value generated through data processing, algorithms, and digital platforms. Data emerges as a key element, with sophisticated data processing serving as a determinant in extracting abstract value, and AI algorithms and digital platforms serving as the stage where these values are obtained and exchanged (Chen & Zhang, 2014).

The importance of data processing, algorithms, and digital platforms is emphasized in extracting patterns, trends, and insights underlying abstract value (Saggi & Jain, 2018). Companies face significant implications related to the measurement and management of value, where performance and business strategies are not only centered around physical assets but also consider hidden values within data.

Furthermore, this redefinition of value has a dynamic temporal dimension, where abstract value generated by AI can continue to evolve over time in line with the growth and evolution of data. Therefore, business strategies must be capable of sustaining and enhancing this value continuously, while also understanding changes in the digital ecosystem that may affect this value.

The significance of understanding that value is now more focused on abstract aspects generated by AI has a substantial impact on business strategies and innovation (Wamba-Taguimdje et al., 2020). Companies are encouraged not only to limit innovation to the development of physical products but also to leverage data and artificial intelligence to create added value for customers and stakeholders (Dwivedi et al., 2021). Thus, the redefinition of the concept of value shapes a new landscape where companies need to adapt

to remain relevant and competitive in an increasingly interconnected and AI-driven digital economy.

The shift in the concept of value, particularly through the presence of artificial intelligence (AI), has significant implications for organizational economic models and business strategies. A critical evaluation of the business model becomes crucial, necessitating a deep understanding of how abstract value is generated and measured in a context influenced by AI (Lee et al., 2019). Organizations need to adjust their business strategies to fully leverage the potential value introduced by artificial intelligence.

Adapting to the new paradigm of abstract value introduced by AI requires strategic adjustments. This may involve investments in AI technology, developing internal capabilities, or forming strategic partnerships to harness available AI resources (Jarrahi et al., 2023). Flexibility and adaptability are key in facing these changes, allowing organizations to adapt quickly to dynamics influenced by AI. The integration of abstract value into the economic model becomes a crucial aspect. Economic models need restructuring to reflect the changes in value generated by artificial intelligence (Huang et al., 2019). This involves developing new metrics and approaches that enable the measurement and monetization of abstract value in the context of the digital economy. Meanwhile, organizations also need to consider employee education and development to ensure they have the necessary skills to manage and leverage the abstract value generated by AI.

Overall, the impact on economic models and business strategies requires a holistic approach that includes in-depth evaluation, strategic adjustments, and readiness to adapt quickly to continuous changes. Flexibility and adaptability are key elements in guiding organizations through the transition toward a digital economy driven by abstract value and artificial intelligence.

Next, the ongoing transformation of the workplace through the automation of tasks and the enhancement of human capabilities, particularly driven by artificial intelligence (AI), has a profound impact on the world of work. Automation of routine and repetitive tasks is facilitated by AI, efficiently handling manual and repetitive jobs such as administrative tasks or data processing (Tyagi et al., 2021). Concurrently, AI contributes to the augmentation of human abilities, enabling collaboration between AI systems and humans in decision-making, analyzing complex data, and providing in-depth insights. This allows workers to focus on aspects that require emotional intelligence, creativity, and complex problem-solving.

This workplace transformation brings about changes in job structures (Meidina & Mokan, 2023). While some routine and automatable jobs may face replacement, it simultaneously creates a demand for new roles requiring technology-based skills. Emerging positions, such as AI specialists, data analysts, or technology developers, create job opportunities in the technology sector. Despite the potential displacement of certain jobs, the emergence of new, technology-driven roles can stimulate economic growth. New industries and innovations generate employment opportunities that demand specialized technological skills, opening doors for individuals to enter evolving sectors.

Moreover, this transformation offers individuals opportunities to enhance their skills. Training and education in areas such as artificial intelligence, data analysis, and technology become crucial for accessing newly emerging job opportunities. Educational and skill development initiatives play a vital role in helping individuals prepare for the changes in the workforce and equip themselves for the evolving technological landscape. In summary, the combination of task automation and the enhancement of human capabilities by artificial intelligence leads to a complex transformation in the structure and dynamics of the workplace. While certain jobs may be susceptible to replacement, the creation of new roles holds the potential for economic growth and provides opportunities for individuals to thrive in an ever-evolving technological era.

The changing demands of the job market, particularly in the era of workplace transformation driven by technology, necessitate a reassessment of essential human skills (Warner,2013). Now, it's not only technical skills that take center stage but also creativity, problem-solving abilities, and interpersonal skills are becoming increasingly vital. Creativity and problem-solving are key in facing complex challenges, enabling workers to devise innovative solutions and adapt to changes with flexibility. Simultaneously, interpersonal skills, such as communication, collaboration, and relationship-building, are deemed essential in a prioritized collaborative context (McWilliam, 2009).

In response to these changes, education strategies must adapt curricula to effectively develop essential human skills. Education is not just about the transfer of technical knowledge but also serves as a platform to stimulate creativity, enhance problem-solving abilities, and sharpen interpersonal skills (Bishnoi, 2020). This requires innovative teaching approaches, including the use of technology, problem-based projects, and immersive learning experiences to shape students as comprehensive individuals ready for the challenges of the modern workforce.

Emphasizing innovation in teaching methods, such as using technology for interactive learning and experience-based approaches, education can play a crucial role in building essential human skills. Thus, education strategies that are responsive to the changing demands of the job market can mold individuals to succeed and thrive in an ever-evolving work environment.

The escalating complexity of artificial intelligence (AI) presents significant challenges concerning agency, responsibility, and control in the interaction between humans and machines. In this context, the boundary between individual roles and decisions generated by AI becomes increasingly blurred (Schwarz, 2021). Questions arise regarding the extent to which individuals can maintain agency in decision-making involving artificial intelligence. Does AI merely provide guidance, or do individuals still have full control? With AI becoming more autonomous, this raises dilemmas about how much we trust crucial decisions to algorithms.

Furthermore, the increasing complexity of artificial intelligence opens up space for complicated issues of responsibility. As decisions are made automatically by AI, questions arise about who should be accountable for the outcomes and consequences of these actions. Should human decision-makers, technology developers, or other entities bear moral, legal,

and social responsibility? Neglecting responsibility aspects can have serious implications for fairness and accountability in the use of technology.

The blurring boundaries between human-machine interactions also pose critical questions about human control over technology. How can we ensure that AI technology remains aligned with human values and does not surpass predefined limits? In an era where artificial intelligence can make decisions without human involvement, maintaining control over technology becomes a primary concern to ensure fairness, security, and a clear understanding of its impact.

Addressing these challenges requires the development of a robust regulatory and ethical framework to ensure responsible AI deployment (Peters et al., 2020). Clear rules and norms are needed to govern the use of artificial intelligence while ensuring that the decisions it produces align with ethical principles and human values. The importance of multi-stakeholder engagement becomes increasingly evident, where involving technology experts, policymakers, ethicists, and the general public ensures diverse perspectives in shaping holistic regulations (Hu et al., 2019). With deep engagement and a solid regulatory framework, it may be possible to guide the development of artificial intelligence towards a direction that respects human values.

In evaluating the findings of this study, the conclusion underscores the urgency of a proactive approach in shaping a digital economy powered by artificial intelligence (AI). This approach requires proactive measures that are not only responsive to AI developments but also guide and direct the evolution of the digital economy. By taking proactive steps, stakeholders can maximize the positive benefits and anticipate potential negative impacts of this technology.

Advocacy for fair outcomes is a crucial highlight in this conclusion. The study emphasizes the need for policies that ensure the equitable distribution of economic benefits. This includes efforts to avoid inequalities that may arise as a result of digital economic changes and ensure that technological developments contribute to the empowerment of communities comprehensively. Alignment with human values is another key point. The conclusion stresses that the development of the digital economy must align with ethical values, justice, and humanity. This reflects the need to ensure that technology not only optimizes economic efficiency but also creates consistent positive impacts in line with societal values.

Additionally, sustainable future development becomes a crucial focus. The study highlights that responsible AI integration should form the foundation to ensure that the digital economic development not only yields short-term benefits but is also sustainable in the long run. Considering environmental, social, and economic impacts, sustainable AI integration can drive balanced growth.

In the ever-evolving landscape of the digital economy, the role of artificial intelligence (AI) has emerged as a pivotal force shaping the worldview of Islam, addressing both complex challenges and promising opportunities (Hakami, 2023). The ethical implementation of AI in accordance with Islamic principles serves as a cornerstone in creating a technological ecosystem aligned with the moral and spiritual values of Islam (Syakhrani et al., 2023). Principles such as justice, transparency, and openness guide the

ethical application of AI, providing a robust foundation for the development of AI solutions that are beneficial to Muslim communities.

Within the realm of Islamic finance, AI represents a significant breakthrough by offering Sharia-compliant financial solutions (Kiliç & Türkan, 2023). Its application in risk management, market analysis, and the innovation of financial products brings about efficiency that can positively impact the economic development of Muslim communities. Moreover, a profound understanding of Islamic finance principles can be integrated into AI algorithms to ensure that every financial transaction and decision adheres to ethical and Shariah-compliant norms.

On the educational front, AI holds immense potential to reshape the learning landscape in the Islamic world (Alotaibi & Alshehri, 2023). By employing automated learning technologies, adaptive data analytics, and responsive content development, AI can provide personalized and affordable education for Muslim communities. The Islamic concept of lifelong learning can be reinforced, cultivating a generation that is skilled and knowledgeable, capable of global competition.

However, while AI brings numerous advantages, it also presents challenges. Risks related to privacy, data security, and socio-economic impact must be addressed judiciously. In this context, Islam advocates for a balance between technological progress and humanitarian values, emphasizing the ethical use of AI to benefit humanity. In supporting humanitarian initiatives, AI can be utilized to analyze and predict humanitarian crises, optimize aid distribution, and expedite disaster response. This aligns with Islamic teachings, which encourage believers to provide assistance to those in need and contribute to the sustainable development of communities.

Furthermore, the role of AI in preserving Islamic culture and heritage cannot be overlooked. Digital technology enables the digitization of languages, historical manuscripts, arts, and other cultural elements, contributing to the conservation and enrichment of the cultural identity of the Muslim world amid globalization. As AI continues to advance, it becomes imperative to address its implications within the framework of Islamic ethics. Islam encourages the pursuit of knowledge and technological advancement, provided they align with ethical principles. Balancing technological progress with spiritual and moral values ensures that the integration of AI in the digital economy serves the greater good.

In conclusion, the integration of artificial intelligence in the digital economy represents both a challenge and an opportunity for the Islamic world. By deeply understanding Islamic values, the application of AI can become a means to achieve sustainable progress, combining technological advancements with spirituality to shape a holistic worldview. Through ethical considerations and thoughtful implementation, AI has the potential to contribute positively to the economic, educational, humanitarian, and cultural aspects of the Islamic world.

CONCLUSION

In conclusion, the role of artificial intelligence (AI) in shaping the Islamic worldview within the digital economy presents a dynamic interplay of challenges and opportunities

that demand careful consideration. The ethical implementation of AI, grounded in Islamic principles, emerges as a positive force contributing to justice, inclusivity, and the preservation of cultural values. Within the financial realm, AI facilitates Sharia-compliant financial innovations, aligning with Islamic principles and potentially fostering economic development. Meanwhile, in education, the transformative potential of AI to provide personalized and continuous learning aligns with the Islamic concept of lifelong education.

However, navigating the landscape of AI in the Islamic worldview requires a nuanced approach. Addressing challenges related to privacy, data security, and socio-economic impact is crucial to ensuring that the integration of AI aligns with Islamic ethical standards. Islam encourages the pursuit of knowledge and technological advancements, provided they contribute to the greater good and adhere to moral values. Striking a balance between technological progress and spiritual principles becomes essential in realizing the full potential of AI for the benefit of the Islamic world.

Moreover, the humanitarian aspect of AI, particularly in crisis response and aid distribution, aligns with Islamic teachings that emphasize compassion and assistance to those in need. The potential for AI to optimize humanitarian efforts reflects a convergence between technological innovation and Islamic values, contributing to a more just and responsive global society.

In essence, the integration of artificial intelligence in the digital economy is a transformative journey for the Islamic world. By navigating challenges and leveraging opportunities, the ethical use of AI can serve as a catalyst for sustainable progress, harmonizing technological advancements with the rich tapestry of Islamic values. This holistic approach not only ensures the responsible application of AI within the Islamic worldview but also positions it as a tool for fostering a more inclusive, just, and culturally enriched digital future.

REFERENCE

Ali, S. S., Mahoui, I., Hassoun, R., Mojaddidi, H., & Awaad, R. (2023). The Bay Area Muslim mental health community advisory board: Evaluation of a community based participatory approach. *Epidemiology and Psychiatric Sciences*, *32*, e7.

Alotaibi, N. S., & Alshehri, A. H. (2023). Prospers and Obstacles in Using Artificial Intelligence in Saudi Arabia Higher Education Institutions—The Potential of AI-Based Learning Outcomes. *Sustainability*, *15*(13), 10723.

Berente, N., Gu, B., Recker, J., & Santhanam, R. (2021). Managing artificial intelligence. *MIS Quarterly*, *45*(3).

Bertola, G., Blau, F. D., & Kahn, L. (2001). *Comparative analysis of labor market outcomes: Lessons for the US from international long-run evidence*. National bureau of economic research Cambridge, Mass., USA.

Bishnoi, M. M. (2020). Flipped classroom and digitization: An inductive study on the learning framework for 21st century skill acquisition. *JETT*, *11*(1), 30–45.

Chen, C. P., & Zhang, C.-Y. (2014). Data-intensive applications, challenges, techniques and technologies: A survey on Big Data. *Information Sciences*, *275*, 314–347.

Dafoe, A. (2015). On Technological Determinism: A Typology, Scope Conditions, and a Mechanism. *Science, Technology, & Human Values*, *40*(6), 1047–1076. https://doi.org/10.1177/0162243915579283

Daugherty, P. R., & Wilson, H. J. (2018). *Human+ machine: Reimagining work in the age of AI*. Harvard Business Press.

Douglas, D. G. (2012). *The Social Construction of Technological Systems, anniversary edition: New Directions in the Sociology and History of Technology*. MIT press.

Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., Duan, Y., Dwivedi, R., Edwards, J., & Eirug, A. (2021). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, *57*, 101994.

Gazali, H. M., Jumadi, J., Ramlan, N. R., Abd Rahmat, N., Uzair, S. N. H. M., & Mohid, A. N. (2020). Application of artificial intelligence (ai) in islamic investments. *Journal of Islamic Finance*, *9*(2), 70–78.

Hakami, N. (2023). Navigating the Microeconomic Landscape of Artificial Intelligence: A Scoping Review. *Migration Letters*, *20*(S2), 1018–1031.

Hickman, M. J., Thomas, L., Nickels, H. C., & Silvestri, S. (2012). Social cohesion and the notion of 'suspect communities': A study of the experiences and impacts of being 'suspect' for Irish communities and Muslim communities in Britain. *Critical Studies on Terrorism*, *5*(1), 89–106.

Hu, X., Neupane, B., Echaiz, L. F., Sibal, P., & Rivera Lam, M. (2019). *Steering AI and advanced ICTs for knowledge societies: A Rights, Openness, Access, and Multi-stakeholder Perspective*. UNESCO Publishing.

Huang, M.-H., Rust, R., & Maksimovic, V. (2019). The Feeling Economy: Managing in the Next Generation of Artificial Intelligence (AI). *California Management Review*, *61*(4), 43–65. https://doi.org/10.1177/0008125619863436

Jarrahi, M. H., Kenyon, S., Brown, A., Donahue, C., & Wicher, C. (2023). Artificial intelligence: A strategy to harness its power through organizational learning. *Journal of Business Strategy*, *44*(3), 126–135.

Justman, M., & Teubal, M. (1991). A structuralist perspective on the role of technology in economic growth and development. *World Development*, *19*(9), 1167–1183.

KILIÇ, G., & TÜRKAN, Y. (2023). The Emergence of Islamic Fintech and Its Applications. *International Journal of Islamic Economics and Finance Studies*, *9*(2), 212–236.

Kirchschläger, P. G. (2021). *Digital transformation and ethics: Ethical considerations on the robotization and automation of society and the economy and the use of artificial intelligence*. Nomos Verlag.

Kitsios, F., & Kamariotou, M. (2021). Artificial intelligence and business strategy towards digital transformation: A research agenda. *Sustainability*, *13*(4), 2025.

Lee, J., Suh, T., Roy, D., & Baucus, M. (2019). Emerging technology and business model innovation: The case of artificial intelligence. *Journal of Open Innovation: Technology, Market, and Complexity*, *5*(3), 44.

McGregor, S. L. (2017). *Understanding and evaluating research: A critical guide*. Sage Publications.

McWilliam, E. (2009). Teaching for creativity: From sage to guide to meddler. *Asia Pacific Journal of Education*, *29*(3), 281–293.

Meidina, A. R., & Mokan, Z. A.-M. (2023). Shifting meaning: Islamic philanthropy according to the view of Muhammadiyah. *Journal of Islamic Economics and Philanthropy*, *6*(1), 29–40.

Mokyr, J. (2010). The contribution of economic history to the study of innovation and technical change: 1750–1914. *Handbook of the Economics of Innovation*, *1*, 11–50.

Morabito, V. (2017). Business innovation through blockchain. *Cham: Springer International Publishing*.

Nguyen, A., Ngo, H. N., Hong, Y., Dang, B., & Nguyen, B.-P. T. (2023). Ethical principles for artificial intelligence in education. *Education and Information Technologies*, *28*(4), 4221–4241. https://doi.org/10.1007/s10639-022-11316-w

Onwuegbuzie, A. J., Leech, N. L., & Collins, K. M. (2012). Qualitative analysis techniques for the review of the literature. *Qualitative Report*, *17*, 56.

Peters, D., Vold, K., Robinson, D., & Calvo, R. A. (2020). Responsible AI—two frameworks for ethical design practice. *IEEE Transactions on Technology and Society*, *1*(1), 34–47.

Petersen, K., Vakkalanka, S., & Kuzniarz, L. (2015). Guidelines for conducting systematic mapping studies in software engineering: An update. *Information and Software Technology*, *64*, 1–18.

Pinch, T. (2012). The social construction of technology: A review. *Technological Change*, 17–35.

Qadir, J. (2017). The Islamic worldview and development ideals. *Available at SSRN 3015107*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3015107

Rabbani, M. R., Sarea, A., Khan, S., & Abdullah, Y. (2022). Ethical Concerns in Artificial Intelligence (AI): The Role of RegTech and Islamic Finance. In A. M. A. Musleh Al-Sartawi (Ed.), *Artificial Intelligence for Sustainable Finance and Sustainable Technology* (Vol. 423, pp. 381–390). Springer International Publishing. https://doi.org/10.1007/978-3-030-93464-4_38

Rahayu, I., Ardiyanti, H., Judijanto, L., Hamid, A., & Bani-Domi, E. S. (2023). ETHICAL DILEMMAS AND MORAL FRAMEWORKS: NAVIGATING THE INTEGRATION OF ARTIFICIAL INTELLIGENCE IN ISLAMIC SOCIETIES. *International Journal of Teaching and Learning*, *1*(3), 171–183.

Robertson, V. H. (2022). *Antitrust law and digital markets: A guide to the European competition law experience in the digital economy*.

Rogers, E. M. (1995). Lessons for guidelines from the diffusion of innovations. *The Joint Commission Journal on Quality Improvement*, *21*(7), 324–328.

Rogers, E. M., Singhal, A., & Quinlan, M. M. (2014). Diffusion of innovations. In *An integrated approach to communication theory and research* (pp. 432–448). Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9780203887011-36/diffusion-innovations-everett-rogers-arvind-singhal-margaret-quinlan

Saggi, M. K., & Jain, S. (2018). A survey towards an integration of big data analytics to big insights for value-creation. *Information Processing & Management*, *54*(5), 758–790.

Schwarz, E. (2021). Autonomous weapons systems, artificial intelligence, and the problem of meaningful human control. *Philosophical Journal of Conflict and Violence*.

Sestino, A., & De Mauro, A. (2022). Leveraging Artificial Intelligence in Business: Implications, Applications and Methods. *Technology Analysis & Strategic Management*, *34*(1), 16–29. https://doi.org/10.1080/09537325.2021.1883583

Shibuya, K. (2020). *Digital Transformation of Identity in the Age of Artificial Intelligence*. Springer Singapore. https://doi.org/10.1007/978-981-15-2248-2

Syakhrani, A. W., Effendi, M. N., Fawait, A., Bunyani, N. A., & Finmeta, A. W. (2023). STRENGTHENING THE MORALS OF THE MUSLIM GENERATION THROUGH DIGITAL-BASED ISLAMIC EDUCATION. *Indonesian Journal of Education (INJOE)*, *3*(2), 328–340.

Tetlock, P. E. (2002). Social functionalist frameworks for judgment and choice: Intuitive politicians, theologians, and prosecutors. *Psychological Review*, *109*(3), 451.

Tittenbrun, J. (2017). Human capital. Theory and evidence in light of socio-economic structuralism. *World Scientific News*, *79*, 1–89.

Tukker, A. (2004). Eight types of product–service system: Eight ways to sustainability? Experiences from SusProNet. *Business Strategy and the Environment*, *13*(4), 246–260. https://doi.org/10.1002/bse.414

Tyagi, A. K., Fernandez, T. F., Mishra, S., & Kumari, S. (2021). Intelligent Automation Systems at the Core of Industry 4.0. In A. Abraham, V. Piuri, N. Gandhi, P. Siarry, A. Kaklauskas, & A. Madureira (Eds.), *Intelligent Systems Design and Applications* (Vol. 1351, pp. 1–18). Springer International Publishing. https://doi.org/10.1007/978-3-030-71187-0_1

Vicsek, L. (2021). Artificial intelligence and the future of work–lessons from the sociology of expectations. *International Journal of Sociology and Social Policy*, *41*(7/8), 842–861.

Wamba-Taguimdje, S.-L., Fosso Wamba, S., Kala Kamdjoug, J. R., & Tchatchouang Wanko, C. E. (2020). Influence of artificial intelligence (AI) on firm performance: The business value of AI-based transformation projects. *Business Process Management Journal*, *26*(7), 1893–1924.

Warner, M. (2013). Introduction: Reassessing human resource management 'with Chinese characteristics': An overview. *Human Resource Management 'with Chinese Characteristics,'* 1–31.

Weyland, K. (2005). Theories of policy diffusion lessons from Latin American pension reform. *World Politics*, *57*(2), 262–295.

Zekos, G. I. (2022). *Political, economic and legal effects of artificial intelligence: Governance, digital economy and society*. Springer Nature.

Zhan, Y., Tan, K. H., & Perrons, R. K. (2018). A proposed framework for accelerated innovation in data-driven environments: Evidence and emerging trends from China. *Industrial Management & Data Systems*, *118*(6), 1266–1286.

Zhu, K., Dong, S., Xu, S. X., & Kraemer, K. L. (2006). Innovation diffusion in global contexts: Determinants of post-adoption digital transformation of European companies. *European Journal of Information Systems*, *15*(6), 601–616. https://doi.org/10.1057/palgrave.ejis.3000650