AI ALARM BELLS: THE EMERGING RISK PERCEPTIONS GLOBALLY REGARDING ARTIFICIAL INTELLIGENCE, 2022-2025

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ABSTRACT

Artificial Intelligence (AI) is increasingly recognized as a disruptive technology with profound potential to reshape complete sectors of our economy and the way we live and work. The present study investigates global public perceptions regarding the risks associated with AI technology in the early to mid-2020s, utilizing data from the Munich Security Index spanning 2022 to 2025 across G7 and BICS nations. Initial findings indicate that while AI risk perception is steadily rising in G7 countries—reflecting concerns about job displacement and ethical implications—public sentiment in BICS nations presents a more complex picture, influenced by varying socio-economic factors and cultural contexts. The study emphasizes the critical need for organizations to address public anxieties through transparent communication and engagement, ensuring that AI integration is managed ethically and responsibly. By promoting public AI literacy and fostering informed dialogues, stakeholders can better navigate the challenges posed by this rapidly evolving technology.

KEYWORDS

Artificial Intelligence, AI, Information Technology, IT, Strategic Management, Risk Analysis

1. INTRODUCTION

Everywhere you turn today, on your TV, on your computer, on your phone - *literally* everywhere, AI (artificial intelligence) is the buzzword of the day. AI has been touted - perhaps *very* deservingly so - as a disruptive technological force that will change how we work, learn, and ultimately, how we live in the very near future. AI may - *may* - be the most important development since the advent of the Internet as a transformative technology in business, the economy, education, and society at large.

With new - and better - artificial intelligence tools and applications coming down the pipe on seemingly a daily basis, AI is poised to be a powerful force that will shape the future - and do so quite quickly. But with the excitement over AI also comes anxiety regarding this new, emerging technology. For businesses, for governments, and yes, for us as individuals, there is a growing recognition of the risks associated with artificial intelligence and all of the developments being brought about by the AI revolution.

The purpose of this study is to examine how global public perceptions regarding the risks of artificial intelligence technology have developed over the course of the early to mid-2020s - a time period that will likely prove to be quite important in the course of AI's development. We will begin with a look at what exactly artificial intelligence is and how it is being applied today - and a glimpse ahead at what is likely to come as the development of AI grows in the near future,

We will then take a look at both the projected benefits - and risks - that are presently and are projected into the future to be springing from AI's growth and development. Then, utilizing a unique data set derived from the global surveys conducted as part of the Munich Security Conference over the past few years (2022-2025), we will take a "deep dive" into their findings from both a longitudinal and transnational perspective. Finally, we will take the results of the present study's data analysis and place artificial intelligence into a strategic information technology management perspective, analyzing how the leadership of business, government and non-profit organizations should be approaching an AI-enabled future, cognizant of an emerging public weariness about the implications of artificial intelligence.

2. REVIEW OF THE LITERATURE

2.1. Overview of Artificial Intelligence (AI)

Artificial Intelligence (AI) represents a vast and multifaceted domain that has significantly transformed various sectors, including healthcare, education, economics, and law. This overview will encapsulate the breadth of AI applications, the ethical implications of AI, and the challenges AI poses in contemporary society.

AI encompasses a range of technologies capable of performing tasks that conventionally - until now - required human intelligence. These range from pattern recognition and decision-making to complex problem-solving through adaptive predictive power and machine learning algorithms [1][2]. The trajectory of AI development has been heavily influenced by advances in computational power and the availability of vast datasets, allowing for remarkable improvements in areas such as predictive analytics and autonomous decision-making [3]. Additionally, it is important to note that the integration of AI technologies is expected to introduce "a new era of smart manufacturing, where the seamless integration of technologies like Artificial Intelligence and robotics is transforming industrial processes" [4]. This observation aligns with the broader narrative that AI is not just a trend; it is becoming an indispensable tool that will define future industrial processes and economic frameworks.

2.2. AI in Organizations

The economic implications of AI adoption are profound. From enhancing productivity in sectors such as agriculture [5] to optimizing financial operations in accounting [6], AI is reshaping industry standards and operational efficiencies. As organizations implement AI technologies, they encounter both the promise of increased efficiency and the daunting challenge of workforce displacement [7][8]. The potential for AI to alleviate labor shortages in various fields, including healthcare and education, suggests a complex future where human and machine collaboration is essential for success [3] [8].

2.3. AI in Healthcare

In healthcare, AI applications have evolved from basic data analysis to sophisticated systems capable of assisting clinical decision-making and enhancing surgical procedures. Techniques like deep learning are increasingly being utilized to improve diagnostic accuracy in fields such as cardiology and radiology [9][10]. AI's role in healthcare is varied, addressing challenges from patient management to administrative efficiencies, ultimately aiming to enhance outcomes while reducing costs [11][12]. For example, AI-driven tools are expected to revolutionize intensive care practices, supporting critical decision-making [10].

2.4. AI in Education

In education, AI's role is particularly noteworthy. As a pedagogical tool, AI can tailor learning experiences to individual student needs, promoting a more engaged and effective educational environment [13][14]. The shift toward project-based learning in AI education has also illustrated an impactful method for teaching complex AI concepts in practical contexts [15]. Despite these advances, educators must navigate challenges in conveying essential AI skills while remaining vigilant about the ethical dimensions of technology use in learning environments [16][17].

2.5. Ethical Considerations with AI

The integration of AI also raises significant ethical considerations. There is an increasing emphasis on the need for ethical guidelines to govern AI deployment, particularly regarding data privacy and social justice [18][19]. As AI systems increasingly handle sensitive information, the potential for misuse or bias becomes a pressing concern [20]. This has led to calls for the establishment of robust legal frameworks to navigate the complex interplay between technology and ethics [21]. Institutions are now tasked with fostering AI literacy among students and professionals alike, ensuring they are equipped to manage these ethical challenges [16].

2.6. Conclusion

In conclusion, AI is at the forefront of technological innovation, influencing diverse aspects of modern life from healthcare to education and economics. While it presents vast opportunities for advancement and efficiency, it also introduces ethical dilemmas and operational challenges that demand careful consideration and proactive management. The duality of AI’s impact—offering significant benefits while posing substantial risks—necessitates an ongoing dialogue among stakeholders aimed at creating a balanced framework for its integration into society.

3. RESEARCH METHODS

3.1. Background on The Munich Security Index

The present research is based on the Munich Security Index (MSI). The MSI Index is part of an annual report issued since 2022 by the Munich Security Conference (MSC), The MSC produces this report in conjunction with Kekst CNC, a leading global strategic communications consultancy.

To generate the MSI Index, an annual survey is done across 11 countries, all 7 G7 nations (Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States) and the “BICS” countries (the nations commonly referred to as “BRICS,” Brazil, India, China, and South Africa, excluding Russia since its invasion of Ukraine in 2022). Each national sample is made up of 1,000 individuals, carefully selected to represent the respective country’s demographics in terms of gender, age, residency, formal education, and income in order to ensure representativeness. Taken together, the 11 national surveys combine to produce an annual survey size of 11,000 for the MSI Index. The annual surveys that form the basis for each year’s Munich Security Indexes [22, 23, 24, 25] and larger, more comprehensive Munich Security Conference Reports[26, 27, 28, 29]are conducted late in the preceding year (hence, the surveys for the 2025 MSI Index were actually taken in the field in November 2024.

The Munich Security Index is comprised of a series of composite scores drawn from five questions that elicit input from survey participants in each of the 11 countries about 27 of today’s

major global risks. These risks, which will be examined in the analysis section of this paper, span the gamut of risk factors facing us as a society, from economic to political to technological to natural forces.

Each survey participant was asked to respond to 5 questions regarding each of the 33 risk areas (the 27 risk factors and the 6 countries). In the words of the researchers in the most recent (2025) MSC Index Report, "The Munich Security Index combines the crucial components that make a risk more serious. Public perceptions of trajectory are combined with imminence and severity alongside a measure to give equal weight to perceptions of preparedness" [25] To that end, the 5 questions asked of all participants across the 11 surveyed countries were:

- Question 1 – How great is the overall risk to your country? (*assessing overall risk perception)*;
- Question 2 – Will the risk increase or decrease over the next twelve months? *(assessing perception of the trajectory of the risk - i.e. will it increase, decrease, or stay the same) over the next 12 months)*;
- Question 3 – How severe would the damage be if it happened? *(assessing perception of risk severity - i.e. how severe the damage would be to your country if this risk actually did occur)*;
- Question 4 – How imminent is the risk? *(assessing perception of the imminense of the risk - i.e. is it likely to happen in the short-term, the long-term, or never)*; and
- Question 5 – How prepared is your country? *(assessing perception of the how prepared - or unprepared - the country may be for the specific risk)*.

To calculate the Munich Security Index score for each risk factor for each country, participant responses to these 5 questions - overall risk, trajectory, severity, imminence, and preparedness - are totaled and then rescaled to range from 0 to 100. The final MSI index score is an absolute figure (with 100 indicating the highest perception of risk and 0 being the lowest possible risk indicator). With this standardized risk assessment methodology, the MSI index allows for comparisons of risk perceptions in nations to be made between countries and over time, something that is being done for the first time in the present study.

3.2. Data Analysis Using the Munich Security Index

In the present research, the author analyzed the four annual Munich Security Conference Reports that, to date, have included the Munich Security Index. The author extracted the data from these reports [22, 23, 24, 25] and created a data set that spans the MSC Reports from 2022 to 2025 (the present year). The construction and analysis of this new, large data set formed the foundation for the present study, which examines both inter and intra-country trends found in the MSI Index. The present research is novel in that it is the first longitudinal study to be conducted on the annual data collected for the MSI Index, and as such, it establishes a new way of gaining insights into cross-national perspectives on a variety of pressing technological, social, political, and economic issues facing business leaders - and the general public - in the nations included in the research that underlies both the Munich Security Conference Reports [26, 27, 28, 29]and the MSI Indexes [22, 23, 24, 25] created to date.

4. DATA ANALYSIS

The present study looked at risk perceptions regarding artificial intelligence (AI) across both G7 countries and the BICS nations. The analysis herein is broken down by regional analysis across these two important geopolitical and economic groups. and then, on a country-specific basis.

4.1. AI Risk Perceptions in the G7 Countries

In this section, we present our findings and then our analysis regarding the Munich Security Index data on risk perceptions regarding Artificial Intelligence (AI) across the G7 nations (Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States) from 2022 to 2025.

4.1.1. Analysis of G7 Nations Findings Regarding AI

The analysis of AI risk perception across G7 countries from 2022 to 2025 reveals varying trends, reflecting shifts in societal attitudes and concerns regarding AI technologies. Overall, the average risk perception regarding AI rose markedly over the 4 years under review. As you can see in Table 1*(Risk Perceptions Regarding AI Across the G7 Nations, 2022-2025)*, AI risk perception grew from 41 in 2022 to 54 in 2025, an increase of 32.85% across the G7 nations. AI risk perception across the G7 countries, other than the United States, closely mirrored that found among Americans over the most recent four-year period. And while AI risk perception stayed steady in the U.S. between 2024 and 2025, overall, this metric rose by 2 points, or 3.62%, across the G7 member nations.

Table 1. Risk Perceptions Regarding AI Across the G7 Nations, 2022-2025.

Country/Year	**2022**	**2023**	**2024**	**2025**
Canada	39	42	55	55
France	40	42	49	52
Germany	44	45	55	59
Italy	39	40	49	52
Japan	48	48	51	53
United Kingdom	35	38	53	54
United States	41	41	52	52
Average	*41*	*42*	*52*	*54*
Average w/o USA	*41*	*43*	*51*	*54*

Source Data: Munich Security Conference Index, 2022-2025.

In looking at trends in AI risk perception across the G7 countries, AI risk perception grew across all seven member nations:

- *Canada*: AI risk perception rose from 39 in 2022 to 55 in 2025, reflecting a 41.03% increase in this sentiment among Canadians over this four-year time period. This was the second highest rate of increase (only lagging the United Kingdom) found among the G7 countries in regard to AI risk perception.

- *France*: AI risk perception rose from 40 in 2022 to 52 in 2025, reflecting a 30.00% increase in this sentiment among the French people over this four-year time period. And from 2024 to 2025, AI risk perception rose 6.12% in France, far higher than the average 3.62% rise found across G7 nations in the past year.

- *Germany*: AI risk perception rose from 44 in 2022 to 59 in 2025, reflecting a 34.09% increase in this sentiment among XX over this four-year time period. The 59 found

amongst the German population in 2025 was the highest AI risk perception found amongst the G7 countries in the current year.

- *Italy*: AI risk perception rose from 39 in 2022 to 52 in 2025, reflecting a 33.33% increase in this sentiment among the Italian people over this four-year time period.

- *Japan*: AI risk perception rose from 48 in 2022 to 53 in 2025, reflecting a 10.42% increase in this sentiment among the Japanese people over this four-year time period. This 5-point rise in AI risk perception was the lowest observed among G7 nations over this four-year time period.

- *United Kingdom*: AI risk perception rose from 41 in 2022 to 52 in 2025, reflecting a 54.29% increase in this sentiment among UK residents over this four-year time period. This was the highest rate of found among the G7 countries in regard to AI risk perception.

- *United States*: AI risk perception rose from 41 in 2022 to 52 in 2025, reflecting a 26.83% increase in this sentiment among Americans over this four-year time period.

Notably, the perceived risk associated with AI strongly correlates with individual factors, including demographic nuances, information exposure, and contextual understanding of AI's implications in everyday life.

For instance, as seen in the data, countries like the United Kingdom and Canada exhibit significant increases in AI risk perception between 2022 and 2025, with 54.29% and 41.03% growth, respectively, in this MSI Index measure over these four years. Such increases suggest growing concerns surrounding issues like data privacy, job displacement due to automation, and algorithmic bias, with the mixed public perception of AI as both a risk and a benefit reflecting societal fears about its potential misuse and unintended consequences[30].

The variation in risk perception across G7 countries might also stem from national differences in public engagement with technology. In Japan, and, to a lesser extent, the United States, while there are still notable increases in risk perception over the 4 years under review, the net change in these two nations is comparatively lower than in other countries, suggesting different levels of public familiarity and trust in AI technologies. Factors such as educational campaigns and the level of integration of AI in public and healthcare services may moderate these perceptions, as prior research has found that trust in technology greatly influences risk perception [31][32].

Furthermore, research findings consistently indicate a strong relationship between knowledge of AI and perceived risk. Individuals with higher knowledge levels typically demonstrate "risk blindness," where they may underestimate the real and potential risks of AI systems, reflecting findings from Said et al.[31][33] This relationship suggests that enhancing public AI literacy could potentially recalibrate risk perceptions in a more constructive direction.

Additionally, the longitudinal nature of the data illustrates a trend wherein specific demographic factors—particularly age, gender, and educational background—play essential roles in shaping AI perceptions. Studies indicate that, in general, older adults tend to have heightened risk perceptions surrounding technological advancements, which aligns with prior research findings that a general skepticism towards new technologies and their societal impactis persistent among older members [31]. This trend warrants a tailored approach to public communications and education regarding AI, focusing particularly on these demographic variations.

In conclusion, the G7 countries' divergent trajectories of AI risk perception from 2022 to 2025 reflect a complex interplay of individual knowledge, societal education, and specific national contexts. As these countries navigate their unique pathways in AI adoption and implementation, ongoing dialogue and education about the risks and benefits of AI technologies remain crucial for shaping informed public perception and ensuring a balanced approach to technological integration. These trends suggest that while the G7 nations are on a path to integrating AI, this integration is accompanied by an evolving consciousness of the associated risks. As public understanding of AI technologies solidifies, nations will likely continue to grapple with balancing innovation with ethical governance and public trust [34].

4.2. AI Risk Perceptions in the BICS Countries

In this section, we present our findings and then our analysis regarding the Munich Security Index data on risk perceptions regarding Artificial Intelligence (AI) across the BICS nations (Brazil, China, India, and South Africa) from 2022 to 2025.

4.2.1. Analysis of BICS Nations Findings Regarding AI

The analysis of AI risk perception across the BICS countries from 2022 to 2025 reveals that in these four nations, attitudes towards AI were found tobe quite different from those found in the G7 nations. Moreover, there was a marked difference between AI risk perception found between China and the other BICS countries (Brazil, India, and South Africa). As you can see in Table 2 *(Risk Perceptions Regarding AI Across the BICS Nations, 2022-2025),* AI risk perception across the BICS nations rose by 8.16% over the 2022 to 2025 time period. This contrasts sharply with the fact that AI risk perception grew by almost a third (32.85%) across the G7 nations. At the same time, Chinese AI risk perception was consistently lower than its BICS counterparts.

Table 2. Risk Perceptions Regarding AI Across the BICS Nations, 2022-2025.

Country/Year	**2022**	**2023**	**2024**	**2025**
Brazil	49	46	57	55
China	27	39	34	34
India	55	43	42	43
South Africa	49	47	55	53
Average	*45.00*	*43.75*	*47.00*	*46.25*
Average w/o China	*51.00*	*45.33*	*51.33*	*50.33*

Source Data: Munich Security Conference Index, 2022-2025.

The data on risk perceptions regarding AI across the BICS nations over the four-year period provides a compelling narrative about how different socio-economic and cultural contexts influence the perception of AI technologies. The analysis of the dataset reveals key trends and implications for the adoption and integration of AI within these countries. In looking at trends in AI risk perception across the BICS countries, a much different picture emerges, contrasting the consistent – and substantial – rise in AI risk perception in the G7 nations:

- *Brazil:* AI risk perception rose from 49 in 2022 to 55 in 2025, reflecting a 12.24% increase in this sentiment among Brazilians over these four years. Quite interestingly, Brazil saw fluctuating AI risk perceptions amongst its people, actually peaking at 57 (the highest recorded level for any BICS nation in this four-year period under review),

and then actually decreasing slightly (by 3.51%)from 2024 to 2025. This variability suggests an evolving landscape of public sentiment regarding AI, possibly influenced by socio-political changes and public discourse around technology. This fluctuation suggests that Brazilian stakeholders might be grappling with the dual perceptions of AI's potential benefits versus its associated risks, which aligns with findings that highlight trust and knowledge as critical factors influencing risk perception in human-AI interaction [35]. The initial drop in AI risk perception may reflect a period of optimism tempered by concerns about regulation and safety as different applications of AI begin to take shape within Brazilian industries [36].

- *India:* AI risk perception in India was at a high of 55 in 2022, settling a dozen (or more) points lower in the three subsequent years under review (2023-2025). Overall, AI risk perception in the Indian population actually fell over the four years in question by 21.82%. While the initial high may stem from concerns about technology negatively impacting employment and social structures, the subsequent decline and stabilization could suggest a growing familiarity and acceptance of AI as the government and industries work towards inclusive digital initiatives [36]. This downward trend may reflect broader challenges such as infrastructural limitations and skepticism towards technology among Indian stakeholders [37] [31]. The stabilization of views on artificial intelligence in India since the 2022 peak has been attributed to both public policy shifts and educational efforts aimed at improving public awareness and understanding of AI in that country [38].

- *China:* AI risk perception rose from 27 in 2022 to 34 in 2025, reflecting a 25.93% increase in this sentiment among the Chinese population over these four years. It should be noted that AI risk perception levels in China, at least according to the Munich Security Index survey, are far lower than that found in either the nation's BICS contemporaries or any of the G7 countries. This could well be simply the byproduct of the dangers of trying to gauge public opinion in a communist/totalitarian country such as China. Assuming the survey captures accurate public sentiment towards artificial intelligence in China, the relatively low index numbers do show growing concerns over privacy and control issues with AI [39]. Despite being a leader in AI development, public sentiment in China might indeed be hindered by the fear of government surveillance and the potential for technological misuse, which aligns with studies showing a complex relationship between technological advancement and individual freedom [40].

- *South Africa:* AI risk perception rose from 49 in 2022 to 53 in 2025, reflecting a 8.16% increase in this sentiment among the South African population over these four years. This relative consistency may indicate a balanced view toward AI, integrating both optimism about its potential and caution regarding its implications for employment and ethical governance [41).

5. CONCLUSIONS

There are several key conclusions to be drawn from the present research:

1. *Evolving Risk Perception:* The analysis has demonstrated that risk perceptions regarding AI are not static; they fluctuate significantly within individual countries and can change year over year. For instance, Germany's increasing perception of risk, alongside Brazil and South Africa's moderate concern, juxtaposes the more optimistic outlook seen in

China. This highlights the complex relationship nations have with AI, dictated by cultural, socio-economic, and political factors.

2. *Public Anxiety and Acceptance:* While AI is celebrated for its transformative potential, it also triggers anxiety regarding privacy, job displacement, and ethical implications. Countries such as India show high levels of concern, reflecting the societal unease about AI's impact on employment dynamics and ethical governance. On the contrary, China's less pronounced risk perceptions suggest a societal acceptance shaped by a focus on technological advancements and state narratives.

3. *Importance of Ethical Considerations:* Ethical considerations emerge as a common theme across both BICS and G7 nations, with calls for robust frameworks to govern AI deployment. As seen in the findings, nations that actively engage in discussions about AI ethics tend to experience a more balanced perception of both its risks and benefits, suggesting a potential path towards increasing public trust in AI technologies.

4. *The Need for Informed Engagement:* This study emphasizes the need for clear communication and public engagement regarding AI technologies. Stakeholders, including policymakers and tech leaders, should prioritize transparency and education to address public concerns about AI, fostering an informed society capable of navigating the complexities introduced by these technologies.

6. DISCUSSION

The current study has provided valuable insights into the evolving landscape of public perceptions regarding Artificial Intelligence (AI) across various regions, particularly focusing on the BICS and G7 nations during the early to mid-2020s. Through analyzing longitudinal data from the Munich Security Conference Index, this research has illuminated both the optimistic outlook and the significant concerns that accompany the integration of AI into everyday life.

In the context of strategic information technology management, the integration and leadership of artificial intelligence require a nuanced approach that balances innovation with ethical considerations. As organizations in business, government, and non-profit sectors navigate an AI-enabled future worldwide, leadership must evolve to meet the challenges presented by public scrutiny and ethical obligations. Given the rising public concerns regarding AI's implications, leaders must proactively address fears around bias, job displacement, and the ethical deployment of AI systems.

Leaders can leverage AI to enhance decision-making and operational efficiency. AI allows for better identification of patterns and optimization of complex processes, thereby reducing bounded rationality in decision-making. Shick et al. argue that AI can facilitate a shift in focus from purely analytical tasks to creativity and innovation, enabling management to concentrate on human-centric aspects of the organization [42]. Moreover, the relational leadership model underscores the importance of collaborative relationships among team members, emphasizing that AI can enhance these interdependent dynamics, fostering an innovative organizational culture through the strategic management of information technology (IT) [43].

Understanding the drivers and barriers to AI adoption is critical for effective strategic IT management today – and will be even more important looking to the future. Indeed, utilizing frameworks such as the "technology–organizations–environment" model helps organizations navigate the complexities of AI integration [44]. This strategic approach to AI adoption is further supported by Mahmood et al., who highlight the essential role of digital leadership in

fostering a sustainable performance environment through the effective use of AI technologies [45]. Hence, an adept leadership style that embraces transparency, ethical oversight, and accountability in AI initiatives is pivotal to maintaining public trust and organizational integrity.

Moreover, addressing the ethical implications of AI deployment is essential. Ferrara emphasizes the necessity for diverse teams to mitigate bias in AI systems, advocating for ethical frameworks that inform AI practices, particularly in sectors susceptible to scrutiny, such as healthcare and policing [46]. It is crucial for leaders to ensure that AI applications not only strive for efficiency but also uphold fairness, transparency, and accountability, aligning with societal values and expectations [47]. Ethical leadership is not merely a regulatory obligation but serves as a catalyst for fostering an inclusive organizational culture that cherishes diverse perspectives [48].

Finally, as the literature indicates, organizations must also address employee concerns regarding AI's impact on the workplace. While Artificial intelligence may have a deleterious impact on the job market overall, AI also has the potential to reduce workloads and enhance worker performance, suggesting a significant positive relationship between AI integration and employee satisfaction and productivity [49]. However, as highlighted by Dabbous et al., the successful implementation of AI technologies hinges on the willingness of employees to adopt these innovations, underscoring the need for leadership that emphasizes training, awareness, and supportive workplace cultures [50].

In conclusion, leadership in an AI-enabled future must prioritize ethical considerations, employee engagement, and systematic integration strategies. By framing AI not just as a technological advance but as a strategic resource in fostering innovation and preserving ethical integrity, leaders in business, government, and non-profits can navigate the complexities of this evolving landscape. This strategic IT management perspective must – regardless of country - account for public sentiment, aiming for transparency and responsibility in deploying AI technologies.

7. DIRECTIONS FOR FUTURE RESEARCH

While this study has made substantial contributions to the understanding of risk perceptions regarding AI, further research is necessary to deepen insights and address emerging questions:

1. *Expanding Geographic Diversity:* Future research could benefit from including a more extensive range of countries than is currently included in the Munich Security Index, beyond the G7 and BICS nations, to capture truly global perspectives on AI risk perceptions. Investigating perceptions from developing nations or regions with distinct socio-economic backgrounds could offer broader insights into how culture influences attitudes towards AI [51].

2. *Longitudinal Studies:* Given that risk perceptions are dynamic, conducting longitudinal studies that capture public sentiments over longer periods could provide a detailed understanding of how societal attitudes evolve in response to specific events (e.g., technological advancements, regulatory changes) and media portrayal of AI technologies.

3. *Deepening Contextual Analysis:* Investigating how local factors such as political instability, economic conditions, and cultural narratives shape AI perceptions could yield insights that are critical for tailoring effective policies and communication strategies [52]. Moreover, qualitative research methods such as interviews or focus

groups could be employed to understand the underlying motivations and fears behind public perceptions.

4. *Impact of Educational Initiatives:* Further studies should evaluate the effectiveness of educational programs aimed at improving AI literacy, focusing on how these initiatives impact public risk perceptions and acceptance of AI technologies. Understanding the correlation between knowledge levels and comfort with AI could be pivotal in developing strategies to mitigate concerns.

5. *Exploring AI in Specific Sectors:* Future research could focus on sector-specific perceptions, such as healthcare, finance, and education, to better understand the unique challenges and opportunities presented by AI in these domains. Sectors that inherently carry societal implications, such as criminal justice or healthcare, may have uniquely nuanced perceptions that deserve dedicated analysis [51].

6. *Regulatory Frameworks and AI Governance:* Investigating how different regulatory environments affect public perceptions of AI risks would provide critical insights into best practices for governance. Research could evaluate whether nations with established, transparent regulations experience higher levels of public trust compared to those with more ambiguous frameworks.

In conclusion, understanding the evolving perceptions of AI risks and benefits across different countries is imperative for harnessing AI's potential while ensuring ethical considerations are adequately addressed. Continued research in this domain will not only offer clarity but also support the responsible integration of AI technologies into society, enhancing public engagement and trust in this transformative era.

REFERENCES

[1] Hagedorn, J., George, T., Aiyer, R., Schmidt, K., Halamka, J., & D'Souza, R. (2024). Artificial intelligence and pain medicine: An introduction. Journal of Pain Research, Volume 17, 509-518. https://doi.org/10.2147/jpr.s429594.

[2] Schwendicke, F., Samek, W., & Krois, J. (2020). Artificial intelligence in dentistry: chances and challenges. Journal of Dental Research, 99(7), 769-774. https://doi.org/10.1177/0022034520915714.

[3] Ihsanullah, I., Alam, G., Jamal, A., & Shaik, F. (2022). Recent advances in applications of artificial intelligence in solid waste management: A review. Chemosphere, 309, 136631. https://doi.org/10.1016/j.chemosphere.2022.136631.

[4] Mia, M. R. and Shuford, J. (2024). Exploring the synergy of artificial intelligence and robotics inindustry 4.0 applications. Journal of Artificial Intelligence General Science (JAIGS), 1(1). https://doi.org/10.60087/jaigs.v1i1.31.

[5] Рожкова, А., Ступина, А., Korpacheva, L., Rozhkov, S., & Dzhioeva, N. (2022). Prospects for the use of artificial intelligence in the agricultural sector. IOP Conference Series Earth and Environmental Science, 1076(1), 012051. https://doi.org/10.1088/1755-1315/1076/1/012051.

[6] Luo, J., Meng, Q., & Cai, Y. (2018). Analysis of the impact of artificial intelligence application on the development of accounting industry. Open Journal of Business and Management, 06(04), 850-856. https://doi.org/10.4236/ojbm.2018.64063.

[7] Rychka, R. (2024). Artificial intelligence to predict solar energy production: risks and economic efficiency. Futurity Economics & Law, 4(2), 100-111.https://doi.org/10.57125/fel.2024.06.25.06.

[8] Haber, Y., Levkovich, I., Hadar-Shoval, D., & Elyoseph, Z. (2024). The artificial third: A broad view of the effects of introducing generative artificial intelligence on psychotherapy. JMIR Mental Health, 11, e54781-e54787. https://doi.org/10.2196/54781.

[9] Nedadur, R., Wang, B., & Yanagawa, B. (2021). The cardiac surgeon's guide to artificial intelligence. Current Opinion in Cardiology, 36(5), 637-643. https://doi.org/10.1097/hco.0000000000000888.

[10] Biesheuvel, L., Dongelmans, D., & Elbers, P. (2024). Artificial intelligence to advance acute and intensive care medicine. Current Opinion in Critical Care, 30(3), 246-250. https://doi.org/10.1097/mcc.0000000000001150.

[11] Tustumi, F., Andreollo, N., & Aguilar-Nascimento, J. (2023). Future of the language models in healthcare: the role of ChatGPT. ABCD - Arquivos Brasileiros De Cirurgia Digestiva, 36. https://doi.org/10.1590/0102-672020230002e1727.

[12] Kazmi, S. (2023). The impact/role of artificial intelligence in anesthesia: Remote pre-operative assessment and perioperative. Asian Journal of Medicine and Health, 21(12), 95-100. https://doi.org/10.9734/ajmah/2023/v21i12964.

[13] Hu, Z., Guo, Z., Jiang, S., Zhao, X., & Li, X. (2023). Research on project-based teaching methods in the introduction to artificial intelligence. Curriculum and Teaching Methodology, 6(20). https://doi.org/10.23977/curtm.2023.062006.

[14] Lin, X., Liu, H., Sun, Q., Li, X., Qian, H., Sun, Z., & T. Lam, et. al. (2022). Applying project-based learning in artificial intelligence and marine discipline: An evaluation study on a robotic sailboat platform. IET Cyber-Systems and Robotics, 4(2), 86-96. https://doi.org/10.1049/csy2.12050.

[15] Long, Q., Ye, X., & Zhao, Q. (2020). Artificial intelligence and automation in valvular heart diseases. Cardiology Journal, 27(4), 404-420. https://doi.org/10.5603/cj.a2020.0087.

[16] Fathahillah, F., Fakhri, M., & Ahmar, A. (2023). Analysis of artificial intelligence literacy in the blended learning model in higher education. Eduline Journal of Education and Learning Innovation, 3(4), 566-575. https://doi.org/10.35877/454ri.eduline2049.

[17] Klímová, B., Pikhart, M., & Kacetl, J. (2023). Ethical issues of the use of AI-driven mobile apps for education. Frontiers in Public Health, 10. https://doi.org/10.3389/fpubh.2022.1118116.

[18] Hermansyah, M., Najib, A., Farida, A., Sacipto, R., & Rintyarna, B. (2023). Artificial intelligence and ethics: Building an artificial intelligence system that ensures privacy and social justice. International Journal of Science and Society, 5(1), 154-168. https://doi.org/10.54783/ijsoc.v5i1.644.

[19] Murdoch, B. (2021). Privacy and artificial intelligence: challenges for protecting health information in a new era. BMC Medical Ethics, 22(1). https://doi.org/10.1186/s12910-021-00687-3.

[20] Morley, J., Machado, C., Burr, C., Cowls, J., Joshi, I., Taddeo, M., & L. Floridi, et. al. (2020). The ethics of AI in health care: A mapping review. Social Science & Medicine, 260, 113172. https://doi.org/10.1016/j.socscimed.2020.113172.

[21] Karmaza, O., Koroied, S., Makhinchuk, V., Strilko, V., & Iosypenko, S. (2021). Artificial intelligence in justice. Linguistics and Culture Review, 5(S4), 1413-1425. https://doi.org/10.21744/lingcure.v5ns4.1764.

[22] Bunde, T., Eisentraut, S., Johnson, J., Knapp, N., Carr, R., Hammelehle, J., Kump, I., Miehe, L., & Mudie-Mantz, A. (2022).Munich Security Index 2022, Munich: Munich Security Conference, February 2022, https://securityconference.org/en/publications/munich-security-index-2022/.

[23] Bunde, T., Eisentraut, S., Johnson, J., Knapp, N., Lubbock, T., & Schütte, L. (2023).Munich Security Index 2023, Munich: Munich Security Conference, February 2023. https://securityconference.org/en/publications/munich-security-report-2023/munich-security-index-2023/.

[24] Bunde, T., Eisentraut, S., Johnson, J., Knapp, N., Lubbock, T., & Schütte, L. (2024).Munich Security Index 2024, Munich: Munich Security Conference, February 2024, https://securityconference.org/en/munich-security-report-2024/munich-security-index-2024/.

[25] Bunde, T., Eisentraut, S., & Schütte, L. (2025).Munich Security Index 2025, Munich: Munich Security Conference, February 2025, https://securityconference.org/en/publications/munich-security-report-2025/munich-security-index-2025/.

[26] Bunde, T., Eisentraut, S., Knapp, N., Carr, R., Hammelehle, J., Kump, I., Miehe, L., & Mudie-Mantz, A. (2022). Munich Security Report 2022: Turning the Tide – Unlearning Helplessness, Munich: Munich Security Conference, February 2022, https://doi.org/10.47342/QAWU4724.

[27] Bunde, T., Eisentraut, S., Johnson, J., Knapp, N., Lubbock, T., & Schütte, L. (2023).Munich Security Report 2023: Re: Vision, Munich: Munich Security Conference, February 2023. https://doi.org/10.47342/ZBJA9198.

[28] Bunde, T., Eisentraut, S., Johnson, J., Knapp, N., Lubbock, T., & Schütte, L. (2024).Munich Security Conference Report 2024: Lose-Lose?, Munich: Munich Security Conference, February 2024. https://doi.org/10.47342/BMQK9457.

[29] Bunde, T., Eisentraut, S., & Schütte, L. (2025).Munich Security Report 2025: Multipolarization, Munich: Munich Security Conference, February 2025, https://doi.org/10.47342/EZUC8623.

[30] Juwita, R., Nurhayai, N., Syaras, D., Rintaningrum, R., & Herliani, A. (2024). Public relations and issues of technological progress: communicating the benefits and risks of AI and IoT to the public. Journal International Dakwah and Communication, 4(1), 90-101. https://doi.org/10.55849/jidc.v4i1.636.

[31] Said, N., Potinteu, A., Brich, I., Buder, J., Schumm, H., & Huff, M. (2023). An artificial intelligence perspective: how knowledge and confidence shape risk and benefit perception. Computers in Human Behavior, 149, 107855. https://doi.org/10.1016/j.chb.2023.107855.

[32] Gabbiadini, A., Durante, F., Baldissarri, C., & Andrighetto, L. (2024). Artificial intelligence in the eyes of society: assessing social risk and social value perception in a novel classification. Human Behavior and Emerging Technologies, 2024, 1-11. https://doi.org/10.1155/2024/7008056.

[33] Asare, A. and Yap, R. (2025). Trust and the future of learning: a model for ai-supported edtech in higher education (preprint). https://doi.org/10.21203/rs.3.rs-5675462/v1.

[34] King, H., Williams, B., Treanor, D., & Randell, R. (2022). How, for whom, and in what contexts will artificial intelligence be adopted in pathology?: A realist interview study. Journal of the American Medical Informatics Association, 30(3), 529-538. https://doi.org/10.1093/jamia/ocac254.

[35] Kerstan, S., Bienefeld, N., & Grote, G. (2023). Choosing human over AI doctors?:How comparative trust associations and knowledge relate to risk and benefit perceptions of ai in healthcare. Risk Analysis, 44(4), 939-957. https://doi.org/10.1111/risa.14216.

[36] Potinteu, A., Renftle, D., & Said, N. (2023). What predicts AI usage? investigating the main drivers of AI use intention over different contexts (preprint). https://doi.org/10.31234/osf.io/jvdpe.

[37] Choudhury, A. (2022). Factors influencing clinicians' willingness to use an ai-based clinical decision support system. Frontiers in Digital Health, 4. https://doi.org/10.3389/fdgth.2022.920662.

[38] Hibban, M. and Singh, A. (2024). Innovation management among the Indian small and medium-sized enterprises focusing on artificial intelligence: opportunities and the way forward. Indian Journal of Commerce & Management Studies, 15(2), 10-17. https://doi.org/10.18843/ijcms/v15i2/02.

[39] Zhang, R., Li, H., Liu, Z., & Lee, Y. (2024). AI privacy in context: a comparative study of public and institutional discourse on conversational AI privacy in the US and China (preprint). https://doi.org/10.31219/osf.io/qw7gx.

[40] Li, Y., Wu, B., Huang, Y., & Luan, S. (2024). Developing trustworthy artificial intelligence: insights from research on interpersonal, human-automation, and human-ai trust. Frontiers in Psychology, 15. https://doi.org/10.3389/fpsyg.2024.1382693.

[41] Schwesig, R., Brich, I., Buder, J., Huff, M., & Said, N. (2022). Using artificial intelligence (AI)?: Risk and opportunity perception of ai predict people's willingness to use AI (preprint). https://doi.org/10.31234/osf.io/4ynkp.

[42] Shick, M., Johnson, N., & Yang, F. (2023). Artificial intelligence and the end of bounded rationality: A new era in organizational decision making. Development in Learning Organizations: An International Journal, 38(4), 1-3. https://doi.org/10.1108/dlo-02-2023-0048.

[43] Sim, J. (2018). Exploring the relational leadership potential of appreciative inquiry: A case study. South Asian Journal of Business and Management Cases, 8(1), 47-57. https://doi.org/10.1177/2277977918803217.

[44] Kar, S., Kar, A., & Gupta, M. (2021). Modeling drivers and barriers of artificial intelligence adoption: Insights from a strategic management perspective. Intelligent Systems in Accounting Finance & Management, 28(4), 217-238. https://doi.org/10.1002/isaf.1503.

[45] Mahmood, G., Khakwani, M., Zafar, A., & Abbas, Z. (2024). Impact of digital transformation and ai through fostering digital leadership excellence: A focus on sustainable organizational performance. Journal of Accounting and Finance in Emerging Economies, 10(1), 33-48. https://doi.org/10.26710/jafee.v10i1.2925.

[46] Ferrara, E. (2023). Fairness and bias in artificial intelligence: a brief survey of sources, impacts, and mitigation strategies (preprint). https://doi.org/10.2196/preprints.48399.

[47] Douglas, D. (2024). Responsibilities of an executive leading AI projects: navigating federal directives for safe and inclusive development (preprint). https://doi.org/10.20944/preprints202402.0815.v1.

[48] Tarisayi, K. (2024). Strategic leadership for responsible artificial intelligence adoption in higher education. CTE Workshop Proceedings, 11, 4-14. https://doi.org/10.55056/cte.616.

[49] Rožman, M., Oreški, D., & Tominc, P. (2023). Artificial-intelligence-supported reduction of employees' workload to increase the company's performance in today's vuca environment. Sustainability, 15(6), 5019. https://doi.org/10.3390/su15065019.

[50] Dabbous, A., Barakat, K., & Sayegh, M. (2021). Enabling organizational use of artificial intelligence: an employee perspective. Journal of Asia Business Studies, 16(2), 245-266. https://doi.org/10.1108/jabs-09-2020-0372.

[51] Wang, W. and Cai, Y. (2022). The risk of artificial intelligence embedded in government governance: mechanism, process, prevention and control. Proceedings of the 2022 2nd International Conference on Public Management and Intelligent Society (PMIS 2022), 609-616. https://doi.org/10.2991/978-94-6463-016-9_63.

[52] Khalf, A., Abdelhafez, k., & Khalab, S. (2022). Health care providers' perception about artificial intelligence applications. Assiut Scientific Nursing Journal, 10(31), 204-215. https://doi.org/10.21608/asnj.2022.144712.1397.

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