"Awareness and readiness to use artificial intelligence by the adult population of Ukraine: Survey results"

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ARTICLE INFO	Svitlana Tarasenko, Oleksandra Karintsev Bilovol and Viacheslav Voronenko (2024) artificial intelligence by the adult population and Perspectives in Management, 22(4), 1	. Awareness and readiness to use on of Ukraine: Survey results. <i>Problems</i>			
DOI	http://dx.doi.org/10.21511/ppm.22(4).2024.01				
RELEASED ON	Tuesday, 01 October 2024				
RECEIVED ON	Monday, 01 July 2024				
ACCEPTED ON	Wednesday, 25 September 2024				
LICENSE	This work is licensed under a Creative Co	mmons Attribution 4.0 International			
JOURNAL	"Problems and Perspectives in Manageme	ent"			
ISSN PRINT	1727-7051				
ISSN ONLINE	1810-5467				
PUBLISHER	LLC "Consulting Publishing Company "Business Perspectives"				
FOUNDER	LLC "Consulting Publishing Company "Business Perspectives"				
S <sup>O</sup>	B				
NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES			
35	5	10			

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### **BUSINESS PERSPECTIVES**



LLC "CPC "Business Perspectives" Hryhorii Skovoroda lane, 10, Sumy, 40022, Ukraine

www.businessperspectives.org

Received on: 1st of July, 2024 Accepted on: 25th of September, 2024 Published on: 1st of October, 2024

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**Conflict of interest statement:** Author(s) reported no conflict of interest

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# AWARENESS AND READINESS TO USE ARTIFICIAL INTELLIGENCE BY THE ADULT POPULATION OF UKRAINE: SURVEY RESULTS

### Abstract

Policymakers, educators, and businesses must develop artificial intelligence-related initiatives and strategies to effectively engage and benefit the population. The study aims to evaluate awareness and readiness to utilize artificial intelligence by the adult population of Ukraine in 2022. The paper employed a questionnaire consisting of two sets of questions: 1) awareness of artificial intelligence and 2) readiness to use artificial intelligence. A total of 806 respondents were interviewed via an online survey. The margin of error does not exceed 5%. The results indicate that while Ukrainians have a generally positive view of artificial intelligence, they remain skeptical about the prospect of robots functioning as workplace partners. The majority find it difficult to envision collaborating with a robot in a professional setting (only 36.9% of Ukrainians are ready to work with a robot). The survey highlights that the primary benefits of AI products and services valued by Ukrainians include timesaving, increased comfort, and enhanced service accessibility. Ukrainian men demonstrate a greater degree of commitment and awareness of artificial intelligence products/services than Ukrainian women. Young people are the most informed age group about artificial intelligence products/services. Residents of the western regions indicate a more significant impact of artificial intelligence on the present, unlike respondents from the eastern regions of Ukraine.

**Keywords** artificial intelligence, information awareness, gender

aspect, perception, region, robot, technologies diffusion,

workplace

JEL Classification O21, Z13, Z18

# INTRODUCTION

Technologies are introduced into society in certain stages. Invention is the first stage; the second stage involves the transformation of an invention into certain technologies; the third stage involves the design and testing of products and services based on the created technologies in the market; and the fourth stage involves the diffusion of tested products and services in society (UNCTAD, 2021).

Accordingly, artificial intelligence-based products/services are being developed today and tested for public acceptance. At the same time, the world's attitude toward artificial intelligence (AI) is multifaceted and may depend on various factors, such as cultural, economic, ethical, and technical peculiarities of different countries and population groups. Notably, opinions and attitudes toward AI can change rapidly, and they are often reflected in different socio-cultural contexts. Each country or community has unique characteristics and differences in the perception and use of AI. For example, gender can influence attitudes toward AI. Attitudes may vary depending on gender and perceptions of certain aspects of AI. Understanding the gender aspects in attitudes toward AI may help develop technologies that meet the needs and expectations of both men and women and facilitate wider acceptance of these technologies in society.

Attitudes toward AI are generally dynamic and complex, depending on many factors. Over time and with further technological development, positive or negative perceptions of AI may strengthen, allowing for a balance between technological development and the protection of society's interests. For technology diffusion to be effective in society, it is necessary to understand the attitude of society toward a particular technology (products/services).

# 1. LITERATURE REVIEW

Different kinds of surveys dealt with estimation of the perception of AI technologies in society. Among them national (Samaieva, 2023) and international surveys (Androshchuk, 2021; Beauchene, 2023; Ipsos, 2023); those on the general perception of AI in society and those on the perception of AI in the workplace. In addition, part of the research is dedicated to the perception of AI products in particular sectors, such as public services or education.

Assessing readiness for AI adoption requires understanding the theoretical models that inform technology acceptance. There are two main model of acceptance technology that is widely used today.

The technology acceptance model (TAM) identifies perceived usefulness and ease of use as key factors in determining technology acceptance (Davis, 1989). Over time, additional elements like intention, technological competency, and system exploration have been incorporated into this model, as suggested by Avcı and Gulbahar (2013). While this approach is widely applied, Legris et al. (2003) argue that empirical studies using TAM often yield inconsistent results, indicating that significant factors might be missing. Furthermore, Sage et al. (2023) highlight that cultural context can affect whether AI is able to replace human interaction, even when the technology appears highly efficient and user-friendly. Their extended model includes factors such as trust, productivity, and expected effort to evaluate AI acceptance.

Another perspective, represented by the unified theory of acceptance and use of technology (UTAUT), examines how characteristics like gender, age, and experience influence technology acceptance. These factors, along with expectations of productivity and social influence, shape the overall perception of new tools (Venkatesh et al., 2003).

In addition to these models, the technology readiness index (TRI) offers a method for assessing an individual's readiness to adopt new technologies. Parasuraman and Colby (2015) developed a revised TRI that evaluates optimism and innovativeness as drivers of readiness, while discomfort and insecurity act as barriers. However, when Ariani et al. (2018) tested the TRI model in SMEs in South Tangerang, they concluded that the model was not entirely relevant in that specific case.

Understanding the readiness for AI adoption requires focusing on individual and organizational acceptance and a deeper look into the broader theoretical and research perspectives that guide AI development. Recent studies in AI research highlight the importance of interdisciplinary approaches and the various models used to manage integration.

AI research, as characterized by Wang (2019), represents a field composed of diverse interdisciplinary studies, each with distinct methodological foundations. He argues that current AI research is shaped more by its historical trajectory than by any unified theoretical framework. Building on this, Tallberg et al. (2023) mapped the field of AI, distinguishing between normative and positive approaches. They stress the importance of establishing best practices for global AI governance and evaluating current AI management strategies based on these models. Meanwhile, Cave and ÓhÉigeartaigh (2018) explored both short- and long-term challenges in AI development, emphasizing that current research priorities and management decisions will significantly shape future AI trajectories. They also review the prevalent societal narratives around AI, noting a tendency for exaggerated fears and expectations, which can be artificially constructed to influence public perception.

In terms of ethical considerations, Corea et al. (2022) propose a unified method that emphasizes human rights and ethics in AI research. They call

for increased awareness of AI practices across various sectors, including research and public engagement. In a related context, Criado and Gil-Garcia (2019) examine how smart technologies, including AI, are transforming public value creation, particularly in government-citizen interactions. AI, when designed to meet specific user needs, can redefine public sector activities. Wirtz et al. (2022) offer a systematization of AI risks and provide a framework for managing AI in the public sector.

Further exploring AI management, Dafoe (2018) organizes research into three clusters: technical foundations of AI, policy foundations for interaction between key stakeholders (e.g., governments, firms, and the public), and model-based AI management, which focuses on creating mechanisms for a smooth transition to more advanced AI systems. Within the European context, Krarup and Horst (2023) examine AI policy, focusing on the creation of a "single digital market" that enables standardized rules and infrastructure for AI services. They also address the paradox of infrastructure standardization: while central provision ensures uniformity, market-driven exchanges create fragmented infrastructure.

These diverse investigations underscore the multifaceted efforts to integrate AI as a new phenomenon into various research and practical domains, reflecting a broad spectrum of challenges and opportunities.

Building on the models of AI acceptance and the interdisciplinary nature of AI research, the analysis of AI perception offers further insights into how societal attitudes shape the adoption and governance of AI technologies.

Dieter and Gessler (2021) suggest that media depictions, especially in films, play a significant role in influencing public perception of AI. Their analysis of 17 popular films reveals that AI and robots are frequently portrayed as friendly and supportive companions to humans. Expanding on public attitudes, Yeh et al. (2021) explored perceptions in Taiwan, finding that AI is viewed with a mix of excitement and concern. They argue that AI development must be governed within both international and domestic frameworks, with additional education necessary to foster sustainable cities

that integrate circular economy principles and AI. In the US, Zhang and Dafoe (2020) analyzed public trust in government and institutions managing AI. Their investigation highlights varying levels of trust, with respondents exhibiting low to moderate confidence in responsible AI management. Similarly, Robles and Mallinson (2023) emphasize the importance of public trust in AI governance, citing differences in perception based on education, gender, and political beliefs. Their findings indicate that women are 32% more likely than men to trust AI.

Studies in Europe, such as that by Brauner et al. (2023), also reflect a nuanced perception of AI. Their analysis in Germany identified biases in AI perception, with respondents exhibiting more favorable but less probable expectations of AI's impact. This underscores the need for greater public literacy on AI. Additionally, Hong and Lim (2022) examined the adoption of AI and robots in Europe, attributing low readiness for AI to fears of job loss and arguing that a country's technosocio-economic status significantly impacts technology acceptance. In the UK, Hadlington et al. (2024) found widespread misconceptions about AI's role in the defense industry through focus group studies, which revealed public hesitancy based on misunderstanding. In contrast, Flavián et al. (2022) examined public readiness for analytical AI in North American service industries, noting a growing optimism and intent to use AIdriven services like robo-advisors (Flavián, 2022).

Turning to the healthcare sector, Rojahn et al. (2023) assessed US public trust in medical AI, finding a near-even split between those who trust AI in medical decisions and those who do not. Interestingly, respondents acknowledged AI's potential for less biased decision-making compared to humans but still preferred human healthcare professionals. In Europe, Amann et al. (2023) examined attitudes toward AI among stroke patients and healthcare providers, revealing strong support for AI's potential to improve accuracy and efficiency in medical decision-making while also calling for clearer regulation regarding patients' rights to information.

In other sectors, studies like the investigation of Talley (2020) into AI in autonomous aircraft highlight public concerns over safety and confidentiality as primary barriers to acceptance. Meanwhile, Schiff et al. (2023) found that public support for AI in policing depends on the perceived proximity of its implementation, with a preference for local over national AI use. Finally, Hradecky et al. (2022), in the events industry's exhibition sector, revealed caution in adopting AI, stemming from low trust and insufficient technological infrastructure. Schepman and Rodway (2022) offer a more psychological approach, identifying personality and corporate trust as significant factors influencing AI perception. Notably, introverts tended to view AI more positively than extroverts.

These findings illustrate that public perception of AI is shaped by a complex interplay of cultural, educational, and social factors, and there is no single approach to understanding or measuring this perception. The diversity of attitudes toward AI reflects the varying degrees of trust, readiness, and concern across different societies and sectors.

The study aims to assess the awareness of artificial intelligence and the readiness to use artificial intelligence by the adult population of Ukraine in 2022.

# 2. METHOD

The study was conducted in July 2022 by the Centre for Social Research of Sumy State University as part of the project "Artificial Intelligence for Everyone," implemented with the support of the House of Europe. A total of 806 respondents representing the adult population of Ukraine were interviewed via an online survey. The margin of error does not exceed 5%. Survey criteria: age, gender, settlement, type of employment, region.

In particular, the survey was completed by 60.1% of women and 39.9% of men. By type of employment, 11.8% were students, 41% were employees, 13.3% were business owners, self-employed, 11.8% were unemployed, 20.4% were pensioners, and 1.7% were others. The distribution of respondents by geographical cluster was as follows: 32.6% – Western cluster, 40.7% – Central cluster, and 26.7% – Eastern cluster. By type of settlement, 11.5% of residents of village communities were interviewed, 14.9% of rural communities, and 73.6% of urban communities.

The questionnaire, besides socio-demographic characteristics, encompasses two categories of questions: 1) awareness of artificial intelligence and 2) readiness to use artificial intelligence technologies. The questions are formulated based on the TAM, which argues that individuals' embrace of technology is influenced by their expected benefits and the expected usability of the technology. The data were processed using the OCA software.

# 3. RESULTS

Ukrainians express positive associations with artificial intelligence (45% of respondents agree that AI technologies are now widely used; 41% say that AI makes life comfortable, and 27.6% say that it is useful and develops humanity). Only 12.2% of respondents do not know anything about AI.

At the same time, only about a third of respondents (27.6%) believe that AI will never fully substitute for human beings. On average, men are more supportive of AI technologies than women, more often stating that AI is extensively utilized today and enhances daily living (53% vs. 43.6%; 49% vs. 39.6%) (Table 1).

Table 1. Select the statements about artificial intelligence you agree with (by gender), %

Statement		Male	
Technologies of the distant future	16.1	13	
Technologies that are widely used now	43.6	53	
Artificial intelligence technologies make life more comfortable and better	39.6	49	
Technologies that are accessible to everyone	12.1	17	
Artificial intelligence is useful; it develops humanity	28.2	27.5	
Artificial intelligence is dangerous; it can destroy humanity	5.7	5	
Artificial intelligence can imitate human intelligence	8.1	8.5	
Artificial intelligence will never be able to replace humans	23.5	21	
I do not know anything about AI	15.4	9	

Table 2. Select the statements about artificial intelligence you agree with (by cluster), %

Statement	Western cluster	Central cluster	Eastern cluster	
Technologies of the distant future	13.3	7.5	27.9	
Technologies that are widely used now	48	51.9	39.7	
Artificial intelligence technologies make life more comfortable and better	46	44.3	39	
Technologies that are accessible to everyone	7.3	17.5	16.2	
Artificial intelligence is useful; it develops humanity	30.7	31.6	19.1	
Artificial intelligence is dangerous; it can destroy humanity	5.3	2.8	9.6	
Artificial intelligence can imitate human intelligence	8	3.3	16.2	
Artificial intelligence will never be able to replace humans	17.3	24.1	25.7	
I do not know anything about AI	8.7	17	11	

Residents of the Eastern cluster are more likely to say that AI is a technology of the future, while residents of the Central cluster say that AI is a technology used now. Also, representatives of the Eastern cluster are more skeptical about the usefulness of AI and its ability to contribute to human development (19.1% vs. 30.7% (Western cluster) and 31.6% (Central cluster)) (Table 2). Residents of the Western cluster report limited access to AI technologies, with only 7.3% of respondents believing that AI is accessible to all. At the same time, only one in six people in the Eastern and Central clusters noted the availability of AI technologies.

Women demonstrate a lesser level of awareness of AI when identifying the ownership of products/services based on AI (Table 3). For example, 58.6% of male respondents identify big data applications as using AI, compared to 47.3% of women. When it comes to medical health monitoring devices, women identify them as AI almost twice as often as men (21.6% vs. 12.4%).

Young people are more aware of AI-driven products and services, so they identify a wide range of examples of their use (Table 4). For example, 65% of 18-29-year-olds define search assistants as an AI service, unlike other groups. In con-

**Table 3.** In your opinion, which of the following products/services use AI (by gender)

Products/services based on AI	Female	Male	
Big data processing applications	47.3	58.6	
Search assistants (e.g., OKGoogle, Siri, Alexa, Cortana)	41.6	49	
Voice, fingerprint, image recognition software, etc.	35.9	43.8	
Virtual characters in video games	24.4	38.6	
Autonomous cars	22.2	38.1	
Humanoid robots	34	41.9	
Recommendation tools (e.g., shopping, travel, chatbots, etc.)	12.4	15.2	
Tools for writing stories, reports, news	7.6	5.7	
Medical technologies (that can treat people and monitor health)	21.6	12.4	
Difficult to answer	20.6	14.3	

**Table 4.** In your opinion, which of the following products/services use AI? (by age), %

Products/services based on AI	Age 18-29	Age 30-39	Age 40-49	Age 50 and older
Big data processing applications	59.3	66.7	57.5	30.4
Search assistants (e.g., OKGoogle, Siri, Alexa, Cortana)	65	53.8	48	19
Voice, fingerprint, image recognition software, etc.	54.5	45.3	47.2	15.8
Virtual characters in video games	51.2	27.4	36.2	10.8
Autonomous cars	43.1	29.9	31.5	13.9
Humanoid robots	54.5	36.8	37	24.1
Recommendation tools (e.g., shopping, travel, chatbots, etc.)	18.7	11.1	14.2	10.8
Tools for writing stories, reports, news	9.8	8.5	5.5	4.4
Medical technologies (that can treat people and monitor health)	14.6	22.2	18.1	17.1
Difficult to answer	2.4	8.5	11.8	42.4

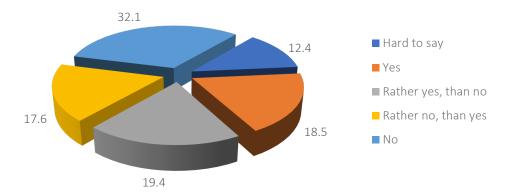


Figure 1. Are you ready to cooperate with a robot/artificial intelligence? %

trast, only 48% of respondents aged 40-49 and 19% of respondents aged 50 and older identify search assistants as AI services.

Ukrainians are rather cautious about the possibility of working with a robot and demonstrate unwillingness to compete with AI. Only one-third of respondents (37.9%) expressed readiness to work in collaboration with a robot – 18.5% are "ready," and 19.4% are "rather ready." However, nearly half of the respondents (49.7%) indicated reluctance to collaborate with a robot (Figure 1).

Men are more inclined to collaborate with a robot compared to women. 26.8% of men and only 13% of women confirm their readiness to work collaboratively with a robot, while only 18.2% of men and 26.3% of women refuse (Table 5).

**Table 5.** Are you ready to cooperate with a robot/artificial intelligence? (by gender), %

Answer	Female	Male
Yes	13	26.8
Rather yes than no	30.2	25.8
Rather no than yes	15.9	20.1
No	26.3	18.2
I do not know	14.6	9.1

Young people are more likely to demonstrate their willingness to work in collaboration with a robot (Table 6). For example, 60.2% of respondents aged 18-29 are ready to cooperate with a robot at work. At the same time, only 44.9% of Ukrainians aged 40-49 confirm the possibility of such cooperation.

**Table 6.** Are you ready to cooperate with a robot/artificial intelligence? (by age), %

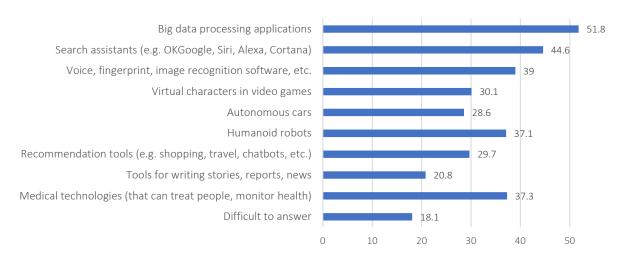
Answer	Age 18-29	Age 30-39	Age 40-49	Age 50 and older
Yes	30.1	25	12.6	9.5
Rather yes than no	30.1	37.9	32.3	17.1
Rather no than yes	22	14.7	24.4	10.8
No	8.1	11.2	19.7	46.2
I do not know	9.8	11.2	11	16.5

Western cluster residents are twice as likely to agree to collaborate with a robot as those in the Central and Eastern clusters (29% vs. 13.9% and 12.9%, respectively).

Figure 2 demonstrates the awareness of Ukrainians of the available AI-based products/services. Respondents more often refer to the following AI products/services: big data processing programs (51.8%), search assistants (44.6%), voice recognition programs (39.0%), medical technologies, and humanoid robots (37.7% each). In other words, most respondents' associations with artificial intelligence products/services relate to data processing and information management.

Respondents mentioned the following benefits of AI for everyday life: timesaving (49.8%), increased comfort (43.7%), and increased accessibility of services (36.8%). Young people are more inclined to mention the benefits of using AI in everyday life, choosing a wide range of advantages. Whereas respondents over 50 indicate no benefits of using AI in everyday life.

Meanwhile, respondents suppose that AI creates a dependency on technology (56.5%), makes people



Note: Respondents were able to select multiple answers, so the sum of the answers exceeds 100%.

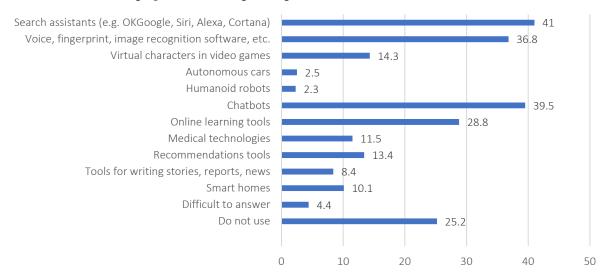
Figure 2. In your opinion, which of the following products/services use AI? %

lazy (38.5%), and immerses them in virtual reality (31.6%). According to the interviewed, AI restricts human freedoms, as it increases control over people (32.4%). Women see the biggest disadvantages of using AI as immersing people in the virtual world and ousting them from the labor market (33.8% and 31.8%, respectively). Men consider that AI influences human choices and controls humans to be among the most significant disadvantages of its use (13.9% and 36.1%, respectively).

Ukrainians quite often use AI products/services in their everyday life/business. The most common technologies are search assistants (41.0%), chatbots (39.5%), voice, fingerprint, and image recog-

nition software (36.8%), and online learning tools (28.8%). Only 25.2% of respondents indicate that they do not use AI (Figure 3).

Men in Ukraine use AI products/services in their everyday lives more often than women (Table 7). Men are 1.6 times more likely than women to use big data processing programs; voice, fingerprint, and image recognition programs – 1.3 times; virtual characters in video games – 2 times; autonomous cars – 8.7 times; and humanoid robots – 2.9 times. However, women are more likely than men to use the following AI products and services: health monitoring (13.7 vs. 7.6%), online learning tools (30.3% vs. 25.2%), and smart homes (8.6% vs. 5.7%).



Note: Respondents were able to select multiple answers, so the sum of the answers exceeds 100%.

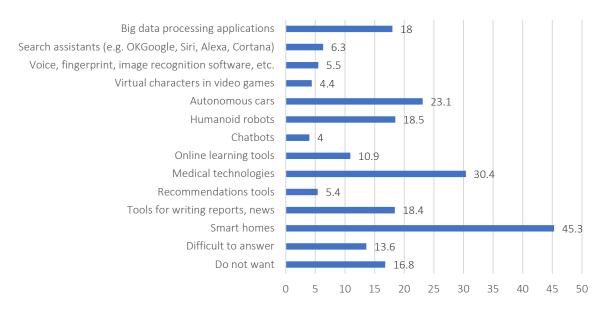
Figure 3. What AI products/services do you use in your daily life/business? %

Table 7. What AI products/services do you use in your daily life/business? (by gender), %

Products/services based on Al	Female	Male	
Big data processing applications	15.6	25.7	
Search assistants (e.g., OKGoogle, Siri, Alexa, Cortana)	39.5	43.3	
Voice, fingerprint, image recognition software, etc.	32.5	43.3	
Virtual characters in video games	10.2	20.5	
Autonomous cars	0.6	5.2	
Humanoid robots	1.3	3.8	
Chatbots	37.9	41.9	
Online learning tools	30.3	25.2	
Medical technologies (health monitoring)	13.7	7.6	
Recommendation tools, ads	11.8	11.9	
Tools for writing reports, news	6.7	6.7	
Smart home (robot vacuum cleaner, climate control, etc.)	8.6	5.7	
Difficult to answer	4.1	4.8	
Do not use	24.8	26.2	

Table 8. What AI products/services do you use in your daily life/business? (by age), %

Products/services based on AI	Age 18-29	Age 30-39	Age 40-49	Age 50 and older
Big data processing applications	22.8	25.6	18.9	13.4
Search assistants (e.g., OKGoogle, Siri, Alexa, Cortana)	52	53	46.5	19.1
Voice, fingerprint, image recognition software, etc.	56.9	50.4	36.2	11.5
Virtual characters in video games	30.9	17.9	10.2	1.9
Autonomous cars	6.5	1.7	2.4	0
Humanoid robots	4.9	3.4	0.8	0.6
Chatbots	59.3	52.1	44.1	10.8
Online learning tools	49.6	31.6	31.5	6.4
Medical technologies (health monitoring)	9.8	11.1	10.2	13.4
Recommendation tools, ads	20.3	8.5	15	5.1
Tools for writing reports, news	6.5	5.1	7.1	7.6
Smart home (robot vacuum cleaner, climate control, etc.)	7.3	11.1	7.9	4.5
Difficult to answer	2.4	5.1	3.1	6.4
Do not use	8.1	9.4	18.1	56.1
Do not need	0	0	0	0.6



Note: Respondents were able to select multiple answers, so the sum of the answers exceeds 100%.

Figure 4. What AI products/services would you integrate into your daily life?

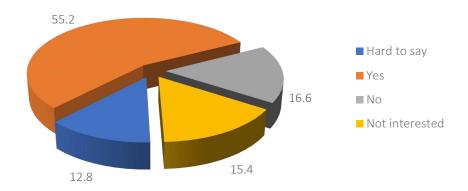


Figure 5. Would you like to learn about available technologies or opportunities to apply AI? %

Young people are more willing to use AI technologies in everyday life (Table 8). For example, 6.5% of respondents aged 18-29 use autonomous cars. By contrast, only 1.7% of respondents aged 30-39 and 2.4% of those aged 40-49 use such autonomous cars.

Ukrainians have established preferences for AI products/services that they would like to integrate into their everyday lives (smart home (45.3%), medical technologies (30.4%), and autonomous cars (28%)) (Figure 4).

Gender differences can be observed in the preferences of men and women for AI products/services they would like to implement in their everyday lives. Men prefer AI products/services that are related to their personal lives: autonomous cars (31.1%), humanoid robots (23.9%), and smart homes (46.4%). Women are more likely to need AI products/services related to smart home (40.1%) and health monitoring (30.3%).

A sufficiently high demand for AI technologies is observed, with 55.2% of respondents willing to learn more about existing technologies and the possibilities of using artificial intelligence. Only 15.4% said they were not interested (Figure 5).

Women are more likely to be reluctant to receive additional information on available technologies and opportunities for using AI than men (20.6% vs. 10.5%). Respondents over 50 years old are also not interested in additional information on available technologies and opportunities for using AI (Table 9). Thus, 56.9% of respondents over the age of 50 demonstrate no interest in AI. In contrast, respondents aged 18-29 show the highest level of

interest in receiving additional information on available technologies and opportunities for using AI (77.2%).

**Table 9.** Would you like to receive additional information on available technologies and opportunities for AI use? (by age), %

Answer	Age 18-29	Age 30-39	Age 40-49	Age 50 and older
Yes	77.2	68.4	49.6	32.9
No	2.4	10.3	17.3	31.6
Hard to say	12.2	13.7	15.7	10.1
Not interested	8.1	7.7	17.3	25.3

Western cluster residents demonstrate a higher interest in receiving additional information on available technologies and opportunities for using AI, 62.9% of respondents (Table 10).

**Table 10.** Would you like to receive additional information on available technologies and opportunities for AI use? (by cluster), %

Answer	Western cluster	Central cluster	Eastern cluster
Yes	62.9	54.6	46.8
No	15.9	24.1	5.8
Hard to say	10.6	4.6	28.1
Not interested	10.6	16.7	19.4

The results show that Ukrainian men are more inclined than women to acknowledge the advantages of AI in daily life, highlighting that AI products and services enhance comfort, save time, and assist in decision-making.

The most significant disadvantages of AI products/ services, according to the Ukrainians respondents, are the following: AI makes people dependent on technology, lazy, immerses them in virtual reality, and limits their freedom, as AI increases control over humans.

Every second respondent expresses reluctance to team up with a robot. 27.6% of Ukrainians believe that AI will never be capable of replacing humans.

The information awareness of Ukrainians about AI products/services is sufficient in terms of their potential use in Ukrainian society (12.2% of respondents are unaware of AI).

Thus, the readiness of Ukrainians to use AI products/services can be described as average, as only 37.9% of respondents are open to working alongside a robot, and almost one in three respondents cannot imagine replacing humans with robots in various activities.

# 4. DISCUSSION

The revealed attitudes of Ukrainians toward AI products/services, to some extent, coincide with the results of other national and international studies. For example, in 2023 a study on the attitude of Ukrainians towards artificial intelligence by the Razumkov Centre (Samaieva, 2023) was conducted in 22 regions of Ukraine and Kyiv city. It revealed that almost 34% of Ukrainians did not know anything about AI, and only 24% were confident that they knew what AI was. The results of this current study show that only 12.2% of Ukrainians know nothing about AI, and 45% of respondents agree that AI technologies are now widely used.

The results of Samaieva (2023) show that 64% of Ukrainians do not use chatbots in 2023 (the results of this current study: 37.9% of women and 41.9% of men used chatbots in 2022), meaning that the situation has hardly changed over the year.

The 31-country Global Advisor survey of 2023 (Ipsos, 2023) reported that only 51% of respondents were aware of AI products/services (55% of men and 46% of women), and knowledge of AI products/services was higher among young people than among older people. The findings of this paper align with international analysis: young people are more aware of

products and services that use AI technologies. Thus, 65% of Ukrainians aged 18-29 defined search assistants as an AI service, compared to 48% of respondents aged 40-49 and 19% of those aged 50 and older; 58.6% of men defined big data applications as those that use AI, compared to 47.3% of women.

Androshchuk (2021) indicated that in the global community, men (32%) responded more positively to AI in the workplace than women (23%), and 65% of the surveyed employees were "optimistic and enthusiastic" about the robot as a co-operator.

The current results show that 36.9% of Ukrainians are ready to work with a robot in 2022, which is 1.8 points less than the global average.

The findings of Beauchene et al. (2023), who investigated the possible impact of AI in the workplace in 18 countries (including Germany, France, Italy, the USA, Japan, India, Brazil, the UK, and Spain) showed that 52% of respondents held a favorable view of the impact of AI on work, and 36% believed that AI would replace them in the workplace. The results of this study revealed that 27.6% of Ukrainians believed that AI would never be capable of replacing humans, meaning that 72.4% expected their jobs to be substituted by AI, which is twice as high as the AI predictions by Beauchene et al. (2023).

Thus, compared to the results of international surveys, Ukrainians are less ready to cooperate with AI in the workplace than representatives of other countries. At the same time, they estimate that the possibility of replacing humans in the workplace with AI is much higher than the global average.

The limitations of the study deal with the necessity of finding factors that define AI readiness differences in geographical clusters. Also, the war significantly impacted Ukrainians' attitudes toward AI, as reflected in the results of surveys. On the one hand, there is an increasing need for technologies to support defense and medical infrastructure, which may lead to a greater willingness to use AI in these areas. Men, in particular, who often highlight the benefits of AI for comfort and time savings, might further appreciate the potential of such technologies for military and logistical needs. On the other hand, there is a growing shortage of labor, especially in sectors previously dominated by men, with women starting to take on

traditionally male professions. This shift also affects women's readiness to use AI.

Due to the war and associated risks of control, Ukrainians may intensify their concerns about the shortcomings of AI. The war heightens fears about losing control over technologies, particularly regarding safety and privacy. This could increase apprehension about reliance on AI, especially in the context of freedom limitations and external control.

The reluctance to work with robots or accept the replacement of humans in the workplace may be exacerbated as people value the human element and job preservation more during wartime. Additionally, the importance of physical and cognitive skills, which robots cannot easily replace, might grow, influencing the perception of collaborating with AI.

At the same time, due to the crisis conditions of the war, Ukrainians may become more receptive to innovations and new technologies, including AI, if they help address issues on the battlefield, in resource management, or in humanitarian matters. The perspective for future research is to analyze factors of AI acceptance and form an independent set of data for assessing the readiness of society to use AI.

# CONCLUSION

The study aims to evaluate the awareness and readiness of the adult population in Ukraine to use artificial intelligence by the adult population of Ukraine in 2022. The results show that artificial intelligence as a technology is positively perceived by Ukrainians. At the same time, they are skeptical about the possibility of robots working as partners in the workplace.

Men have a stronger commitment and awareness of AI products/services than women. Young people are the most informed age group about AI products/services. Respondents aged 18-29 are also more likely to use AI products/services compared to other age groups. In terms of regional differences, residents of Western regions report a more significant impact of AI on their lives today compared to respondents from Eastern regions. According to the survey, the most critical aspects of AI products/services are time-saving, increased comfort, and improved accessibility of services.

Most Ukrainian respondents do not imagine working together with a robot in the workplace. Consequently, in order to achieve better effects in AI policy in Ukraine, it is recommended to conduct awareness-raising events on AI capabilities, organizing a special information program on AI for women, concentrating on assessing the needs of the market for smart home devices and medical monitoring devices.

# **AUTHOR CONTRIBUTIONS**

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# ACKNOWLEDGMENT

This research was funded by a grant "Restructuring of the national economy in the direction of digital transformations for sustainable development" (№0122U001232) from National Research Foundation.

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