

## The Influence of AI Awareness Dimension on Sustainable Employability: Study from Gen X Employees in Jakarta

Netania Emilisa<sup>1\*</sup>, Sarah Rizkika Ifa Muna<sup>2</sup>, Nico Lukito<sup>3</sup>, Lidia Wahyuni<sup>4</sup>, Dietce Apriani<sup>5</sup>

<sup>1,2,3,4</sup> Faculty of Economics and Business, Trisakti University, Jakarta, Indonesia

<sup>5</sup> Business Economics, University of Lincoln, Lincoln, New Zealand

Corresponding author: netania@trisakti.ac.id

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### ABSTRACT

This study aimed to analyze the influence of the AI awareness dimension, namely challenge and hindrance appraisal toward AI, on sustainable employability through job crafting mediation variables in Gen X employees in Jakarta. In this study, hypothesis testing and data collection were carried out cross-sectionally. The data were collected primarily by distributing questionnaires to 272 Gen X employees in Jakarta. The sample collection method used the purposive sampling method. The data processing techniques included validity tests, reliability tests, and structural equation modeling (SEM). The results of the study showed that there was a positive influence caused by challenge appraisal toward AI and job crafting on sustainable employability. Meanwhile, hindrance appraisal toward AI triggered a negative influence on sustainable employability. The company and employees were expected to collaborate in implementing AI in the work environment to support their work sustainably.

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### Introduction

The Industrial Revolution 4.0 era encourages digitalization in operational functions in various sectors, from manufacturing to services. In this case, companies need to implement sustainable employability to ensure that employees will remain motivated to work, adapt, and improve performance and competence per the company's needs. Sustainable employability refers to the ability of employees to provide added value to an organization, now and in the future, and to experience this added value themselves in the process (Irfan et al., 2023). Sustainable employability could be influenced by the digitalization and automation trends in each company. Current digitalization and automation trends include increased use of data, connectivity, human-machine interaction, artificial intelligence (AI), and improvements in robotics (McKinsey&Company, 2021). The current use of automation systems certainly adds to existing business dynamics, starting from changes in work arrangements and new challenges.

When companies start to change the working arrangement and implement a new working tool which is artificial intelligence (AI), employees need to adapt to survive and

maximize the use of AI to make their work easier. Later, this will trigger changes in employees' orders or job descriptions, encouraging them to be more productive and adding value to their work processes. Thus, these challenges become a reference for sustainable employability in the company (Alnamrouti et al., 2022). Likewise, Gen X spent the 1980s as a teenager. The ability possessed by Gen X Initially, when Gen X entered the world of work, they were not used to communicating using digital media and technology. Research conducted by Venkatesh et al. (2003) found that age is more significant in influencing workers. In contrast, older workers tend to be less willing/accepting to adopt new information technology. This is a challenge for companies that still employ a lot of Gen X, where currently, the widespread use of AI will affect the work effectiveness of Gen.

In the workplace, AI has the potential to automate repetitive and time-consuming tasks, liberating employees to concentrate on more strategic and creative work. Integrating AI in companies is anticipated to contribute significantly to achieving company goals, from enhancing the effectiveness of quality management and supply chains to bolstering asset management, including managing human resources (Irfan et al., 2023). However, the adoption of AI in companies is not without its challenges. It necessitates a shift in mindset and a readiness to confront the obstacles and challenges that employees may perceive. AI awareness, or employees' comprehension of how AI can influence their future job prospects, becomes pivotal (He, C et al., 2023).

A study conducted by He, C et al. (2023) on employees in the service industry stated that when the company they work for, employees will react differently. One of them is challenge appraisal toward AI, which is a challenge employees feel in implementing AI in the work environment, which should be encouraged by motivating employees. Thus, employees will assess AI as a positive challenge, such as considering AI as an opportunity to achieve goals and a place to increase competence. Besides, hindrance appraisal towards AI is a perceived obstacle when adopting AI. This refers to employees' perceptions that AI will suppress their abilities and that there is no room to improve their competencies (Bakker & Demerouti, 2017).

Companies will take steps to adapt the scope of employee work to respond to changes in company dynamics by incorporating AI into the work environment. Job crafting is a company's endeavour to redesign or reshape the scope of employee work (Emilisa et al., 2020). With job crafting, employees can discover new approaches to work and adapt to using AI in their company. Moreover, this change will stimulate employees to choose the most efficient way of doing their work (Alnamrouti et al., 2022). This will foster initiative and increase competency for employees not only within the scope of their work. Employees can broaden their exploration of the scope and function of work through the new order of using AI (Chen et al., 2023).

In implementing job crafting, the company adjusts the scope of existing work to current needs, which aligns with the AI adoption that has been implemented. Furthermore, the company strives to retain employees by fostering employability and creating new jobs. This will lead to sustainable employability in the company, with the mediation of job crafting and AI application. A study conducted by Irfan et al. (2023) on health service employees stated that employees perceived the company's job crafting as motivating to continue working, increasing work engagement, and optimizing job fit for each employee. Thus, the efforts will lead to sustainable employability in the company, even in the face of changing conditions, such as AI (He, G et al., 2023). Sustainable employability refers to an employee's

capacity to function on the job and in the labor market. For instance, in their current jobs, employees will have a career path and a willingness to work until retirement (Irfan et al., 2022).

He, C et al. (2023) explain AI awareness is employees' perception of technology; this leads to the possibility of AI influencing their job prospects in the future, starting from the challenges and obstacles they feel. It can be seen after companies adopt AI as a tool for their work. In addition, AI awareness also leads to new learning, perception, and cognition, reducing errors and increasing efficiency, speed, and accuracy for organizations (He, C et al., 2023). Companies that adopt AI will trigger AI awareness, which will contribute to better employee participation in company activities and sustainable employability. (Kumar et al., 2023). On the other hand, AI awareness refers to the company's awareness of current technological advances, which bring positive currents to the company's effectiveness and efficiency. Thus, companies will adopt AI with the speed of data analysis, work automation, and potential as a supporting tool for their employees (Chatterjee et al., 2023). AI awareness has two dimensions: first, challenge-hindrane appraisals toward artificial intelligence, challenging job demands and encouraging job creation by increasing employee motivation. Employees will assess AI as a challenge and an opportunity to improve individual competencies. Therefore, employees will be motivated to seek proactive strategies to overcome the challenging demands of AI. Second, hindrance appraisals toward artificial intelligence. The threat employees receive regarding adopting AI by companies is due to changes in the work structure, such as job descriptions. Additionally, employees will need more stability in their positions in the company as companies seek advanced technology to replace human capabilities.

Based on a study by Zuma (2020), job crafting is a proactive response to changes in company dynamics that lead to changes in tasks, relationships, and cognitive perceptions to redesign jobs. On the other hand, *job crafting* is also defined as cultivating positive meaning and identity in an employee's work. This process will encourage employee contribution and motivation in the work environment (Emilisa et al., 2020), explaining that job crafting has three dimensions: first, task crafting empowers employees to add or reduce responsibilities from their official job description. For instance, the freedom to work independently, choose preferred projects, ask questions without hesitation, trust colleagues, and communicate openly with others all contribute to a sense of control and value in their work, enhancing employee retention. Secondly, relationship crafting is a collaborative process that involves changing existing work paradigms through communication and engagement. This can be seen using different communication channels with various company parts, diverse value offerings, and employee learning opportunities. This approach fosters a dynamic work environment and cultivates a sense of teamwork and camaraderie, facilitating the achievement of desired goals. Finally, cognitive crafting refers to a changing employee mindset towards their work, including perspectives regarding routine work, scope, work relationships, and views on the current job description.

Sustainable employability is the extent of an employee's ability and motivation to continue working productively now and in the (Irfan et al., 2023). Apart from that, Neupane et al. (2022) research explains that sustainable employability is an aspect of employees ranging from health, general fatigue, emotional exhaustion, work ability, work involvement, work relationships, and personal conditions. (household), job satisfaction, and employee absenteeism. According to research by Itam and Swetha (2022), sustainable employability

is the aspect of job performance, job satisfaction, and employee loyalty. According to van Dam et al., (2017), the factors that influence sustainable employability are as follows: first employability refers to an individual's ability to perform adequately in current and future jobs, within and outside the organization. Although the chances of retaining or obtaining employment may also depend on labor market characteristics, it is generally recognized that individual characteristics, such as abilities, skills, and knowledge, contribute to employability and labor market participation; secondly, work engagement. work engagement is not just a state of positive attitudes and behavior employees show regarding their work. It is a powerful driver of productivity and well-being. This state, characterized by enthusiasm, dedication, and focus, can lead to employees mobilizing personal resources, enjoying better health, delivering better work performance, and even delaying retirement. The potential benefits of work engagement are significant and should not be underestimated. Finally, affective commitment refers to the degree to which an employee identifies with, is involved in, and is attached to an organization. Employees with effective, solid commitment will perform better, be absent less often, and not change jobs compared to less committed employees.

Research by Sundaresan and Zhang (2022) also supports challenge appraisal toward AI, which triggers employee job crafting. This research explains that AI can drastically change the nature of work and business processes and motivate employee engagement. As a result, job crafting is a redesign of work rules and procedures to facilitate better use of AI by employees. So, having a challenging appraisal toward AI as a job requirement will significantly positively affect job crafting, leading to a more optimistic work environment. Based on the explanation above, the following hypothesis is proposed:

H1: Challenge Appraisal Toward AI has a positive effect on Job Crafting

Based on research conducted by He, C et al. (2023) state that when faced with inhibiting demands, employees need to expend extra energy and resources to meet these demands, thereby reducing proactive behavior in cognitive perception for job redesign. Thus, employees who perceive hindrance appraisal toward AI will show low self-esteem, not concentrate on doing their work, and oppose job crafting. Therefore, hindrance appraisal toward AI will provide a negative direction towards implementing job crafting, raising concerns about the potential adverse effects on job performance. Based on the explanation above, the following hypothesis is proposed:

H2: Hindrance Appraisal Toward AI has a negative effect on Job Crafting

Sustainable employability, defined as an individual's ability and motivation to sustain work, is a crucial aspect of our discussion. It involves continuously enhancing work engagement, accumulating job resources, improving person-job fit, coping with job demands, and optimizing work. In this context, job crafting emerges as a valuable tool that enables employees to understand their roles better and be better prepared to work effectively over an extended period (Irfan et al., 2023). Therefore, job crafting is expected to play a positive role in fostering sustainable employability. Based on the explanation above, the following hypothesis is proposed:

H3: Job Crafting has a positive effect on Sustainable Employability

In addition, technological advances and the adoption of AI in companies will lead to employee efficiency. Companies will need human resources who can work continuously to optimize productivity with fewer personnel. In this case, job crafting, a proactive, independent, and socially innovative job redesign process, will lead to sustainable

employability (Irfan et al., 2022). Based on the explanation above, the following hypothesis is proposed:

H4: Challenge Appraisal Toward AI has a positive effect on Sustainable Employability

Research conducted by Yue (2023) revealed that hindrance appraisal toward AI swallow's employee job opportunities. In this case, employees will feel they need to have the chance to work for a long time. Employees will feel pessimistic about their capabilities because AI will replace them. Thus, it will trigger low sustainable employability. Based on the explanation above, the following hypothesis is proposed:

H5: Hindrance Appraisal Toward AI has a negative effect on Sustainable Employability

The research conducted by Irfan et al. (2022) contributes significantly to the field by highlighting companies' increasing dependence on AI and technology, which is driving rapid changes in work structures. The approach to work design, work relationships, and the systems used in work is crucial in this context. When challenge appraisal toward AI becomes a positive medium, it can lead to optimal change (job crafting), which helps achieve sustainable employability. This research's academic value lies in its comprehensive analysis of the influence of AI awareness dimensions on sustainable employability mediated by job crafting. Based on the explanation above, the following hypothesis is proposed:

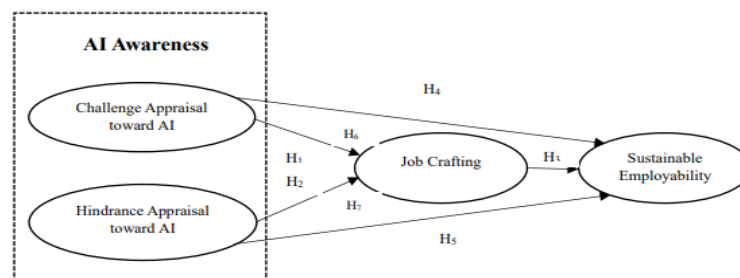
H6: Challenge Appraisal Toward AI has a positive effect on Sustainable Employability, which Job Crafting mediates

The obstacles employees feel are not only based on job opportunities but also on the access and skills they must have in the future. Employees will give up on their jobs if they cannot pursue the skills needed by the industry today, which incidentally uses AI. Meanwhile, the formation of job crafting to adjust job needs could be more optimal (Hussain et al., 2023). Therefore, when the perceived hindrance appraisal toward AI is large enough, sustainable employability cannot be created even though it is mediated by job crafting. Based on the explanation above, the following hypothesis is proposed:

H7: Hindrance Appraisal Toward AI has a negative effect on Sustainable Employability, which Job Crafting mediates

Based on the description above, the influence of the AI awareness dimension on sustainable employability mediated by job crafting is presented in Figure 1, related to the formation of a conceptual framework, which is as follows:

**Figure 1**  
*Conceptual Framework*



Research conducted by He, C et al. (2023) suggest that implementing AI in companies will encourage job crafting, significantly impacting service performance in service companies. This research focused on an analysis carried out on several employees working in the service industry. Apart from that, research by Irfan et al. (2023) also, job crafting

positively impacts sustainable employability, especially in an era of uncertainty. These findings were obtained by analyzing employees who work in the education and health sectors. Meanwhile, this research's primary concern is identifying the dimensions of AI awareness that influence sustainable employability by mediating job crafting among Gen X.

## **Method**

### ***Design***

The research was conducted using cross-sectional study; data was collected once to find the influence between variables. Data was collected using the survey research method, namely distributing questionnaires. The unit of analysis used in this research is the individual, focused on Gen X employees in Jakarta.

### ***Respondents***

The unit of analysis used in this research is the individual, focused on Gen X employees in Jakarta. The sample used was 272 respondents. In terms of the features of respondents, men accounted for 29%, and women accounted for 71%. The respondents' ages were mainly between 40 and 50 years old. The years of working experience ranged from 11 to 20 years. Meanwhile, based on the industry profile, it is dominated by the consultant industry at 38.6%.

### ***Measurements***

The relevant variable measurement scales used in this study are from mature scales used in previous studies. Furthermore, an online questionnaire was used as a medium to obtain data relevant to the objectives of this study. The validity test results on the variable indicators of all items have a loading factor of 0.35. Each statement item is declared valid and measurable. All indicators in the research variable are reliable because they have a Cronbach alpha  $\geq 0.60$ .

### ***AI awareness***

AI awareness was assessed using established scales from previous studies. The scale consists of two dimensions: Challenge Appraisal toward AI and Hindrance Appraisal toward AI. Participants responded using a Likert-type format (1 = strongly disagree to 5 = strongly agree), with higher scores indicating greater discrepancy. Four items for Challenge Appraisal toward AI (Cronbach's alpha [ $\alpha$ ] = 0.712) and three items for Hindrance Appraisal toward AI ( $\alpha$  = 0.764) were adapted from He, C et al., (2023).

### ***Job Crafting***

Job Crafting was assessed using mature scales used in previous studies, developed by Emilisa et al. (2020). This Scale consists of 13 items. Participants responded using a Likert-type format (1 = strongly disagree to 5 = strongly agree), with higher scores indicating greater discrepancy. The authors reported a Cronbach  $\alpha$  of 0,717.

### ***Sustainable Employability***

The statement indicators used in the questionnaire for sustainable employability consisted of 10 items adapted from Irfan et al. (2023). Participants responded using a Likert-type format (1 = strongly disagree to 5 = strongly agree), with higher scores indicating greater discrepancy. The authors reported a Cronbach  $\alpha$  of 0,860.

## Data Analysis

The data processing techniques used included validity testing, reliability testing, and structural equation modeling (SEM) using SPSS and AMOS software. SPSS was used to prepare and analyze the study's data to determine the significance of the proposed connections between constructs. First, we conducted a structural model to check the model's fit. Second, we tested the hypothesized structural associations using Structural Equation Modeling (SEM). We ran a series of direct and indirect path models to determine the indirect effects. To obtain the results of the influence of mediating variables, we used the Sobel test with free statistical calculation software for the Sobel test and AMOS. Studies have shown that the AI Awareness Dimension influenced the Sustainable Employability of Gen X Employees in DKI Jakarta. There are differences in applying AI Awareness in different enterprises, and there are bound to be differences in employees' work attitudes and behavior. Therefore, this study took the AI Awareness Dimension as an independent variable.

## Results

The results of descriptive statistics from the variable dimensions of AI awareness, job crafting, and sustainable employability show that the average for the challenge appraisal toward AI is 4.15. This condition proves that Gen X employees feel that AI provides a positive challenge for them. The average hindrance appraisal toward AI is 1.75, and these results confirm that Gen X employees do not feel AI hinders their work. The average result of job crafting is 4.07, which means that Gen X employees feel that job crafting in the company is related to changes in the order of duties to the design of their work. The average score for sustainable employability obtained was 3.96. These results indicate that Gen X employees feel their current jobs are sustainable and employable. Table 1, related to the the Goodness of Fit test, which is as follows:

**Table 1**

*Goodness of Fit Test Result*

Category	Measurement	Value	Cut-off Value	Decision
Absolut Fit Measure	<i>Chi-square</i>	1968.687	Low	Poor Fit
	<i>p-value</i>	0.000	$\geq 0.05$	Poor Fit
	RMSEA	0.120	$\leq 0.08$	Poor Fit
	GFI	0.667	$\geq 0.90$	Poor Fit
Incremental Fit Measure	NFI	0.556	$\geq 0.90$	Poor Fit
	RFI	0.516	$\geq 0.90$	Poor Fit
	IFI	0.611	$\geq 0.90$	Poor Fit
	TLI	0.572	$\geq 0.90$	Poor Fit
	CFI	0.608	$\geq 0.90$	Poor Fit
Parsimonious Fit Measure	AGFI	0.612	$\leq$ GFI	Goodness of fit
	CMIN/DF	4.934	Lower limit 1, upper limit 5	Goodness of fit

After conducting the Goodness of Fit test, the model was feasible for hypothesis testing. This study uses Structural Equation Modeling (SEM) to test the hypothesis. All models were tested through path analysis using AMOS software. Table 2 shows the results of the path analysis of the structural model. As shown in Table 2, all hypotheses were supported. Based on Table 2, AI Challenge Appraisal has a positive effect on Job Crafting ( $\beta = 0.587$ ,  $p < 0.05$ ), while AI Hindrance Appraisal has a negative effect on Job Crafting ( $\beta = -0.138$ ,  $p < 0.05$ ). Similarly, both Job Crafting ( $\beta = 0.818$ ,  $p < 0.05$ ) and Challenge Appraisal toward AI ( $\beta = 0.302$ ,  $p < 0.05$ ) have a positive effect on Sustainable

Employability. Meanwhile, the effect of Hindrance Appraisal toward AI on Sustainable Employability was negative ( $\beta = -0.153$ ,  $p < 0.05$ ).

**Table 2**

*The path analysis of the structural model*

Hypothesis	Estimate	$\rho$ -value	Decision
Challenge Appraisal Toward AI $\rightarrow$ Job Crafting	0.587	0.000	Supported
Hindrance Appraisal Toward AI $\rightarrow$ Job Crafting	-0.138	0.005	Supported
Job Crafting $\rightarrow$ Sustainable Employability	0.818	0.000	Supported
Challenge Appraisal Toward AI $\rightarrow$ Sustainable Employability	0.302	0.019	Supported
Hindrance Appraisal Toward AI $\rightarrow$ Sustainable Employability	-0.153	0.034	Supported

This study uses the Sobel test to determine whether the influence of the independent variable on the dependent variable, after including the mediator in the model, is significant and whether the mediation effect is statistically significant. The parameter values were based on the variables' standard estimations. The results revealed that the mediating effect of job crafting in the challenge appraisal toward AI on Sustainable Employability was significant. Meanwhile, hindrance appraisal toward AI has a negative effect on sustainable employability mediated by job crafting. Table 3, related to the results of the Sobel Test using the online Sobel calculator, is as follows:

**Table 3**

*Sobel Test Result*

Hypothesis	Estimate	$\rho$ -value	Decision
Challenge Appraisal Toward AI $\rightarrow$ Job Crafting $\rightarrow$ Sustainable Employability	0.463	0.000	Supported
Hindrance Appraisal Toward AI $\rightarrow$ Job Crafting $\rightarrow$ Sustainable Employability	-0.260	0.012	Supported

## Discussion

In the first hypothesis test, it can be concluded that there is a significant positive influence between challenge appraisal toward AI and job crafting. This shows that Gen X employees in Jakarta feel that the challenge of appraisal toward AI is a challenge that brings a positive direction to their work. In its application, AI is considered a medium to improve the competence of employees. Through the AI appraisal challenge, employees get new experiences that lead to developing strategies for doing work. A new approach is taken to optimize their work through job crafting. In his role as a Gen X employee, it is necessary to redesign the work according to the current needs of the industry. One function strongly supported by the role of challenge appraisal toward AI is the talent acquisition process. The existence of the AI appraisal challenge can allow them to explore new ways to be more proactive in finding the best talent for their company through databases and AI search features. This transformation of new tasks and approaches leads to job crafting tailored to company needs, making work more effective and efficient (Pillai & Sivathanu, 2020). Therefore, if Gen X employees feel that appraisal toward AI is a challenge, it will trigger job crafting. Job crafting will help Gen X employees find new approaches, reorganize, and be more proactive in their work, which is entering the digital era. This research is supported by previous research by He, G et al., (2023), which stated that the use of AI in the work environment will increase in the digitalization era. This will trigger changes to the conceptualization of work now and in the future. Therefore, if the company adopts AI,



employees will strive to adapt and be motivated to do job crafting. In addition, research by He, C et al., (2023) also confirm that the appraisal challenge toward AI drives job crafting in a job role that is used as a supporting tool. This will help employees further enrich their learning methods, working methods, and productivity. The rapid use of AI in the work environment is interpreted as a positive thing by Gen X employees in Jakarta. Challenge appraisal toward AI is a challenge that motivates them to continue to be proactive in working as a trigger for job crafting so that their work becomes optimal. So, the existence of an AI appraisal challenge felt by Gen X employees will lead to job crafting.

In the second hypothesis test, it was found that there was a significant negative influence caused by hindrance appraisal toward AI on job crafting. This study found that Gen X employees in Jakarta feel that hindrance appraisal toward AI does not hinder any achievement in their current job; moreover, it prevents them from mastering challenging aspects of the job. So, they do not find it difficult with job crafting, starting from redrafting work designs, introducing new tasks, and the existence of an additional system in work, namely AI. This research is supported by previous research conducted by He, C et al., (2023) state that if AI is implemented in work, it cannot trigger employees to develop, and employees will find it challenging to realize job crafting to normalize AI in the work environment. However, if the implementation of AI is not an obstacle, employees can still optimize their work through job crafting. In addition, research by Tuffaha and Perello-Marín (2022) also explains the same thing. If hindrance appraisal toward AI does not indicate obstacles to work, then employees can perform job crafting optimally. Hindrance appraisal toward AI for Gen X employees who work in Jakarta is not considered an obstacle or a limitation in their work. In the era of digitalization, Gen X employees are increasingly aware that the function of AI is one of the company strategies in carrying out work. For example, in carrying out the talent acquisition function, HR can optimize the use of AI and find new ways to attract and fulfill the best talent for their company to strengthen employer branding. Their task is increasingly accustomed to the emergence of job crafting that forms new strategies and references to their work (Xiao et al., 2023). Therefore, Gen X employees in Jakarta feel that AI can provide space for them to master new aspects of their work, which can trigger job crafting and increase their effectiveness and efficiency.

The third hypothesis test showed a significant positive influence between job crafting and sustainable employability. Job crafting, a process of redesigning proactive, independent, and socially innovative jobs, leads to sustainable employability. In this case, it is known that Gen X employees feel that a new scheme to improve their work level helps achieve sustainable employability. One is redesigning the work, choosing additional jobs according to interests, and rethinking the goals to be achieved. For example, Gen X employees integrate AI features into their job descriptions, ranging from recruitment to job evaluations (Xiao et al., 2023). Therefore, the employee becomes more proactive in their current work and projects it to remain sustainable. Sustainable employability is related to their belief in career opportunities, opportunities to work until retirement age, and a forum to continue to perform roles and improve competencies triggered by job crafting. Previous research by Sartori et al. (2023), also explains that companies are paying attention to sustainable employability in line with the constant changes in the work environment. When employees are willing to do job crafting, it will encourage the creation of sustainable employability. This research is also strengthened by the findings of Irfan et al. (2022), who stated that job crafting in the current employee's job will contribute to future strategies to prepare for their jobs. This encourages a proactive, independent, and socially innovative attitude that will lead to sustainable employability. So, in this study, it is proven that Gen X employees in Jakarta feel that there is job crafting, namely by redesigning jobs that include job descriptions, work relationships, and skills needed by HR, which will lead them to sustainable employability.

Testing the fourth hypothesis, proving that there is a significant favorable influence of challenge appraisal toward AI on sustainable employability. In this case, Gen X employees

feel that the existence of AI in the work environment encourages them to continue to be productive. AI is seen as a tool that can help improve their competence, from making their work more accessible to becoming more creative in doing their work. The aspects employees receive due to AI will help them prepare for future job opportunities. So, the perception of challenge appraisal toward AI will undoubtedly lead to a positive direction toward sustainable employability. Even though companies adopt AI, sustainable employability will still emerge due to employees' perception that the appraisal challenge toward AI will not erode their work. Sustainable employability emerges in the form of promising career opportunities following the competencies of current employees, the ability to multitask, and the willingness to work for an extended period. In a study conducted by Alnamrouti et al. (2022), it was also stated that the existence of AI is one of the reasons employees are creative in doing their work so that their work can be done sustainably. When employees can take advantage of the opportunity to apply AI optimally, it will undoubtedly bring sustainable employability to their work. In addition, research by Yue (2023) presents findings that employees with a challenging appraisal of the AI view can adapt well and continue their work for an extended period. Then, it is strengthened with a research instrument on the challenge appraisal toward AI variables, which states that employees are motivated to perform new tasks related to AI implementation. This will support the improvement of competence and change the scope of their work. Therefore, this study proves that Gen X employees in Jakarta feel that the challenge appraisal toward AI can motivate them to be productive and creative and create their work partners to achieve sustainable employability, such as their opportunity to work until retirement age.

The fifth hypothesis test gave the result that there was a significant negative influence of hindrance appraisal towards AI on sustainable employability. Gen X employees in Jakarta feel this; they consider AI not an obstacle to achieving goals at work. In addition, AI is also not a barrier to mastering complex aspects of work. Gen X employees in Jakarta also do not face the limitations caused by hindrance appraisal toward AI; they still believe that implementing AI can provide opportunities to continue to grow at work. So, Gen X employees believe that with this perception, they will still be able to work optimally and maintain their jobs. Research by Donald et al. (2020) also supports that the existence of a work system convention that was originally manual and then digital certainly brings changes to employees. Employees who cannot meet these demands will tend to give up on their jobs. Thus, the challenges felt will impact the decline in sustainable employee employability. However, changing employees' perception of these demands into motivation will increase their sustainable employability. Research conducted by Böhmer and Schinnenburg (2023) shows that employee who does not feel that there is a hindrance appraisal toward AI will maximize the potential for automation in their work, resulting in sustainable employability. This reflects this study, which shows that Gen X employees in DKI Jakarta do not feel the existence of hindrance appraisal toward AI in their work so that they can bring sustainable employability to their work. Gen X employees in DKI Jakarta feel more productive and work optimally with the help of AI to create their current and future job opportunities.

The sixth hypothesis test found a significant positive influence of challenge appraisal toward AI on sustainable employability through job crafting. It is known that the challenge appraisal toward AI is an essential aspect in the formation of sustainable employability. Based on testing, it was found that Gen X employees in DKI Jakarta are dedicated to adapting to accumulate experience and competencies to interact optimally with AI. This is intended as an effort to work productively for an extended period. The role of job crafting in terms of reformulating work according to employee needs is undoubtedly a catalyst to realize sustainable employability. Research by Irfan et al. (2022), emphasizes that companies increasingly rely on AI and technology, driving rapid changes in work structures. When the AI appraisal challenge becomes a positive medium, it will lead to optimal change (job crafting), which will help fulfill sustainable employability. In addition, Sharma et al. (2022) revealed that the challenge appraisal toward AI in employees implies a change in the work

order that ultimately creates sustainable employability. This aligns with the perception that Gen X employees in Jakarta believe that the AI appraisal challenge brings a positive direction to their work; from reducing repetitive work, AI technology motivates employees to create more flexible and independent jobs. Therefore, this perception will create sustainable employability in employees, which is strengthened by the role of job crafting in perfecting new approaches to work.

In the seventh hypothesis test, a significant negative influence produced by hindrance appraisal toward AI negatively affected sustainable employability through job crafting in Gen X employees in Jakarta. In this case, employees perceive that the company's adoption of AI aims to make their work easier. This is also supported by the existence of AI capacity that can encourage the achievement of employee goals at work, from improving competence and mastering challenging aspects of work to realizing job opportunities sustainably. For example, HR, of course, is essential to adapting to the needs of the currently aggressive industry and adopting AI as a supporting tool. So, the low perception of Gen X employees towards hindrance appraisal toward AI will encourage sustainable employability in employees. In this case, job crafting will act as a catalyst that strengthens the adaptation process and new approaches of employees to jobs that AI has automated, leading to employee opportunities to work sustainably or sustainably. This is supported by research by He, C et al. (2023; Hussain et al., 2023), state that there is a process of changing the work order because AI automation becomes difficult if AI is considered an obstacle to the careers of current and future employees. Finally, sustainable employability cannot be realized with this perception even though job crafting efforts have been made. Moreover, vice versa, if employees do not consider AI as an obstacle, of course, they will intensify the use of AI, optimize the discovery of new alternatives through job crafting, and finally achieve sustainable employability. This is also associated with a research instrument on the sustainable employability variable, which confirms that Gen X employees are willing to continue working until retirement age. The statement illustrates that applying AI as a new system will allow employees to work sustainably. Thus, Gen X employees in Jakarta do not feel a hindrance to AI in their work and do not have the assumption that AI is a threat that will prevent them from mastering difficult jobs for now and in the future. Therefore, this perception will create sustainable employability in employees, which is strengthened by the role of job crafting in perfecting new approaches to work.

Companies are expected to be able to implement AI awareness in the work environment sustainably. This is related to a challenge appraisal toward AI, which triggers employees to increase competence, enrich their experience, and work optimally. Companies can also gradually carry out the digital transformation process and implement AI. This aims to make employees better prepared to face hindrance appraisal toward AI, which allows for new dynamics that employees will face.

The limitation of this study's research is that it was only conducted on Gen X employees in Jakarta and focused on the dimensional variables of AI awareness, job crafting, and sustainable employability. It is hoped that further research can cover more diverse areas and professions and add other variables. By expanding the scope of future research to include a wider variety of demographic groups and professional sectors could provide a more comprehensive understanding of how AI awareness impacts job crafting and sustainable employability across different contexts.

## Conclusion

Based on the research analysis and discussion results, it is concluded that the AI awareness dimension influences sustainable employability, which is mediated by job crafting among Gen X employees in Jakarta. Challenge appraisal toward AI shows that Gen X employees in

Jakarta think that implementing AI helps them increase competence, be proactive, and get job opportunities. Hindrance's appraisal of AI shows that Gen X employees in Jakarta feel supported by the implementation of AI. Job crafting shows that Gen X employees in Jakarta have implemented new approaches to work. Finally, it can increase the sustainable employability of Gen X employees. Apart from that, job crafting also mediates increasing sustainable employability by challenging appraisal toward AI and avoiding appraisal toward AI.

### Declarations

**Author contribution.** The first author presented the idea, analyzed the data, wrote the manuscript, and finalized it. The second, third, and fourth authors collected and inputted the data from participants, data processing, and discussed the results. The fifth author developed the theory and data analysis.

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