Impact of AI Technology Disruption on Turnover Intention of Employees in Digital Marketing

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Abstract
The rapid advancement of AI technology has led to its integration into various sectors, including the digital marketing industry. As organizations leverage AI for tasks such as optimizing voice search content, creating conversational chatbots, and enhancing advertising campaigns, it becomes crucial to understand the impact of AI on employee perspectives and behaviors. This study aims to investigate employees' viewpoints regarding AI adoption in the digital marketing industry, specifically examining its influence on job insecurity, turnover intention, and job mobility. Job insecurity, stemming from concerns about AI rendering roles obsolete, is crucial to address for fostering a supportive work environment. Turnover intention, influenced by AI adoption and potential job dissatisfaction, provides insights into employees' commitment to the industry. Job mobility, affected by growth prospects and alignment with AI-driven workplaces, sheds light on career aspirations within digital marketing. This study addresses a significant knowledge gap regarding how employees envision the future of work and how this perspective influences their job-related behaviors. To bridge this gap, we conducted a study involving 303 employees in the digital marketing industry in India. Through structural equation modeling, we discovered that AI technology disruption influences employees' turnover intention, with job insecurity playing a mediating role. Additionally, our analysis revealed that mistreatment by superiors increases turnover intention, highlighting its impact on employees' decisions. Overall, this research unveils the profound impact of AI technology disruption in the digital marketing industry on employees' attitudes, behaviors, and future career decisions, providing essential insights into how employees perceive AI technology, particularly concerning job security and their engagement in the digital marketing sector.

Keywords: IA technology disruption, turnover intention, job insecurity, job mobility, digital marketing industry

1. Introduction
Artificial intelligence is a human-like intellect displayed by a machine, is now one of the critical sources of innovation, and has spread swiftly across numerous sectors [40,29]. It is a branch of computer science in which machines do human-like jobs to improve business efficiency. It seeks to solve human-related problems by combining machine efficiency and human traits through the use of algorithms [25]. It enables businesses in numerous areas to give unique experiences to their consumers by utilizing deep-learning algorithms that study and memorize clients' wants and preferences without human contact [39]. Applying intelligence technology to the digital market has encouraged organizations to improve customer experience by implementing new technologies like artificial intelligence [13]. Businesses with effective marketing strategies are implementing new technology to support their marketing programs that
are designed to reflect changes in consumer behaviour while taking into account modern trends and ensuring data analytics to analyse customer wants and expectations. It has changed the way companies acquire and use customer data. AI-driven digital marketing has helped organizations reach the right consumers at the right time [51] and has been progressively utilized in operational markets for risk identification, consumer research, and identifying company operations to collaborate with target customers. It will impact marketing strategies, business models, marketing procedures, and consumer service options and will also impact customer behaviour. It will let advertisers swiftly assess potential customers' needs and adapt their digital marketing AI to increase sales [7]. This has helped consumers and organizations collaborate and communicate through a digital platform [6]. For example, virtual consumer engagement can be characterized in the context of a digital environment as customers’ behavioral symptoms that emerge due to their motivations and occur while the business or brand is the focus point [16]. This advancement in digital marketing with the help of AI has benefitted organizations from the automation of many marketing areas [2]. Besides the fact that AI is becoming a necessary innovation component in the digital marketing industry, it is undeniable that it could threaten human jobs (such as Search Engine Optimizer (SEO), Content Creator, Social Media Manager, Digital Advertising Specialist, Email Marketer, Marketing Automation Specialist, Customer Relationship Management, etc.) due to its ability to mimic human thought processes and reasoning abilities; thus, there are possibilities that AI could handle large amounts of data and work instead of humans in the future [42; 52]. The use of AI in the digital marketing industry knowing that it is likely to be a double-edged sword for both employees and customers. This has led to the AI revolution, and fears about the displacement of human occupations may cause employees to perceive job insecurity. This is because job insecurity is the most significant stress for present employees amid this AI-induced environmental transformation. This stress is related to the number of positions available for a specific job title and the position’s continuation [46]. It also means that employees cannot participate completely in their work because they are preoccupied with their job performance and eventually fall to unpleasant feelings such as worry and dissatisfaction [37]. As a result, the degree of employee job engagement is closely related to their work behavior and is a crucial component in their intention to leave [54, 55]. These phenomena have put employees in danger, reducing organizational performance. This, the present study is focused on three main contributions. First, we analyse the real threat of technological disruption and how it affects job behavior regarding turnover intentions. We incorporate job security as a mediator to explore how these perceptions impact attitudes. Finally, we include job mobility to examine the direct and moderating effects on how employees eventually believe in the future of their employment. We also thoroughly examine how a consciousness of moving technology advances can shape employee turnover intentions.

2. Literature Review

The emergence of disruptive technologies and their impact on traditional business models has resulted in radical changes rather than incremental improvements. This phenomenon contrasts with the notion of sustaining technologies, which typically involves introducing new features to existing technologies [3]. For example, companies like Uber, Facebook, Alibaba, and Airbnb have exemplified these rapid and transformative changes in their organization because of the technology. Despite being the world's largest taxi company, Uber does not own any vehicles. As the leading media owner, Facebook does not create its own content. Alibaba, the most valuable retailer, operates without maintaining inventory. Similarly, Airbnb, the largest accommodation provider, owns no real estate [18]. These companies have rapidly disrupted traditional business models and have become prominent examples of the changing landscape of industries. The pace at which these companies have
risen to prominence is unprecedented. Disruptors like Uber, Facebook, Alibaba, and Airbnb are no longer considered unique occurrences but rather characteristic of the current business environment. This trend highlights the rapid evolution of technology and its transformative impact on various sectors. Reflecting on technological advancements, one can observe the significant changes in cell phones over the past decade. The rise of smartphones has revolutionized the way business transactions are conducted. A single smartphone now has the capability to perform a wide range of tasks that previously required visiting physical retail shops, supermarkets, banks, music/video stores, and more. This example illustrates the speed at which technology advances and its potential to reshape traditional business practices. It also highlights the convenience and efficiency the smartphone brings to consumers, further driving the adoption of digital solutions in various industries. The same developments have occurred in the workplace, as AI technology may now fulfil sections of jobs.

2.1 AI technology disruption in digital marketing

According to Makridakis [40-42], the Artificial Intelligence revolution will be as significant as the industrial and digital revolutions, with a massive influence on organizations, employees, and daily life, and it is also a type of disruptive innovation [33]. For example, big data, which is projected to fuel more profound insights into marketing and sales, and AI and smart algorithms, which will leverage these insights to automate marketing and sales duties [44, 45]. It will have an influence on some digital marketing positions, like the content creation process, by increasing the limits of personalization [17]: email marketing was replaced by AI, enabling customized email marketing and ensuring that emails are delivered to people most likely interested in the content. It can also be used to personalize email content, target emails to specific audiences, and track the effectiveness of email campaigns [28]; Chabot’s can take over the work of social media management by creating an app that allows you to connect with your customers about specific topics [35]; Traditional media buyers' jobs will be cut off by programmatic media purchasing, which employs automated technology for media buying rather than more manual or traditional techniques [13]; Ad targeting will have an impact on media planners. Using past data, machine learning algorithms can detect which advertising performed best and at what stage of the buying process. Compared to traditional digital marketing strategies, machine learning provides them with adequate data to optimize content and enhance interaction [29, 30]. The above mentioned literature highlights that AI will affect the employee's job in digital marketing.

2.2 AI Technology Disruption and Turnover Intention

The Technology Threat Avoidance Theory refers to how individuals perceive information technology's potential harm or threat [20]. As AI technology continuously advances, employees may feel that their professional knowledge is eroding, leading to increased anxiety [47]. This theory suggests that if companies extensively implement AI technology in the workplace, it could result in higher staff turnover rates in various industries. Research has shown that heightened awareness of AI is positively correlated with turnover intention, cynicism, and depression [11]. Thus, the following hypothesis was proposed:

- H1: The level of awareness about AI technology disruption directly influences turnover intention.

2.3 AI Technology Disruption, Job Insecurity, and Turnover Intention

Job insecurity is defined as "Powerlessness to maintain the desired level of stability in a challenged job situation", which emerges when people sense a potential danger to their job security [14]. It is a vital fear for both individuals and employers. It was considered as an incentive during the 1960s and 1970s. However, Greenhalgh and Rosenblatt [19] defined job insecurity as "the perceived inability to maintain desired continuity in a threatened job situation." They also claimed that job uncertainty is caused by the individual's views and interpretations of the current job environment. Sverk, Hellgren,
Naswall and Isaksson [55, 25] define job insecurity as possessing the following consequences

- **Frustration and Stress:** Work gives people money, social contacts, possibilities for personal development, and a more regulated life. If someone believes his needs are challenged by a perceived unstable employment position, such as losing his job, he would be frustrated and stressed since people have a strong desire for stability in their ordered lives.

- **Stress Reactions:** Job ambiguity, as well as uncertainty, will result in stressful experiences. Stress triggers emotions, which can be classified as physical, psychological, or behavioural.

- **Attitudinal Consequences:** Job instability has been linked to various attitudinal reactions. The most widely studied context is work satisfaction, and it demonstrates that employees who felt uneasy about their job's future were more unsatisfied than employees who perceived their employment's future as more secure.

- **Behavioural Consequences:** An employee who is insecure about his job condition exhibits a range of behavioural reactions in the workplace. One of them is that employees are less likely to stay with the organization, which indicates that job insecurity may lead to higher levels of turnover intention. It is critical for managers to retain talented employees since they can more readily locate new jobs and are more likely to depart if they perceive job instability. Their sense of job security may also influence employee performance.

In the 1980s, concerns about job security arose due to the adverse perception of AI's application [9], as it was perceived to automate routine operations, allowing specialists to focus on consumer demands and design unique, creative solutions [50]. With the advancement of technology and increasing knowledge of its applicability, psychologically excellent professionals recognize the developing threat of technology to their job security, driven by the rising threat of "technology taking jobs" [43]. Employees' perceptions of environmental hazards (e.g., new technologies displacing human workers) and inadequate AI awareness [4] may lead to beliefs or experiences of job insecurity [27]. Instead of competition for promotions and bonuses among employees, job insecurity develops from the struggle for job opportunities between employees and AI [56]. This influence of AI technological innovation acts as a structural requirement, increasing the uncertainty and unpredictability of the workforce in organizations, ultimately leading to workers' feelings of job insecurity [31]. Employees become less engaged with their jobs when job insecurity increases [34], and employee loyalty and willingness to stay with the organization decrease [8]. These employees will also experience withdrawal symptoms from their jobs [1]. As a result, this insecurity has a detrimental influence on various factors, including employee well-being, stress levels, job satisfaction, and organizational efficiency [38], which can lead to job attrition. It also influences employees' physiological instability, which is linked to indicators of well-being such as cynicism, despair, and emotional tiredness [4, 44, 50]. This has raised concerns about AI's influence on their jobs, spreading to leaders in various industries, including retail, insurance, and equipment [12]. As a result, managers must evaluate the implications of artificial intelligence and its potential impact on their employees [48]. This has led to the formulation of the following hypothesis:

- **H2:** The impact of AI technology disruption on employee well-being, stress levels, job satisfaction, and organizational efficiency is positively related to job insecurity

- **H3:** Job insecurity has a positive relationship with employees’ attitudes, behaviour, and stress, leading to turnover intentions.

- **H4:** Job insecurity mediates the relationship between AI technology disruption and turnover intention.

### 2.4 AI Technology Disruption, Turnover Intention, and Job Mobility

Job mobility is defined as "the extent to which employees feel they have attractive employment alternatives" [56]. Employees who believe they have more control over their future are more likely
to "generally see environmental events as having less impact and believe they have the power to counteract whatever threats their environment may pose" [1]. Employees with higher perceived job mobility have a direct and positive relationship with turnover intentions [23]. Employees who are mistreated by their superiors are more likely to have turnover intentions. This is because they are more likely to feel that they are not being treated with respect or fairness, which can lead to them wanting to leave their job [49]. It can lead to feelings of instability and insecurity and make it difficult to build long-term relationships with colleagues and clients [52]; these employees may lead to turnover intention. Employees do not just leave their jobs because of AI technology disruption; sometimes, they leave their jobs because of job mobility. Based on these arguments, we propose the following hypothesis, as shown in Figure 1.

- **H5:** Job mobility moderates the relationship between AI technology disruption and turnover intention

### 3. Method

Primary data for this research was acquired using survey questionnaire. The questionnaire was designed using Google Forms as an instrument for the survey. The questionnaire was based on a points Likert scale where one means strongly disagrees and five means strongly agree [10]. To design the questionnaire, variables were obtained from previous studies that have studied similar variables. The target population involves digital marketing professionals working in India. The chosen population is appropriate to answer the research question as they are currently working in the digital marketing industry and, thus, can better respond to the survey based on their level of understanding and experience.

### 4. Measures

The study investigated the relationship between AI Technology Disruption, Turnover Intention, Job Insecurity, and Job Mobility. The scale was designed based on previous research but adjusted to suit the specific context of the current study. AI Technology Disruption was measured using a 4-item measure by David Brougham and Jarrod Haar [5]. The items began by explaining the technological advancements that could occur due to Smart Technology, Artificial Intelligence, Automation, Robotics, and Algorithms (STAARA). This measure of awareness includes how employees believe technology, such as artificial intelligence, will affect their job security, career, or sector. Job insecurity was measured using a 4-item measure by Todd D Jick [32]. The items begin with employees who experience high levels of job insecurity and have negative consequences, such as stress, anxiety, and decreased morale. Employees who can adapt to change and who are seen as valuable contributors to the new organization are more likely to retain their jobs. Turnover Intention was measured using a 4-item measure [57, 58]. This item measures employees’ attitudes and behavior toward their current job because of the low organizational commitment. Job mobility was measured using a 4-item measure by Bennett J. Tepper [53]. The item
begins with the employees who were subjected to abusive supervision were more likely to leave their jobs than employees who were not subjected to abusive supervision.

4.1 Analysis
The research hypotheses underwent testing through Structural Equation Modelling (SEM) using AMOS version 25. Two models were initially run to determine the best fit, and the second model was selected based on its optimal fit with interaction effects, as per the methodology outlined by Haar [22]. To ascertain the index of moderated mediation, we employed PROCESS 3.4 [24] within SPSS version 25, utilizing 5000 bootstrapped samples. Consistent with the approach outlined by Haar [21], we conducted probing of the conditional indirect effect to enhance the robustness of our analysis.

5. Results
5.1 Correlation
From Table 1, the correlation reveals various significant associations among demographic factors and key constructs. Age demonstrates positive correlations with marital status (r = 0.603, p < 0.01), education qualification (r = 0.354, p < 0.01), and the duration of employment in the current company (r = 0.761, p < 0.01), suggesting that older individuals are more likely to be married, have higher education levels, and possess longer tenures. Gender, on the other hand, exhibits negligible correlations with other variables. Marital status is positively correlated with age (r = 0.603, p < 0.01) and education qualification (r = 0.233, p < 0.01), indicating that older and more educated individuals are more likely to be married.

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Education qualification also positively correlates with age (r = 0.354, p < 0.01) and the duration of employment (r = 0.629, p < 0.01), reinforcing the connection between education, age, and longer tenures. Turning to the main constructs, the negative correlation between awareness of AI technology disruption (TT) and turnover intention (TI) (r = 0.568, p < 0.01) suggests that increased awareness is associated with increased turnover intention. Additionally, TT is positively correlated with job insecurity (JI) (r = 0.309, p < 0.01), indicating that higher awareness of technological disruption is linked to elevated job insecurity. Job insecurity (JI) positively correlates with turnover intention (TI) (r = 0.113, p < 0.01), underlining the connection between perceived job insecurity and intentions to leave. Job mobility (JM) is negatively correlated with turnover intention (TI) (r = -0.201, p < 0.01), suggesting that individuals with higher perceived job mobility are more likely to express turnover intentions. Study Result shown in Figure 2.
5.2 SEM Analysis

From Table 2 of the structural equation model (SEM) output provides estimates, standard errors (S.E.), critical ratios (C.R.), and p-values for the specified relationships. Firstly, the positive estimate of 0.223 (S.E. = 0.055, C.R. = 4.024, p < 0.001) for the association between Job Insecurity (JI) and AI Technology Disruption (TT) suggests a significant positive relationship. Secondly, the negative estimate of -1.169 (S.E. = 0.026, C.R. = -44.454, p < 0.001) indicates a substantial and highly significant negative relationship between Turnover Intention (TI) and Job Insecurity (JI). The positive estimate of 0.106 (S.E. = 0.026, C.R. = 4.097, p < 0.001) for the link between Turnover Intention (TI) and AI Technology Disruption (TT) signifies a significant positive relationship. Moreover, the positive estimate of 0.408 (S.E. = 0.006, C.R. = 70.810, p < 0.001) for Turnover Intention (TI) and a moderator variable (MOD) highlights an exceptionally strong and highly significant positive association. Lastly, the negative estimate of -0.076 (S.E. = 0.018, C.R. = -4.299, p < 0.001) for Turnover Intention (TI) and Age in years suggests a robust and statistically significant negative relationship.

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5.3 Discussion

The current study contributes to the existing body of knowledge by exploring the intricate dynamics among employee technology awareness, job insecurity, and turnover intentions. Notably, our findings indicate a direct and positive impact of AI technological disruptions on job insecurity, subsequently influencing turnover intentions as anticipated. This approach enhances our understanding of the development of
comprehensive job insecurity perceptions, particularly concerning technology. It is evident that the perceived threat of technological disruption plays a crucial role in shaping job insecurity perceptions, aligning with previous research [36]. The study, conducted within the digital marketing industry in India, suggests that perceptions related to technological disruptions should be considered as additional antecedents of job insecurity. Moreover, our examination of moderating effects on job mobility reveals that employees with greater job options or employees who are dissatisfied have higher perceived job mobility and are more inclined to contemplate leaving their current job and employer during technological disruptions. This observation aligns with literature emphasizing that employees who perceive disruptions as beyond their control may consider alternative career paths. Building on this, involving employees in decision-making processes during change, as suggested by Huang [26], can provide a sense of control, potentially mitigating feelings of insecurity. Our findings underscore the importance of contextual factors, such as job mobility, in shaping employee behaviour, especially considering that this specific factor is not under the direct control of employers. Furthermore, as organizations and employees alike need to adapt to disruptions, our study offers valuable insights into how employees respond to change. It suggests that future research should explore diverse perspectives beyond organizational boundaries, including the responses of government entities, policymakers, and managers. Understanding these broader insights and response strategies in the face of potential disruption is crucial. Training emerges as a potential effective strategy to address automation-related job threats. The paper emphasizes the need for affordable, rapid, and meaningful training initiatives to facilitate smooth transitions for employees entering new lines of work. In conclusion, our research sheds light on employee responses amid change, urging future studies to delve into varied stakeholder perspectives and proactive response strategies to navigate potential disruptions.

6. Limitations
There are a few limitations to our study that need to be considered. The amount of data we used is limited, and it's important to note that having more data could potentially lead to different results in how employees perceive the digital marketing industry. Additionally, when we talk about measures like turnover, where someone expresses a desire to leave their job, it doesn't necessarily mean they will actually leave. People might express these feelings, but it doesn't always translate into taking action.

Conclusion
The exploration of job insecurity stemming from AI technological disruption and recent phenomena is an area that has received limited attention in research. However, it is crucial to recognize that technological advancements will persist in reshaping work environments. AI technology, in particular, has the potential to impact employees' conditions, automate various processes, and alter job dynamics. Our current study demonstrates that being aware of these effects can influence individuals' intentions to leave their current positions. Our research contributes valuable insights into how people perceive AI technology concerning their job security and their inclination to seek alternative employment. It is important to exercise caution, though, as the potential impact of this new 'industrial revolution' might be overstated. In line with the perspective of Frey and Osborne [15], we suggest that the acceptance of new work methodologies could significantly shape the future landscape. Further extensive research is warranted in this domain to comprehend how employees navigate their views on technology and formulate plans to adapt or resist change in the evolving work landscape.

References


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