



(REVIEW ARTICLE)



WHEN THE MACHINE ARRIVES: WORKPLACE AI, TRUST, AND INNOVATIVE WORK BEHAVIOUR IN GHANAIAN ORGANIZATIONS

Alpha Addai *

F. O. D. Microcredit Ltd, Tema, Greater Accra Region, Ghana.

* Corresponding Author

International Journal of Science and Research Archive, 2026, 20(03), 504–508

Publication history: Received on 29 July 2026; revised on 09 September 2026; accepted on 11 September 2026

Article DOI: <https://doi.org/10.30574/ijrsra.2026.20.3.1722>

Copyright © 2026 Author(s) retain the copyright of this article. This article is published under the terms of the Creative Commons Attribution License 4.0

ABSTRACT

Organizations in Ghana and across Africa are adopting artificial intelligence in human resource and work processes, yet employee responses remain uncertain, with trust repeatedly identified as a central determinant of acceptance and job-security fears a recurring concern. Drawing on literature on workplace AI, affective commitment, psychological contracts, psychological safety, trust, and innovative work behaviour, this conceptual review develops a dual-route model of employee responses to workplace AI. Through affective commitment, AI experienced as useful and supportive operates as a positive resource and may strengthen innovative work behaviour. Through psychological contract breach, AI experienced as a threat to job security and professional agency may be interpreted as a withdrawn promise and may reduce innovation by eroding psychological safety, a mechanism distinct from commitment. The model proposes trust in AI as the condition that shapes which route is more likely to dominate and positions Ghana's cultural and institutional context, including high power distance, collectivism, uneven AI readiness, and heightened job-security sensitivity, as a boundary that may sharpen the breach route. The paper contributes a trust-conditioned, dual-route account of workplace AI suited to African organizational realities and identifies practical implications for introducing AI in ways that support innovation while reducing perceived threat.

Keywords: Artificial Intelligence; Innovative Work Behaviour; Affective Commitment; Psychological Contract Breach; Trust In AI; Ghana

1 INTRODUCTION

Artificial intelligence is moving into the everyday operation of organizations in Ghana and across Africa, from recruitment and payroll systems to decision support and customer-facing tools [1]. The promise is efficiency and capability, but the employee response is not guaranteed. A consistent finding across emerging research is that trust is the central determinant of whether employees accept AI, and that this trust is shaped by transparency, perceived fairness, and managerial communication [2]. A second and equally consistent finding is that AI commonly raises fears about job security, which can sour the employment relationship even where the technology performs well [3].

This dual reality creates a puzzle for human resource management. The same AI deployment can strengthen or weaken the very innovation it is meant to support, depending on how employees read it. Where AI is experienced as a useful resource introduced in good faith, it can build commitment and free attention for creative work. Where AI is experienced as a threat to one's job or professional standing, it can read as a broken promise and suppress the willingness to take

the risks that innovation requires. Prior work has documented AI's effects on commitment, engagement, and job insecurity in various settings, but it has rarely modelled these opposing routes together, and rarely in a Ghanaian context.

This paper develops a conceptual model to capture that dual possibility. The central claim is that workplace AI adoption travels two competing routes to innovation. A useful, supportively introduced AI travels a positive route through affective commitment. A threatening AI travels a negative route through psychological contract breach, where breach lowers innovation by eroding psychological safety. The model proposes trust in AI as the deciding condition that determines which route dominates, and positions Ghana's cultural and institutional context as a boundary that sharpens the breach route.

The paper is the second in a programme. A companion model examines flexible work arrangements through the same engine of affective commitment, psychological contract breach, and organizational trust. The present paper extends that engine to a stimulus that is distinct in an important way: where flexible work sends a signal about autonomy, AI sends a signal about job security and professional identity. The contribution is to show that this existential quality makes the breach route more powerful and the trust condition more decisive for AI than for flexibility.

2 WORKPLACE AI AND INNOVATIVE WORK BEHAVIOUR

Innovative work behaviour refers to the generation, promotion, and implementation of new ideas within a work role [4–6]. It is discretionary, given freely rather than mandated, and it depends on employees feeling both motivated to contribute and safe enough to take interpersonal risks [7]. This makes innovative work behaviour sensitive to how employees interpret a major change such as the arrival of AI.

On the positive side, AI can act as a resource. When employees find AI useful and easy to use, and when its introduction is accompanied by support and clear communication, AI can enhance organizational commitment and engagement, and trust carries much of this effect [1]. Affective commitment, the emotional attachment an employee feels toward the organization [8,9], is the attitude through which a positively received AI can motivate the extra-role effort that innovation requires. This underpins the first route: a trusted, useful AI signals organizational investment, builds commitment, and supports innovative work behaviour.

3 WHEN AI SIGNALS THREAT: THE BREACH ROUTE

AI differs from many workplace changes in the kind of threat it can pose. Beyond altering tasks, it can call into question whether a role will continue to exist and whether an employee's expertise still matters. Research consistently links AI adoption to job insecurity and to its downstream costs for commitment and well-being [3]. When employees perceive that AI has been introduced in ways that devalue their contribution, sideline their judgement, or threaten their position, an implied promise about the employment relationship appears to have been broken.

The psychological contract is an employee's set of beliefs about reciprocal obligations between themselves and their employer [10], and breach is the perception that the organization has failed to meet those obligations [11]. Breach carries well-documented costs, including reduced commitment, lower satisfaction, and weaker citizenship and performance [12], and it specifically suppresses innovative work behaviour [13]. Evidence from Ghana confirms that breach is a live and damaging phenomenon, with effects on citizenship behaviour and on employee mental health [14,15]. AI-induced job insecurity is a plausible and potent trigger of such breach in Ghanaian organizations.

As in the companion model, the mechanism through which breach reaches innovation must be distinct from commitment, or the two routes would collapse into one. The model specifies that breach lowers innovation by eroding psychological safety, the belief that one can take interpersonal risks and voice unfinished ideas without penalty [7,16]. An employee who fears that AI has made their position precarious may remain willing to do the job yet become unwilling to take the visible risks that innovation demands. Affective commitment concerns whether an employee wants to contribute. Psychological safety concerns whether an employee dares to. The empirical separability of the two is an open question for future measurement work.

4 TRUST IN AI AS THE DECIDING CONDITION

What determines which route dominates is trust, and in the AI context the relevant trust has a specific object: trust in the AI system and in the organization's handling of it. Trust is the willingness to be vulnerable to another party based on positive expectations of that party's conduct [17], and it is a robust predictor of cooperative workplace behaviour [18]. In AI settings, trust is shaped by system transparency, perceived fairness, and managerial communication [2]. Under high trust in AI, the technology is read as a useful and fairly governed resource, the commitment route is

strengthened, and the breach route is weakened. Under low trust, the same technology is read as an opaque threat, the breach route is strengthened, and the commitment route is weakened.

This positions trust in AI as the switch that decides the net effect of AI adoption on innovation. The practical implication is that the value of an AI deployment depends less on the technology itself than on the trust climate and the communication and fairness with which it is introduced.

5 THE GHANAIAN CULTURAL AND INSTITUTIONAL CONTEXT

The model is bounded by, and gains specificity from, the Ghanaian context. Ghanaian organizations tend toward high power distance and collectivism [19], and they operate in an environment of uneven AI readiness and heightened sensitivity to job security. High power distance means that decisions to adopt AI are typically made at senior levels and communicated downward, so employees have limited voice and rely heavily on whether leadership is trusted, which raises the stakes of the trust condition. Collectivism means that the effects of AI on colleagues and the group are salient, so perceived threats to jobs are felt collectively and can spread quickly. Uneven AI readiness, including gaps in infrastructure and AI literacy, can amplify both unfamiliarity and fear. Heightened job-security sensitivity, in a labour market where stable employment is precious, makes the threat route especially potent. These features do not change the structure of the model, but they sharpen the breach route and make trust in AI especially decisive in Ghanaian organizations.

6 THE CONCEPTUAL MODEL

Figure 1 presents the model. Workplace AI adoption relates to innovative work behaviour through two competing routes. The positive route runs through affective commitment. The negative route runs through psychological contract breach, triggered by job insecurity and operating by reducing psychological safety. Trust in AI conditions which route dominates, and the Ghanaian cultural and institutional context forms the boundary within which the model operates.

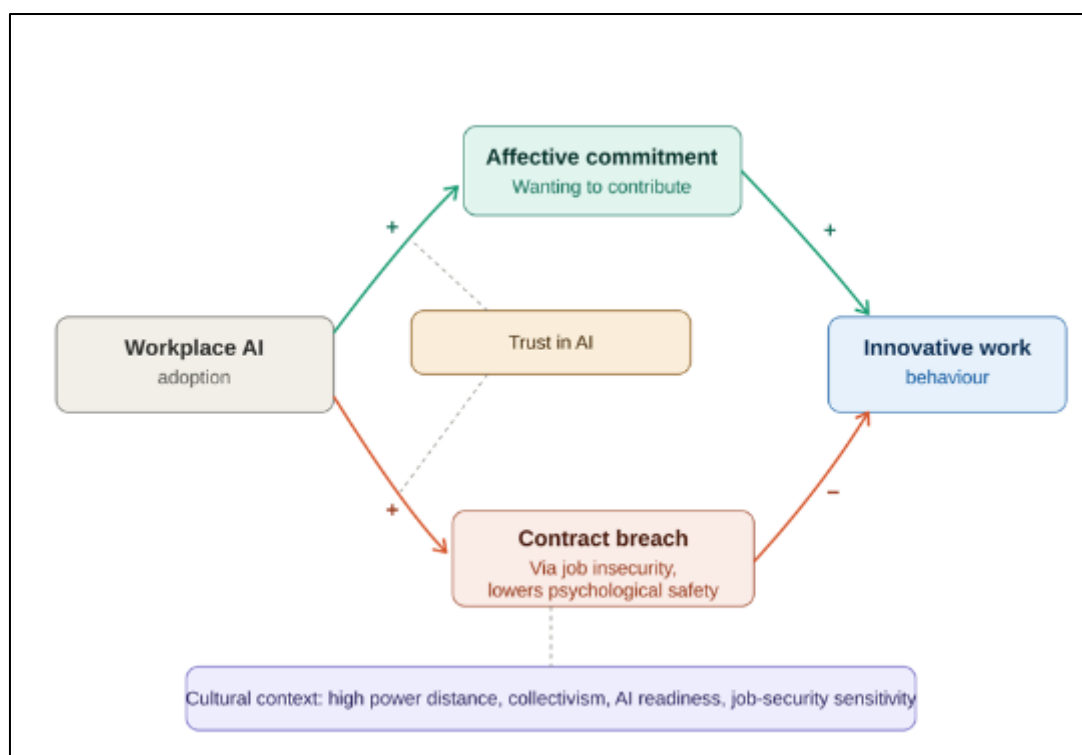


Figure 1: Trust-conditioned dual-route model of workplace AI and innovative work behaviour in Ghanaian organizations.

The propositions below state the model's claims in a form that future empirical work in Ghana can test.

- **Proposition 1:** Workplace AI adoption relates positively to innovative work behaviour through affective commitment, where AI is experienced as useful and supportively introduced.
- **Proposition 2:** Workplace AI adoption relates positively to psychological contract breach through perceived job insecurity, and breach in turn relates negatively to innovative work behaviour, with the breach-to-

innovation effect operating through reduced psychological safety rather than through lowered affective commitment.

- **Proposition 3:** Trust in AI conditions the two routes, so that high trust strengthens the commitment route and weakens the breach route, while low trust strengthens the breach route and weakens the commitment route.
- **Proposition 4:** The net effect of workplace AI adoption on innovative work behaviour depends on trust in AI, so that AI produces a positive total effect under high trust and an attenuated or negative total effect under low trust.
- **Proposition 5:** Ghana's cultural and institutional context of high power distance, collectivism, uneven AI readiness, and heightened job-security sensitivity sharpens the breach route and strengthens the moderating role specified in Propositions 3 and 4.

Proposition 4 is the model's signature claim. It predicts that the total effect of AI adoption on innovation can change sign depending on trust in AI, which is disconfirmable and distinguishes the model from accounts that treat AI as uniformly beneficial or uniformly threatening.

7 DISCUSSION AND IMPLICATIONS

7.1 Theoretical implications

The model makes three contributions. It extends a trust-conditioned, dual-route account from flexible work to workplace AI, building a coherent research programme on employee responses to organizational change in Ghana. It identifies what is distinctive about AI, namely its existential character, which makes the breach route operate through job insecurity and gives trust in AI a more decisive role than organizational trust plays for flexibility. And it assigns the negative route a mechanism, reduced psychological safety, that is distinct from commitment and specific to innovation.

7.2 Practical implications

For human resource managers in Ghana, the model reframes AI adoption as a trust-building exercise rather than a purely technical one. Introducing AI without transparency, fairness, and communication risks triggering job insecurity, breach, and the suppression of innovation. Communicating the purpose of AI clearly, involving employees, framing AI as augmenting rather than replacing human work, and investing in AI literacy shift the balance toward the commitment route. The model implies that AI can become a catalyst for innovation when organizations build trust in the technology and in their handling of it.

7.3 Boundary conditions and future research

The model is positioned at the level of individual perception, so AI adoption refers to employees' perceptions and experience of AI rather than the objective system. Three avenues for future work follow. First, the model invites empirical testing in Ghanaian organizations across sectors that differ in AI maturity, such as banking, telecommunications, and the public sector. Second, the discriminant validity of affective commitment and psychological safety should be established empirically. Third, comparative work with the companion flexible-work model would test whether trust operates similarly across different organizational changes, and comparative work across African economies would test the role of the institutional context.

8 CONCLUSION

Artificial intelligence is arriving in Ghanaian organizations, and its effect on innovation is not predetermined. This paper has argued that workplace AI travels two competing routes to innovative work behaviour, that the negative route operates through job insecurity, psychological contract breach, and reduced psychological safety, and that the balance between the routes is decided by trust in AI and sharpened by the Ghanaian context. The message for human resource managers is constructive. Whether AI builds or breaks innovation depends substantially on the trust organizations cultivate around it, which is within their power to shape.

STATEMENTS ON COMPLIANCE WITH ETHICAL STANDARDS

Disclosure of conflict of interest

The authors declare that there is no conflict of interest.

REFERENCES

- [1] Ekuma K. Artificial intelligence and automation in human resource development: a systematic review. *Human Resource Development Review*. 2024;23(2):199–229.
- [2] Afroogh S, Akbari A, Malone E, Kargar M, Alambeigi H. Trust in AI: progress, challenges, and future directions. *Humanities and Social Sciences Communications*. 2024;11(1):1–30.
- [3] Anand A, Dalmaso A, Rezaee Vessal S, Parameswar N, Rajasekar J, Dhal M. The effect of job security, insecurity, and burnout on employee organizational commitment. *Journal of Business Research*. 2023;162:113843.
- [4] Scott SG, Bruce RA. Determinants of innovative behavior: a path model of individual innovation in the workplace. *Academy of Management Journal*. 1994;37(3):580–607.
- [5] Janssen O. Job demands, perceptions of effort-reward fairness and innovative work behaviour. *Journal of Occupational and Organizational Psychology*. 2000;73(3):287–302.
- [6] De Jong J, Den Hartog D. Measuring innovative work behaviour. *Creativity and Innovation Management*. 2010;19(1):23–36.
- [7] Edmondson AC. Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*. 1999;44(2):350–383.
- [8] Meyer JP, Allen NJ. A three-component conceptualization of organizational commitment. *Human Resource Management Review*. 1991;1(1):61–89.
- [9] Meyer JP, Stanley DJ, Herscovitch L, Topolnytsky L. Affective, continuance, and normative commitment to the organization: a meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior*. 2002;61(1):20–52.
- [10] Rousseau DM. Psychological and implied contracts in organizations. *Employee Responsibilities and Rights Journal*. 1989;2(2):121–139.
- [11] Robinson SL, Morrison EW. The development of psychological contract breach and violation: a longitudinal study. *Journal of Organizational Behavior*. 2000;21(5):525–546.
- [12] Zhao H, Wayne SJ, Glibkowski BC, Bravo J. The impact of psychological contract breach on work-related outcomes: a meta-analysis. *Personnel Psychology*. 2007;60(3):647–680.
- [13] Niesen W, Van Hoetegem A, Vander Elst T, Battistelli A, De Witte H. Job insecurity and innovative work behaviour: a psychological contract perspective. *Psychologica Belgica*. 2018;58(1):174–196.
- [14] Koomson S. Psychological contract breach moderates job satisfaction–citizenship behaviour relationship. *PSU Research Review*. 2024;8(1):179–194.
- [15] Mensah J, Amponsah-Tawiah K, Baafi NKA. Psychological contract breach and mental health: the role of equity sensitivity and self-control. *Organization Management Journal*. 2024;21(2):63–74.
- [16] Newman A, Donohue R, Eva N. Psychological safety: a systematic review of the literature. *Human Resource Management Review*. 2017;27(3):521–535.
- [17] Mayer RC, Davis JH, Schoorman FD. An integrative model of organizational trust. *Academy of Management Review*. 1995;20(3):709–734.
- [18] Dirks KT, Ferrin DL. Trust in leadership: meta-analytic findings and implications for research and practice. *Journal of Applied Psychology*. 2002;87(4):611–628.
- [19] Hofstede G. *Culture's consequences: comparing values, behaviors, institutions, and organizations across nations*. 2nd ed. Thousand Oaks (CA): Sage; 2001.