Adaptation-oriented HRM for Companies' Future Orientation and the Role of AI: Conceptual Framework and Survey-results

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Abstract: Currently companies are confronted with a multitude of challenges. They must achieve economic consolidation in economically challenging times and need to safeguard their long-term viability through appropriate strategic choices. In this dilemma-situation, human resource management (HRM) plays a pivotal role by using adaptation-oriented HR practices to foster organizational agility and future orientation. Artificial intelligence (AI) is a means of creating and sustaining organizational adaptability: the results of the survey study indicate that AI orientation can partially compensate for limited adaptation-oriented HR and amplifies the relationship between adaptive HR strategies and future orientation.

Keywords: Generative AI, Adaptive HR-management, Future orientation, Organizational agility

1. Introduction

1.1 Economic Pressures and Future Orientation

Geopolitical crises, economic downturns, shortages of skilled labor, multigenerational workforces, and the disruptive potential of artificial intelligence currently confront firms with a host of intertwined challenges that mutually reinforce one another and massively increase environmental complexity and dynamism (Zukunftsinstitut 2026). In this economically difficult situation, companies are simultaneously required, on the one hand, to secure economic consolidation and, on the other hand, to safeguard their long-term viability through appropriate strategic positioning in 'dynaxity' shaped business environments (Rieckmann 1992). This dilemma compels firms worldwide to build adaptive capacity and to undergo continuous transformation in order to remain fit for the future. As a result, adaptability becomes a central core competence of organizations (cf. Do et al. 2016).

1.2 State of Research and Research Questions

Prior research shows that organizational adaptability is largely determined by firms' agility and resilience (Wamba, 2022; Georgescu et al., 2024). Human resource management (HRM) plays a critical role in this regard, as it directly shapes the conditions for organizational adaptability through workforce flexibility, the fostering of learning organizations, and the implementation of agile forms of collaboration (Saha et al., 2017). According to Do et al. (2016), HR flexibility—defined as employees' skill flexibility, behavioral flexibility, and the flexibility of HR practices—enhances an organization's innovative capacity and adaptive culture (Do et al., 2016).

However, these studies do not specify which HR practices are concretely associated with firms' economic adaptability, their perceived readiness for the future, and their future orientation, nor do they clarify how HRM must be configured in order to exert a sustainable influence within the tension field between economic constraints and required future orientation. This leads to the first research question and hypothesis:

RQ 1: What roles does an adaptation-oriented HRM with its specific strategic orientation, adaptation-oriented HR practices, and structural and instrumental conditions play with respect to the economic adaptability, future readiness, and future orientation of an organization?

> *Hypothesis 1: The use of specific adaptive HR practices affects the perceived adaptability of organizations across the dimensions of economic adaptability, perceived readiness for the future, and future orientation.*

In the existing literature, the role of generative AI technologies for the effectiveness of this HR-driven adaptability has so far been insufficiently examined. Initial studies examine the value of AI in selected HR processes (Madanchian et al., 2025), while others focus on the influence of AI applications in HRM on HR digitization, organizational network analysis, and organizational design (Murugesan et al., 2023). Existing research suggests that AI capabilities can enhance creativity and firm performance (Mikalef et al., 2021). Further work indicates that the introduction of AI systems can increase organizational agility and that the integration of AI can have mediated effects on improved performance indicators (Wamba, 2022). Meta-analytic evidence identifies AI as an internal driver of organizational agility through automation, data-driven decision-making, and rapid responsiveness (Jaafar, Khan, & Salman, 2026). In addition, the central role of HRM

for organizational resilience is emphasized (Lengnick-Hall et al., 2011; Georgescu et al., 2024), as is the influence of AI on resilience through AI-enabled capabilities (Ma et al., 2026). To the best of our knowledge, no studies have yet examined the influence of AI on an organizations' future orientation via adaptation-oriented HRM. This leads to the second research question and associated hypothesis:

RQ 2: How does the use of AI technologies in HRM influence the relationship between adaptation-oriented HR practices and an organization's future orientation?

> *Hypothesis 2: The use of AI technologies amplifies the influence of adaptation-oriented HR practices on organizational adaptability.*

2. Theoretical Foundation

2.1 Economic Adaptability, Future Readiness, and Organizational Future Orientation

When organizational adaptability is referred to in the following, it denotes an organization's ability to flexibly adjust its structures, processes, resources, and competencies in order to respond to changing external and internal conditions, seize opportunities, and cope with threats (Volberda, 1996). Adaptability is conceptualized as part of the dynamic capabilities (Eisenhardt et al., 2000; Teece et al., 1997) that firms require to continuously adjust to new circumstances, a notion that Gergs (2017) describes as "continuous self-renewal."

Organizational adaptability can be operationalized first, through economic adaptability, understood as an organization's ability to outperform its industry peers in identifying ways to cope with economic downturns, operate more efficiently, and exploit revenue potential more decisively. Second, it involves perceived future readiness, that is, a summarized assessment of whether an organization possesses the structural and cultural conditions necessary to meet the challenges of continuous self-renewal. Third, it is linked to organizational future orientation in a strategic sense, namely the alignment with and development of the capabilities required for future success, including goals, goal-oriented structural and skill-related foundations, as well as development-oriented cultural preconditions (cf. Armutat et al., 2025a).

2.2 Adaptation-oriented HRM

HRM can be defined as a corporate management function concerned with the "goals, strategies, structures, and measures by which human resources are integrated into organizations in a value-creating way and generating impact by shaping the behavior of all members of the organization" (cf. Armutat, 2018).

In this sense, adaptation-oriented HRM is defined as a strategy that designs and deploys HR instruments—tailored to the specific organizational context—in such a way that proactive flexibility in capacity, costs, and qualifications enhances the organization's adaptability (based on Armutat, 2025; DGFP, 2006). HRM supports adaptive responses through specific adaptation-oriented HR practices, which may be used repeatedly or as one-off measures and which relate to capacity flexibility, pay flexibility, and qualification flexibility (DGFP, 2006). These HR practices presuppose the existence of HR instruments across the domains of HRM, as well as organizational structures for their implementation. That includes a codified HR strategy, established processes e.g. for workforce planning, employer branding, performance management, and learning and development, as well as flat hierarchies, process orientation, and project-based work.

Finally, adaptation-oriented HRM requires a substantive strategic framework with clear strategic priorities and a strategic workforce perspective (DGFP, 2006). The former implies positioning HRM within the tension field between headcount- and personnel cost reduction and strategic qualitative workforce transformation with the development of future skills among employees. The latter entails clarity regarding quantitative and qualitative workforce requirements in light of anticipated changes in workforce size and competency profiles.

2.3 Artificial Intelligence

AI is understood here as machine-supported systems that operate with varying degrees of autonomy, can adapt to their environment, and are thus capable of generating predictions, content, recommendations, or decisions and of influencing their organizational context (BITKOM, 2024). Effective use of AI, in the sense of the human–technology–organization–approach (Strohm & Ulich, 1997), requires, that AI technologies are purposefully integrated into business processes, that there is a clear structural and organizational anchoring of responsibility for AI technologies, and that employees recognize AI-related competencies as relevant and are willing to develop them. These AI-relevant competencies pertain not only to technical knowledge about the functioning and use of AI systems, but also to knowledge, skills and abilities required to fulfil the social, cognitive, and professional components of work tasks (Chiu, 2025; Armutat et al., 2025b). These requirements

apply to the deployment of AI in organizations in general, and in particular to the use of AI in HRM (Armutat et al., 2024).

2.4 Conceptual Framework

Building on these preliminary considerations, the following conceptual framework can be derived, which integrates the two hypotheses: adaptation-oriented HRM—with its strategic framework, adaptation-oriented HR practices, and structural requirements—shapes organizational adaptability, which is reflected in organizations' economic adaptability, their perceived future readiness, and their future orientation.

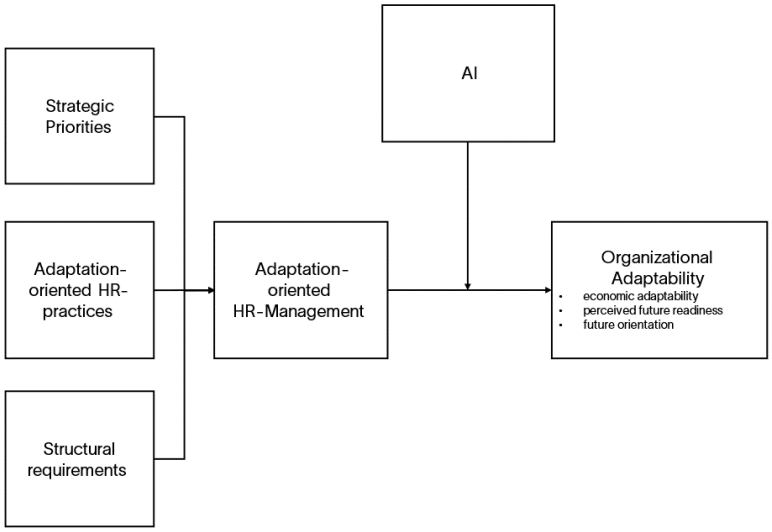

Figure 1: Conceptual framework (own illustration)

3. Methodology

3.1 Research Design

in the present study, a quantitative-empirical approach was chosen in order to use a survey design to draw statistically well-founded conclusions about the effectiveness of adaptation-oriented HR practices and to examine whether AI orientation conditions the relationship between HR adaptability and organizational future orientation (Helfrich, 2024).

3.2 Scale Development and Validation

To answer the research questions and test the hypotheses, a questionnaire was developed, assessing organizational adaptability across three dimensions: organizational future orientation, perceived economic adaptability, and perceived future readiness. The first construct was measured using a documented future orientation scale (Armutat et al., 2025a); the second using a comparative rating scale that asked respondents to evaluate their own organization's response to economic challenges relative to other firms in the industry; and the third using a summary rating scale capturing perceived future readiness.

Adaptation-oriented HRM was operationalized as follows: the strategic dimension of adaptation orientation refers to the underlying priorities guiding strategic HR decisions and was captured via a ranking item. Adaptation-oriented HR practices were compiled in line with DGFP (2006), and their degree of implementation was measured with a four-point scale. Finally, changes in the instrumental and structural conditions were translated into specific items, measured using four-point scales differentiating degrees of implementation.

Following the literature-based development, the questionnaire was validated and piloted in cooperation with representatives of the Chamber of Industry and Commerce of East Westphalia in Bielefeld (IHK EW) in online workshops.

3.3 Population, Sampling and Data Collection

The survey was conducted in cooperation with the IHK EW. Accordingly, the population of the study comprises the firms affiliated with East Westphalia economic region. This region is characterized by a strong,

internationally oriented Mittelstand, a diversified industry mix, and a high level of innovativeness. Dominated by owner-managed family businesses, the region is regarded as a leading technology location that combines rural rootedness with cutting-edge research excellence (Peschke, 2026).

For the survey study, an online questionnaire was programmed in the survey tool Unipark and distributed via link in an email sent through the IHK EW corporate network to one designated contact person in each member company. The collected data were analyzed using SPSS.

4. Results, Analysis and Interpretation

4.1 Analysis Sample

During the survey period from June to July 2025, a total of 180 firms participated in the study. Of these, 37.2% were micro and small enterprises with fewer than 50 employees, 37.2% were medium-sized enterprises with 51–250 employees, and 25.6% were larger firms with more than 251 employees (cf. Armutat, 2025). The final sample includes organizations from all major industries, with a concentration in manufacturing—particularly metal, chemical, and electrical industries (36%)—and a second major concentration in services (16%).

Overall, the final sample appears to reflect the population of IHK member firms reasonably well, as suggested by comparisons with other surveys (IHK, 2026).

4.2 HR Success Practices for Organizational Adaptability

Based on the collected data regression models were estimated to examine the extent to which selected adaptation-oriented HR practices explain organizational future orientation, economic adaptability, and perceived future readiness, in order to test Hypothesis 1.

Because the survey dimensions were measured at different scale levels, appropriate models were used in each case: binary logistic regression models were estimated for the dichotomized variables economic adaptability and future readiness, and a multiple linear regression model was estimated for the metric dimension organizational future orientation. Before estimating the models, the key statistical assumptions were examined. These included conditions ensured by the research design (e.g., independence of observations) as well as assumptions that require statistical testing. For the binary logistic regressions, the focus was on assessing potential multicollinearity; for the linear regression, additional checks were conducted for linearity, homoskedasticity, and normality of residuals. All models met these assumptions, so the results can be considered robust and reliable.

The binary logistic regression model predicting economic adaptability indicates a significant association between HR measures and the likelihood that firms are perceived as adaptable ($\chi^2(18) = 32.24$, $p = .021$). The model achieves an acceptable fit with a Nagelkerke R^2 of .273 and shows a substantial improvement over the null model without predictors—indicating that the HR measures under study contribute meaningfully to explaining firms' economic adaptability. Among the practices examined, short-time work arrangements emerged as the strongest positive predictor: firms that used this measure had approximately a 70% higher likelihood of being rated as economically adaptable ($B = 0.529$, $p = .038$, $OR = 1.697$). By contrast, the use of working time accounts ($B = –0.625$, $p = .010$, $OR = 0.535$) and the temporary reduction of discretionary employee benefits ($B = –0.686$, $p = .017$, $OR = 0.504$) showed the strongest negative effects. In both cases, the odds of being perceived as adaptable were nearly halved. None of the other HR practices included in the model exhibited significant effects.

The binary logistic regression model for perceived future readiness was also significant ($\chi^2(18) = 40.92$, $p = .002$) and achieved a comparatively high model fit with a Nagelkerke R^2 of .356. Redundancies due to operational reasons were identified as the strongest negative predictor: firms that relied on this measure had more than a 50% lower likelihood of being perceived as highly future-ready ($B = –0.756$, $p = .005$, $OR = 0.469$). By contrast, two practices showed significant positive effects: initiatives to promote employee employability doubled the odds of being rated as highly future-ready ($B = 0.752$, $p = .037$, $OR = 2.120$). An even stronger effect emerged for employee participation in the development of HR measures. Firms that fostered such participation had more than twice the odds of being classified as highly future-ready ($B = 0.848$, $p = .003$, $OR = 2.334$).

The multiple linear regression predicting organizational future orientation was overall significant ($F(18, 161) = 2.51$, $p = .001$) and explained a moderate proportion of variance ($R^2 = .219$). The standardized regression coefficients highlight the relative importance of individual HR practices. By far the strongest effect was found

for employee participation in the development of measures (β = .167, p < .001): organizations that actively involved their workforce reported substantially higher levels of future orientation. Employability promotion also had a significant, albeit weaker, positive effect on future orientation (β = .096, p = .028). None of the remaining HR measures displayed statistically significant coefficients, indicating that they did not contribute independently to explaining organizational future orientation.

Taken together, the three models reveal a consistent pattern: short-term cost-cutting measures—such as the use of working time accounts in a retrenchment mode, reductions in employee benefits, or redundancies—have negative effects on key dimensions of organizational adaptability. In contrast, HR practices aimed at flexibility (short-time work arrangements), capability development (employability promotion), and participation (employee involvement in measure development) significantly increase economic adaptability, perceived future readiness, and organizational future orientation.

The explanatory power of the HR practices varies across the three outcome variables. The logistic regression models for economic adaptability and future readiness yield substantial explained variances (Nagelkerke R^2 = .273 and .356, respectively) and show that especially short-time work arrangements, employability promotion, and employee participation considerably increase the likelihood of higher adaptability. The multiple linear regression model for organizational future orientation explains a moderate share of variance (R^2 = .219), but clearly indicates, based on the standardized coefficients, that employee participation is the primary driver of organizational future orientation.

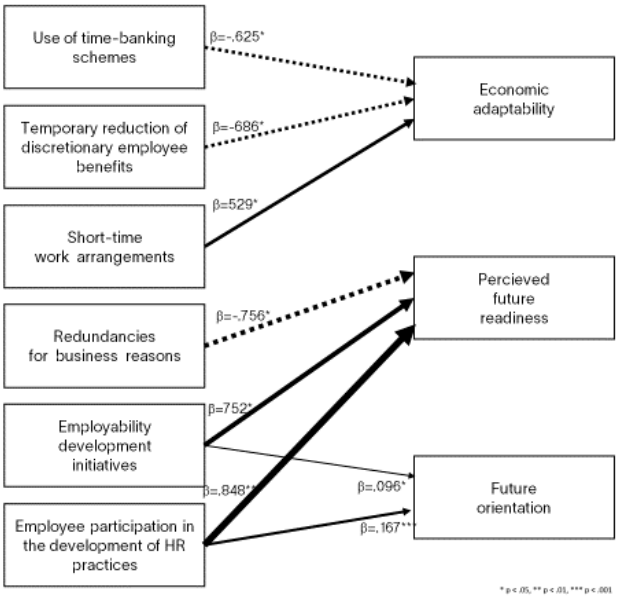

Figure 2: Adaption-oriented HR practices and organizational adaptability (own illustration)

These results support Hypothesis 1: The use of specific adaptation-oriented HR practices has a statistically significant effect on organizations' perceived adaptability across the dimensions of economic adaptability, perceived future readiness, and organizational future orientation.

4.3 AI Impact on HR's Influence on Organizations' Future Orientation

To examine whether organizations' AI orientation moderates the relationship between HR measures and perceived organizational future orientation, a moderation analysis was conducted using the SPSS PROCESS macro.

To validly capture the constructs, multiple items were aggregated into scales for each of the three variables by computing the mean of the corresponding Likert-type items and assessing internal consistency using Cronbach's α, with values of .60 or higher indicating acceptable reliability. The following overview summarizes the composition and reliability of the scales:

The adaptation-oriented HR scale (Cronbach's α = .806) comprises 29 items in total, including 18 short-term HR measures and 11 strategically oriented HR instruments. The organizational future orientation scale (Cronbach's α = .785) was measured with a five-item scale capturing firms' strategic orientation and change readiness. Th

AI orientation scale (Cronbach's α = .646) was measured using items that cover three domains: (1) the perceived importance of digitalization and AI as economic trends, (2) the use of AI in HR processes, and (3) the anticipated future relevance of AI-related skills.

Prior to conducting the moderation analysis, key statistical assumptions were assessed. We focused on testing for potential multicollinearity and verifying the linearity of relationships. As all assumptions were met (multicollinearity after mean centering), the analysis was performed with 5,000 bootstrap samples and heteroskedasticity-consistent standard errors to further enhance robustness. Moreover, all metric predictors were mean-centered to facilitate interpretation of the coefficients.

Overall, the moderation model was statistically significant and explained a moderate proportion of the variance in organizational future orientation ($F(3, 176) = 16.74$, $p < .001$, $R^2 = .237$). Both main effects and the interaction term were significant and, given the ordinal nature of the interaction, can be interpreted at a global level. Regarding the first main effect, there was a significant positive relationship between adaptation-oriented HR and organizational future orientation, $b = 1.49$, 95% CI [0.76, 2.23], $p < .001$, indicating that firms with higher HR adaptability tend to exhibit stronger future orientation (Do et al., 2016). A similar pattern emerged for the main effect of AI orientation on organizational future orientation, $b = 1.18$, 95% CI [0.64, 1.72], $p < .001$, suggesting that firms with higher AI orientation also tend to have stronger future orientation.

These two effects do not only exist independently; there is also a significant interaction between adaptation-oriented HR and AI orientation, $b = –0.43$, 95% CI [–0.68, –0.18], $p < .001$. Specifically, the relationship between adaptation-oriented HR and organizational future orientation is contingent on firms' AI orientation, with organizations benefiting from AI to varying degrees. In particular, firms with low HR adaptation-orientation can achieve a comparatively high level of future orientation when they have a strong AI orientation. Firms with already high HR adaptation-orientation also benefit from AI, but the additional gain in future orientation is smaller compared to organizations with low HR adaptation-orientation.

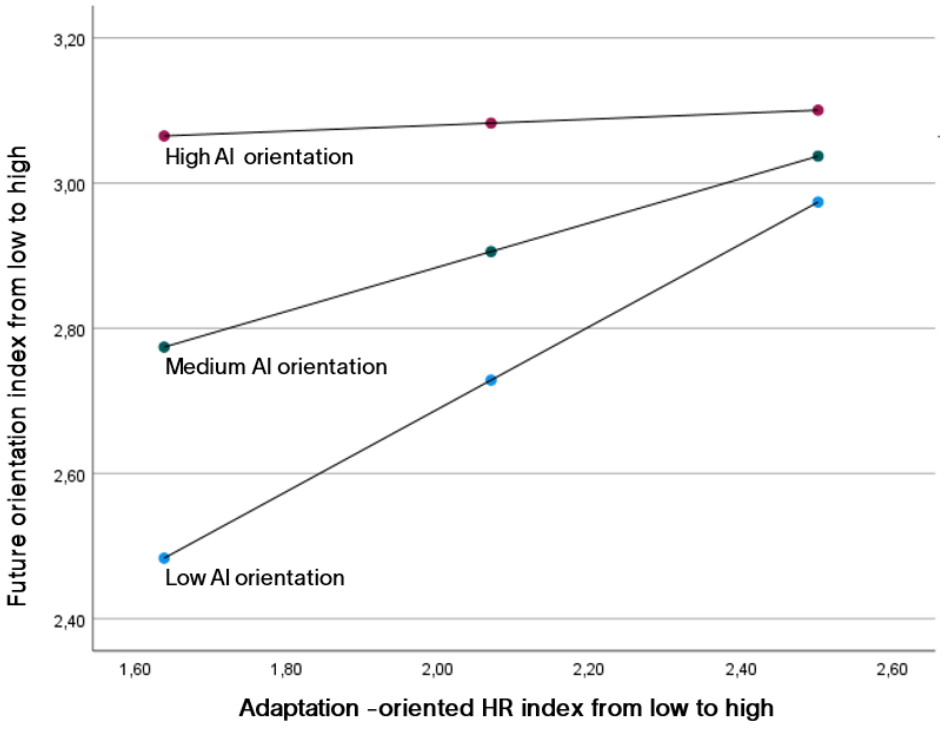

Figure 3: Interaction effect (own illustration)

In practical terms, the results of the moderation analysis can be interpreted as follows: a high level of AI orientation appears to partially compensate for the importance of adaptation-oriented HR measures for perceived organizational future orientation. While firms with low to medium AI orientation rely more heavily on flexible and strategic HR practices in order to be perceived as future-oriented, this relationship becomes

progressively weaker in firms with a stronger AI orientation. Accordingly, Hypothesis 2 can be confirmed in a nuanced way: the use of AI technologies amplifies the impact of adaptation-oriented HR practices on organizational adaptability, although the strength of this moderation effect varies depending on the extent to which adaptation-oriented HR practices are implemented.

5. Discussion, Practical Implication and Scope for Future Study

The findings of this study show that adaptation-oriented HRM makes an independent and statistically robust contribution to firms' adaptability. Across all three outcome dimensions—economic adaptability, perceived future readiness, and organizational future orientation—a consistent pattern emerges: short-term, primarily cost-focused measures (e.g., temporary reductions in discretionary employee benefits, redundancies due to operational reasons) reduce perceived adaptability, whereas practices oriented toward flexibility, capability development, and participation strengthen it.

These results are closely aligned with resilience approaches, which emphasize that organizations are particularly crisis-resilient when they can balance efficiency and adaptability logics, institutionalize learning processes, and provide psychological safety (e.g., Lengnick-Hall et al., 2005). While redundancies and short-term cost-cutting measures may contribute to immediate cost reductions, they simultaneously diminish medium- to long-term adaptation-oriented capacity by eroding critical skills, weakening the commitment of remaining employees, and undermining trust in the employer's reliability.

Conversely, the positive effects of short-time work arrangements, employability promotion, and employee participation are consistent with the literature on "adaptation-oriented HR systems," which foster long-term learning and change capabilities. Employability-oriented practices have frequently been identified in studies of individual and organizational adaptability as levers for proactive behavior, learning orientation, and change competence (Pulakos et al., 2000). The observed effects on perceived future readiness and organizational future orientation fit this pattern: firms that invest in their employees' employability strengthen their capacity to integrate new technologies, market shifts, and business models.

Particularly noteworthy is the consistently strong influence of employee participation in the development of measures—on both perceived future readiness and organizational future orientation. Research on organizational resilience likewise highlights the role of participative decision-making in fostering collective sensemaking, engagement, and the ability to develop robust solutions quickly in times of crisis (Mallak, 1998; Sutcliffe & Vogus, 2003). Participation, therefore, is not a "soft" factor but one of the central predictors of perceived future orientation.

The moderation analysis further nuances this picture: both higher adaptation-oriented HR and higher AI orientation are associated with stronger organizational future orientation, which is consistent with prior studies on the role of digital technologies for organizational resilience (e.g., Mikalef et al., 2021). At the same time, the interaction effect shows that strong AI orientation can partially compensate for the importance of adaptation-oriented HR practices—especially in firms with low HR adaptability. This suggests that technological and people-centered adaptation paths can act as partial substitutes, even though they are fundamentally complementary: firms can achieve a certain level of future orientation through consistent digitalization and AI deployment, even if their HR system is not yet fully adaptation-oriented. However, the findings also indicate that, at high levels of HR adaptation-orientation, the additional leverage of AI declines—implying that an overemphasis on technological solutions without parallel cultural and HR-driven change reaches limits in its effectiveness.

Taken together, the results reinforce the argument in the international literature that future orientation is less the product of isolated interventions than of an integrated, long-term system of adaptation-oriented HR practices. Flexibilization, capability building, and participation constitute the core elements of a resilient, future-ready HR system. From these findings, five tasks for HRM emerge to strengthen firms' adaptability:

- HRM should establish formats that systematically involve employees in the design of HR and transformation measures—for example, through participation forums, cross-functional project teams, or employee labs.
- Employability development is not an optional add-on but a central function of strategic HRM. HR should establish employability as a guiding principle and increase employees' adaptability through systematic programs for future skills, internal mobility schemes, and individualized development dialogues to strengthen organizational future orientation.

- Given its positive effect on economic adaptability, short-time work should be understood as a managed mechanism of flexibility that is deliberately combined with training, transparent communication, and perspective work, rather than as a purely reactive crisis tool.
- The negative effects of redundancies and benefit cuts on adaptability and perceived future readiness suggest that such measures should be used sparingly. Where they are unavoidable, they should be accompanied by transparent communication, support services and participation formats to minimize losses of trust and capability.
- HRM should align technological and HR-strategic paths. It should be actively involved in AI strategy processes, and AI initiatives should be coupled with qualification programs, change management, and culture development to translate technological potential into organizational adaptability and future orientation.

The study also points to several avenues for future research: Future studies should more closely examine the distinct logics of short-term cost-cutting instruments and long-term development measures and investigate their combined effects on resilience, adaptability, and future orientation using longitudinal designs. To better understand the mechanisms through which adaptation-oriented HR practices operate, further research could link employees' individual perceptions of fairness, psychological safety, commitment, and learning orientation with the organizational outcome variables examined here (economic adaptability, perceived future readiness, organizational future orientation).

Ethics Declaration: This study was conducted in accordance with established ethical standards for empirical survey research, ensuring that participation was entirely voluntary and based on informed consent. Data were collected via an online questionnaire specifically designed to prevent the storage of identifying information, so that individual responses are fully anonymized and cannot be traced back to specific participants or organizations. Participants were informed that they could discontinue the survey at any time without any disadvantage and that only aggregated results would be reported in publications and presentations. All data were stored on secure servers with access restricted to the research team and were analyzed exclusively for scientific purposes.

AI Declaration: The author utilized GPT 5.1 to support the writing process, enhance the linguistic presentation of his thoughts and ensure the orthographically and grammatically correct written formulation of the ideas in English. However, the ideas, concepts, and arguments presented in this article are solely those of the author.

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