Human-Centered Digital Transformation and Employee Well-Being in Honduras: The Mediating Role of Work Engagement

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Abstract– Digital transformation is increasingly framed as a capability that emerging economies must build to sustain innovation, competitiveness, and regional development. Yet whether organizational digitalization translates into human value for the workforce that must adopt it remains empirically underexamined outside North America, Europe, and Southeast Asia. This study examines whether work engagement statistically mediates the association between organizational digitalization and employee well-being among workers in Honduras, a Central American emerging economy with uneven digital maturity. A cross-sectional survey of 220 Honduran workers, recruited by non-probabilistic convenience sampling, was analyzed through structural equation modeling with robust maximum-likelihood (MLR) estimation; digitalization and well-being were specified as second-order constructs and engagement as a global unidimensional construct. Digitalization was positively associated with engagement ($\beta = .627$, $p < .001$), and engagement was positively associated with well-being ($\beta = .888$, $p < .001$). The direct path from digitalization to well-being was not significant ($\beta = .097$, $p = .069$), whereas the indirect path through engagement was significant ($\beta = .557$, $p < .001$). Engagement and well-being were empirically distinguishable but highly proximal (latent $r = .949$; HTMT up to .950), and a reverse-ordering model showed equivalent global fit; the 90.7% of well-being variance accounted for is therefore read as partly reflecting construct proximity, and no causal or temporal ordering is claimed. The findings are consistent with digitalization operating as a human-centered organizational capability whose value for the workforce depends on activating engagement, and are offered as context-specific evidence from an underrepresented setting rather than as estimates generalizable to the Honduran workforce.

Keywords— Digital transformation; organizational digitalization; work engagement; employee well-being; emerging economies

I. Introduction

Digital transformation has become a central driver of innovation, competitiveness, and regional economic development, reshaping how organizations create value, compete, and scale into global markets [1]–[4]. Across Latin America, improvements in connectivity and technology adoption coexist with persistent gaps in digital infrastructure, workforce competencies, and organizational innovation capabilities, which condition how far digital transformation actually translates into productive and human gains [3], [4]. This asymmetry defines a central problem for entrepreneurship and innovation research in emerging economies: digitalization frequently advances faster than the organizational and human capabilities required to absorb it, so technology investment does not automatically yield the workforce outcomes that justify it.

Recent research reframes organizational digitalization not merely as technology adoption but as a multidimensional organizational capability that combines technological integration, employees' digital competencies, the redesign of organizational processes, and an innovation-oriented digital culture [5]–[7]. Under this capability-based view, digitalization is a resource that organizations build and deploy, analogous to other strategic capabilities that entrepreneurship and innovation scholarship treats as preconditions for scaling into new markets. The digital-competence dimension is particularly relevant, since employees' digital literacy acts as a catalyst of organizational digital maturity [6], [8], while an innovation-oriented digital culture, openness to change, collaboration, and data orientation, has been identified as the enabling condition through which digitalization benefits are transferred into workforce outcomes [7].

A persistent gap limits this capability-based view: little evidence documents how organizational digitalization translates into positive human outcomes in Central America. Related work has examined well-being in Argentina [9], employee motivation across Latin America [10], and digitalization in Latin American firms more broadly [3], [11], but we are not aware of a study that has used structural equation modeling to examine the mechanism through which digitalization becomes a human-centered capability rather than a purely technical one. This gap is consequential for regional development because the same digital investments that raise productivity can either strengthen or erode organizational talent, depending on whether they are appropriated by the workforce.

We propose that work engagement is the human mechanism that converts organizational digitalization into a sustainable organizational capability. Engagement, a persistent motivational state expressed through vigor, dedication, and absorption [12], is the channel through which technology-enabled resources such as autonomy, connectivity, real-time feedback, and learning platforms are experienced as usable and meaningful rather than as burdens [13]–[16]. On this view digitalization does not generate well-being automatically, but only to the extent that it activates engagement, turning a

technological investment into a capability centered on people rather than infrastructure alone.

Honduras offers an informative context for examining this mechanism. As a lower-middle-income Central American economy with markedly uneven digital maturity across sectors, it exemplifies the conditions under which digital transformation must be evaluated not by adoption rates but by its capacity to build sustainable, people-centered organizational capabilities [3], [17]. Digital transformation is only beginning to take hold there in business discourse and public innovation policy, making the country an underrepresented but theoretically important setting.

This study examines whether work engagement mediates the association between organizational digitalization and employee well-being among Honduran workers, using structural equation modeling. It was expected that: (a) organizational digitalization would be positively associated with work engagement; (b) work engagement would be positively associated with employee well-being; and (c) the association between digitalization and well-being would operate primarily indirectly, through engagement. Because the design is cross-sectional and the sample was recruited non-probabilistically, every expectation is stated, tested, and interpreted throughout as a pattern of statistical association within this sample, not as a causal effect or as a population estimate.

The contribution to LEIRD 2026 is twofold. First, it provides empirical evidence, from an underrepresented Central American economy, consistent with organizational digitalization functioning as a human-centered transformation capability rather than a purely technological one. Second, it offers a multidimensional operationalization of digitalization whose measurement properties are reported in full, together with an interpretive framework that treats engagement as a candidate leading indicator of whether digital transformation investments are being appropriated by the workforce, information relevant to managers and policymakers seeking to scale innovation sustainably.

II. Theoretical Framework and Hypotheses

A. Organizational Digitalization as a Transformation Capability

Organizational digitalization is conceptualized here as a second-order organizational capability comprising four first-order dimensions: technological integration, digital competence, organizational-process redesign, and digital culture [5]–[7]. This framing departs from treating digitalization as a binary adoption variable and positions it alongside other strategic capabilities, such as absorptive capacity or innovation capability, that determine whether an organization can scale technology into sustained competitive and human advantage. The Job Demands–Resources model (JD-R) [18] provides the mechanism linking this capability to employee functioning: digitalization, when implemented well, expands job resources (autonomy, feedback, learning opportunities) rather than merely adding job demands. Conservation of Resources theory (COR) [19] complements this view, proposing that digitalization-driven resource gains reduce threats to employee functioning and build a reserve of psychological resources that sustains motivation over time.

B. Work Engagement as a Human Mechanism of Digital Transformation

Work engagement, a positive, persistent, work-related psychological state expressed through vigor, dedication, and absorption [12], is treated here not as an isolated wellness outcome but as the human mechanism through which a digital transformation capability is converted into organizational value. Empirical evidence converges on a positive digitalization–engagement association across varied contexts: digitalization improves job resources and increases engagement through job crafting [13]; the perceived meaningfulness of digital transformation relates to engagement [14]; workplace digitalization combined with an innovation culture predicts engagement [15]; and digital transformation increases job resources associated with engagement in service settings [16]. Digital literacy operates as a boundary condition: employees with skill gaps may experience the same technology as a demand rather than a resource, weakening or reversing the expected association [8].

C. Employee Well-Being as a Sustainable Organizational Outcome

Employee well-being is framed as a strategic outcome of sustainable digital transformation rather than as an isolated psychological topic. The PERMA model [20] frames workforce flourishing through positive emotions, engagement, relationships, meaning, and accomplishment, complemented by hedonic, social, and physical well-being and job satisfaction [21]. In digitalized environments, well-being is conditioned by how technology is implemented rather than by its mere presence: engaged workers consistently report higher well-being and better psychological functioning [22], and mutually reinforcing relationships between engagement and well-being have been documented in digitalized and remote settings [23], [24]. From an entrepreneurship and regional-development standpoint, well-being functions here as an indicator of talent sustainability, an organizational asset that determines whether digital transformation can be scaled without depleting the workforce that carries it out.

D. Hypotheses

Building on the JD-R and COR frameworks, it is theoretically plausible that engagement is the mechanism that converts a digitalization capability into workforce well-being: digitalization expands job resources, resources sustain engagement, and engagement nurtures well-being. Partial empirical support exists: AI-driven human resource practices increased engagement, which in turn predicted well-being [25]; organizational digital climate has been shown to predict employee well-being [26]; and digital transformation in the hotel sector increased job resources associated with both engagement and well-being [16]. This study tests three hypotheses:

H1. Organizational digitalization is positively associated with work engagement.

H2. Work engagement is positively associated with employee well-being.

H3. The association between organizational digitalization and employee well-being operates indirectly, through work engagement.

Consistent with the cross-sectional design, *H3* is stated and tested as a hypothesis about the pattern of association implied by the a priori model. It is not a claim that engagement causally transmits an effect of digitalization, and the analyses reported below cannot establish that engagement temporally precedes well-being.

III. Method

A. Design and Participants

A quantitative, cross-sectional, observational design was used. Data were collected online via Microsoft Forms between March and May 2026, distributed through professional and social networks using non-probabilistic convenience sampling. Inclusion criteria were being an active worker in a Honduran organization and being 18 years of age or older, with no restrictions on sector, organizational size, education, or contract type. Participation was voluntary, anonymous, and uncompensated; informed consent was obtained digitally before access to the questionnaire. Given the cross-sectional design, the results identify statistical associations rather than causal relationships.

Data collection yielded 288 records. Five were excluded as incomplete and two were removed for implausible ages. The remaining exclusions were based on questionnaire completion time, and the criteria were defined a priori, before any measurement or structural model was estimated. Thirty-nine cases with completion times below the first quartile (Q1 = 315 s) were excluded: very short completion times are an established non-reactive indicator of insufficient-effort and careless responding, since they are incompatible with reading and evaluating the number of items administered [27]–[29]. Twenty-two cases above the interquartile-range upper threshold (Q3 + 1.5 × IQR = 977.5 s) were excluded on a different and explicitly weaker rationale: in an unsupervised online questionnaire, extremely long completion times typically reflect interrupted or multi-session completion, in which the response context, and therefore the comparability of the response set, cannot be verified. A long completion time is not in itself evidence of careless responding [29], so this upper-bound screen is reported here as a conservative design decision rather than as a validated data-quality criterion; its contribution is stated separately from the lower-bound screen so that its effect on the analytic sample is transparent, and it is revisited in Section VI. The final analytic sample was $N = 220$, exceeding the a priori power requirement estimated with G*Power; no missing values remained.

Because recruitment was non-probabilistic and channelled through professional and social networks, the sample is self-selected and consists largely of connected, formally employed workers. It is not a probability sample of the Honduran workforce, and no post-stratification weighting was applied; all estimates below are sample-specific.

B. Measures

All constructs were measured with self-report items answered on a five-point Likert scale (1 = strongly disagree; 5 = strongly agree), administered in Spanish. No previously validated Spanish-language instrument covered the four-dimensional, capability-based conceptualization of organizational digitalization adopted here, and the well-being construct was required to span five facets drawn from more than one framework. The item pools for the three constructs were therefore developed for this study directly from the conceptual definitions and dimensional structures of the sources cited below, rather than by translating an existing item set. Item wording was reviewed before administration for conceptual coverage of each intended dimension, clarity, and appropriateness for Honduran workplace vocabulary, and each scale was then refined psychometrically: items with low standardized loadings or with cross-dimension behavior in the confirmatory factor analyses were removed, and the retained solutions are the ones reported in Section IV-B. Table II summarizes the final composition, the conceptual source, and the psychometric properties of each instrument.

1) Organizational digitalization. Fourteen items were retained after refinement, covering four dimensions: technological integration, digital competence, organizational-process redesign, and digital culture. The dimensional structure follows the digital-transformation success-factor literature [5], the competency-based digital-transformation framework of [6], and the organizational digital-culture dimensions identified by [7].

2) Work engagement. Eight items were retained, written to reflect the vigor, dedication, and absorption components of the engagement construct as conceptually defined by [12]. The scale is a conceptual adaptation of that framework and not an administration of the Utrecht Work Engagement Scale itself; scores are consequently not comparable with UWES normative data, and the instrument is treated here as a study-specific operationalization of the same construct.

3) Employee well-being. Seventeen items were retained across five dimensions operationalizing hedonic, eudaimonic, social, and physical well-being and job satisfaction, following the PERMA framework [20] and the workplace well-being and meaningfulness literature [21], [24].

Because all three instruments were developed for this study, their scores should be read as context-specific operationalizations whose cross-cultural and cross-sector equivalence has not been established. Measurement-invariance testing is a necessary step before these instruments are used for comparison across countries, sectors, or organizational sizes, and the absence of such testing is stated as a limitation in Section VI.

C. Procedure and Ethics

The study was approved by the corresponding institutional research ethics committee, in accordance with the Declaration

of Helsinki. No personally identifying data were collected. The version of the manuscript submitted for peer review was prepared for anonymous double-blind evaluation.

D. Data Analysis

Likert items were treated as continuous indicators, an accepted procedure with five or more response categories [30]. Digitalization and well-being were specified as second-order constructs and engagement as a global unidimensional construct, each evaluated through confirmatory factor analysis (CFA) before structural estimation. All models used maximum likelihood with robust (Huber-White) standard errors and the Yuan-Bentler scaled test statistic (MLR). Fit criteria were CFI and TLI ≥ .90, RMSEA ≤ .08, and SRMR ≤ .08 [31], [32]; reliability was evaluated with Cronbach's alpha and McDonald's omega, and convergent validity with average variance extracted (AVE ≥ .50) [33].

Given the conceptual proximity between engagement and well-being, discriminant validity was examined with four convergent procedures: the heterotrait-monotrait ratio (HTMT) [34], the latent correlation between the constructs with its confidence interval, a constrained model fixing that correlation to unity, and a comparison against a single-factor model, which also served as a test for common method variance [35]. A reverse-ordering structural model was estimated as a sensitivity analysis. The indirect effect and its 95% confidence interval were estimated through the delta method with robust standard errors. Because the data are cross-sectional, the mediation analysis was conceived as a test of consistency between the data and an a priori theoretical model rather than as a test of causal mediation [36], [37]. Analyses were performed in jamovi 2.7 with the SEM-lj module, which uses lavaan as the estimation engine [38], [39].

IV. Results

A. Sample Characteristics

The analytic sample comprised 220 Honduran workers (*M* age = 41.0 years, *SD* = 10.5, range 19–68); 63.2% were women and 42.3% were married. Most participants (71.8%) reported more than four years of job tenure; 53.2% worked in the private sector and 46.8% in the public sector. Industry sector concentrated in education (47.7%) and services (28.6%), followed by trade (7.3%), health (7.3%), manufacturing (6.4%), and agriculture (2.7%). Table I summarizes these characteristics. The concentration in education and services, together with the predominance of women and long-tenured workers, should be kept in view throughout: the sample describes a specific segment of the Honduran labor market, not its overall composition.

TABLE I
Sample Characteristics (N = 220)

Characteristic	Value
Age, *M* (*SD*)	41.0 (10.5)
Age range	19–68
Women	63.2%
Married	42.3%
Job tenure > 4 years	71.8%
Private sector	53.2%
Public sector	46.8%
Industry: education	47.7%
Industry: services	28.6%
Industry: trade	7.3%
Industry: health	7.3%
Industry: manufacturing	6.4%
Industry: agriculture	2.7%

Note. Non-probabilistic convenience sample; percentages describe this sample and are not population estimates.

B. Measurement Models

Organizational digitalization was retained as a second-order construct with four dimensions (robust CFI = .955, TLI = .944, RMSEA = .066, SRMR = .052); dimension loadings on the second-order factor ranged from β = .771 (digital culture) to β = .950 (organizational processes). Employee well-being was retained as a second-order construct with five dimensions (robust CFI = .972, TLI = .967, RMSEA = .060, SRMR = .043). Work engagement was retained as a global unidimensional construct (robust CFI = .984, TLI = .978, RMSEA = .073, SRMR = .023). Alpha and omega coefficients exceeded .70 across all dimensions, and AVE values were at or above .50 throughout (digitalization: .559–.606; well-being: .569–.803; engagement: .672), supporting reliability and convergent validity. Table II reports these properties alongside the composition and conceptual source of each instrument.

TABLE II
Composition, Conceptual Source, and Psychometric Properties of the Instruments

Construct	Dimensions retained	Items	Conceptual source	α / ω and AVE
Organizational digitalization (second order)	Technological integration; digital competence; organizational-process redesign; digital culture	14	Digital-transformation success factors [5]; competency-based framework [6]; digital-culture dimensions [7]	All α and ω > .70; AVE .559–.606
Work engagement (global, unidimensional)	Vigor; dedication; absorption (modelled as one global factor)	8	Conceptual definition of engagement [12]; conceptual adaptation, not the UWES instrument	α and ω > .70; AVE .672
Employee well-being (second order)	Hedonic; eudaimonic; social; physical well-being; job satisfaction	17	PERMA framework [20]; workplace well-being and meaningfulness literature [21], [24]	All α and ω > .70; AVE .569–.803

Note. All items were developed for this study in Spanish from the conceptual definitions of the cited sources, reviewed for dimensional coverage and contextual wording, and refined by removing items with low standardized loadings or cross-dimension behavior in the confirmatory factor analyses. No measurement-invariance evidence is available; see Section VI.

C. Discriminant Validity and Sensitivity Analyses

HTMT values between engagement and the well-being dimensions ranged from .818 to .950; the social and job-satisfaction dimensions exceeded the liberal .90 threshold, indicating conceptual proximity in those specific facets. A single-factor model collapsing engagement and well-being fit clearly worse than the multifactor solution (robust CFI = .884 vs. .956), arguing against a single common-method factor [35]. The latent correlation between engagement and well-being was .949, 95% CI [.908, .990], excluding unity; constraining it to 1.0 significantly worsened fit (scaled $\Delta\chi^2(1) \approx 28$, $p < .001$). A reverse-ordering sensitivity model showed equivalent global fit; in that specification, the direct path from digitalization to engagement was non-significant ($\beta = .011$, $p = .794$), and the association operated entirely through well-being.

These four procedures agree that engagement and well-being are not the same latent variable in this sample, but they also bound how strongly that distinction can be interpreted. A latent correlation of .949 leaves roughly 10% of the variance of each construct unshared with the other, and the two facets with HTMT values at or above .90, social well-being and job satisfaction, are precisely those whose item content overlaps most with dedication and absorption. Two consequences follow and are carried through the Discussion. First, the magnitude of the indirect effect is not independent of this overlap: an indirect path estimated through a mediator that shares most of its variance with the outcome will be large partly for measurement reasons, so the value reported below should be read as an upper bound on the association attributable to a substantively distinct engagement mechanism, not as a point estimate of it. Second, because the reverse-ordering model reproduces the same global fit, the data are equally compatible with well-being preceding engagement; directionality is imposed by theory here, not recovered from the data.

D. Structural Model

The structural model showed acceptable global fit (robust RMSEA = .058, 95% CI [.051, .065]; SRMR = .063; robust CFI = .928; robust TLI = .922). As shown in Fig. 1 and Table III, organizational digitalization was positively associated with work engagement ($\beta = .627$, $p < .001$), accounting for 39.3% of its variance (*H1* supported). Work engagement was positively associated with employee well-being ($\beta = .888$, $p < .001$; *H2* supported). The direct association between digitalization and well-being was not statistically significant once engagement was included ($\beta = .097$, $p = .069$), whereas the indirect path through engagement was significant ($\beta = .557$, $p < .001$; *H3* supported), a pattern conventionally labelled indirect-only mediation. The total association was $\beta = .654$ ($p < .001$), and the model accounted for 90.7% of the variance in well-being ($R^2 = .907$). Consistent with Section IV-C, this R^2 is not interpreted as evidence of predictive accuracy: it is inflated by the measurement proximity between the mediator and the outcome, and a comparable figure would be expected from any pair of strongly overlapping constructs.

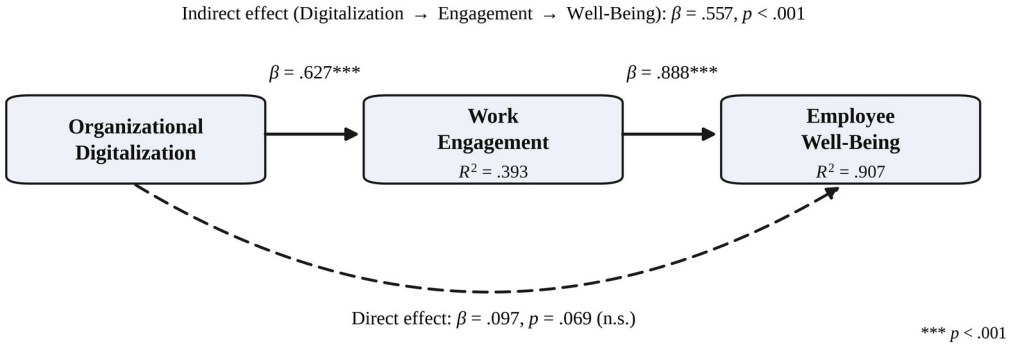


Fig. 1 Structural mediation model: organizational digitalization, work engagement, and employee well-being (standardized coefficients). Solid arrows denote statistically significant paths; the dashed arrow denotes the non-significant direct path. Coefficients express statistical association, not causal effect.

TABLE III
STRUCTURAL MODEL FIT AND PATH COEFFICIENTS

Global structural fit (robust): CFI = .928, TLI = .922, RMSEA = .058, SRMR = .063			
Path	β	B [95% CI]	p
Digitalization → Engagement	.627	.721 [.480, .962]	< .001
Engagement → Well-being	.888	.804 [.656, .952]	< .001
Digitalization → Well-being (direct)	.097	.101 [−.008, .210]	.069
Digitalization → Well-being (indirect)	.557	.580 [.346, .813]	< .001
Digitalization → Well-being (total)	.654	—	< .001
R^2 Engagement = .393; R^2 Well-being = .907			

Note. Standardized (β) and unstandardized (B) coefficients, MLR estimation; indirect effect by the delta method with robust standard errors. Coefficients express statistical association within this sample, not causal effects. The R^2 for well-being is inflated by the measurement proximity between engagement and well-being (Section IV-C).

V. DISCUSSION

This study examined whether work engagement statistically mediates the association between organizational digitalization and employee well-being among Honduran workers, conceptualizing digitalization as a human-centered transformation capability rather than as the mere adoption of

technological tools. The findings are consistent with the proposed model and clarify three issues. First, digitalization was positively associated with engagement, suggesting that it may operate as an organizational resource when employees can translate technological change into a more functional work experience. Second, the association with well-being was concentrated statistically in the indirect pathway through engagement rather than in a unique direct pathway. Third, the results shift attention from the amount of technology acquired to the organizational conditions that let employees use it with competence, confidence, and a sense of contribution.

A. Digitalization as a Human-Centered Transformation Capability

The positive association between organizational digitalization and work engagement supports the view that digitalization should be understood as a multidimensional capability involving technological integration, digital competencies, process redesign, and digital culture [5]–[7]. From the JD-R perspective, these dimensions can form a resource bundle rather than acting as isolated technical inputs. Integrated tools can improve access to information and coordination; redesigned processes can reduce repetitive or fragmented activities; digital competencies can increase employees' confidence in using new systems; and a supportive digital culture can legitimize learning and experimentation [18]. Under COR theory, such changes may preserve cognitive and emotional resources that would otherwise be consumed by administrative burden, duplicated work, or inefficient routines [19]. The observed association is therefore compatible with digitalization strengthening engagement when employees experience a concrete improvement in how work is carried out, not simply when a new platform becomes available.

This resource interpretation is conditional. The same platform or automated process may simplify work for an employee who has received preparation and understands its purpose, yet become an additional demand for someone who must learn it while maintaining the same workload, lacks timely support, or fears that automation threatens the value or continuity of the position [8]. Digitalization may therefore produce a resource-demand tradeoff: efficiency, flexibility, and skill development can coexist with cognitive load, uncertainty, resistance, and technostress. A plausible interpretation of the positive path is that, on average, the resource-generating side of that tradeoff predominated in this sample. The model did not measure these implementation experiences directly, however, so it cannot identify which specific practice produced the association or whether subgroups experienced the same technologies differently.

This distinction is particularly relevant in Honduras, where organizational digital maturity and access to implementation resources may differ considerably across sectors and institutions [3]. Prior technology exposure, infrastructure reliability, process standardization, training availability, leadership, and internal communication may all influence whether employees interpret change as an opportunity or as added pressure, although none of these was measured here and none can be evaluated with these data. Digitalization accounted for 39.3% of the variance in engagement, a substantial proportion that confirms its relevance while leaving room for non-technological resources such as social support, recognition, and job design [8], [15].

The finding extends patterns previously reported in more digitally mature contexts [13], [15], [16] to an underrepresented Central American setting. Its contribution is not to show that the mechanism is uniform across countries or sectors, but that the resource-generating potential of digitalization is observable even where transformation is uneven. This matters because emerging-economy organizations may face a double challenge: acquiring or adapting technology while building the competencies, routines, and trust required for employees to appropriate it. Technological and human capabilities are therefore best treated as interdependent components of the same process.

B. Engagement as the Mechanism Translating Digitalization into Human Value

The association between engagement and employee well-being was the strongest relationship in the model. Together with the significant indirect effect and the absence of a statistically distinguishable unique direct association between digitalization and well-being after engagement was included, this pattern suggests that technology's human value may depend less on its presence than on the motivational experience it helps create. Digitalization was positively related to well-being in total, but the residual direct estimate was small and imprecise ($\beta = .097$, $p = .069$). It would therefore be inappropriate to conclude that digitalization has no relationship with well-being. A more precise interpretation is that the data provide stronger support for the theoretically specified indirect pathway, in which digitalization is connected with well-being when employees experience greater vigor, dedication, involvement, and meaning in their work.

From a JD-R perspective, technological resources may become connected with well-being by first activating the motivational process represented by engagement [18]. COR theory adds that resource gains from more functional processes and learning opportunities may become psychologically meaningful only when workers can use them effectively and continue to see their contribution as valuable [19]. This places engagement at the point of human appropriation: the organization supplies tools, competencies, and process conditions, the employee converts them into sustained energy and dedication, and that motivational state is associated with functioning well at work.

The indirect pattern also offers a reading of why infrastructure alone may be insufficient. Introducing software, automation, or digital platforms without removing obsolete procedures can create parallel systems and preserve the original workload while adding learning demands. Likewise, training limited to technical functions may not resolve uncertainty about role changes, performance expectations, or job continuity. These are inferences from the JD-R and COR frameworks rather than results of the present model, which measured none

of these implementation practices; they are set out as such in Section V-D.

The very strong association between engagement and well-being requires particular caution, and it constrains how far the mediation result can be taken. Although the constructs were empirically distinguishable by four separate procedures, their latent correlation was .949, HTMT values for the social and job-satisfaction facets reached .950, and the model accounted for 90.7% of the variance in well-being. That explanatory power should not be read as predictive success, because a substantial part of it plausibly reflects substantive and measurement proximity: dedication, positive functioning, social connection, and job satisfaction occupy neighboring conceptual territory, and the facets with the highest HTMT values are the ones whose items are closest in content to the engagement items. The indirect estimate of $\beta = .557$ is accordingly best read as an upper bound on the association that could be attributed to a distinct engagement mechanism. The reverse-ordering model also fit the data equally well, so the results cannot establish that engagement temporally precedes well-being; employees who feel well may have more energy to invest in their work, and the two states may reinforce one another over time [23], [24]. Taken together, the present findings support the existence of an a priori indirect statistical pathway. They do not establish a causal sequence, do not demonstrate complete mediation, and do not by themselves justify treating engagement as an empirically separable lever that managers can move independently of well-being.

C. Implications for Emerging Economies and Regional Development

For organizations in Honduras and other emerging-economy settings, the findings are consistent with managing digital transformation as a coordinated process of technological and human-capability development. The practical objective is not adoption but usable adoption: employees should understand the purpose of the change, possess the skills their roles require, have opportunities to raise difficulties, and see obsolete tasks removed or redesigned. This prevents organizations from treating completed installation as evidence that transformation has occurred. Training, communication, participation, and process redesign are offered here as plausible conditions through which a technological investment may become a job resource; none was measured in this study, and the model provides no estimate of their effect.

These conditions may matter most where digital maturity is limited or uneven. Implementation decisions are often made at senior levels, whereas operational employees encounter the day-to-day consequences for workload, coordination, monitoring, and required skills. Organizations should also avoid assuming that one implementation strategy operates uniformly: the sample was concentrated in education and services, and differences in work content, technological intensity, culture, resource availability, and process standardization could alter how digitalization is experienced. Because sector, organizational size, and digital maturity were not tested as moderators, these possibilities are offered to guide future comparative research and must not be read as findings of the present study.

For entrepreneurship and regional-development initiatives, the findings reinforce the idea that scaling digital or AI-enabled innovation requires more than acquiring technology: human appropriation determines whether tools are used consistently, adapted to local workflows, and converted into durable organizational capacity. In resource-constrained settings a staged strategy may be useful, prioritizing tools that solve visible workflow problems, training employees on their actual tasks, and evaluating whether the change improves both performance and the work experience, with broader cultural and leadership development over a longer horizon [5]–[7]. This is a theoretically derived design proposal, not a tested intervention; it links workforce well-being with innovation sustainability on the argument that a transformation which exhausts or alienates users may achieve technical deployment without building the human capacity needed to sustain it.

D. Empirically Supported Findings and Theoretically Derived Recommendations

Because the managerial guidance above concerns practices the structural model did not measure, the two kinds of statement are separated explicitly in Table IV. The left column lists what the estimated model supports within this sample; the right column lists propositions derived from JD-R, COR, and prior literature that remain untested here, together with the design each would require. Only the left column should be treated as evidence from this study; the right column is the agenda this paper proposes rather than the conclusion it reaches.

TABLE IV
SEPARATION OF EMPIRICALLY SUPPORTED FINDINGS FROM THEORETICALLY DERIVED RECOMMENDATIONS

Supported by the estimated model (within this sample)	Theoretically derived and not tested here (with the design required)
1. Organizational digitalization, modelled as a four-dimensional capability, is positively associated with work engagement (β = .627), accounting for 39.3% of its variance.	1. Role-specific training and employee preparation strengthen the digitalization–engagement association. Requires measuring training exposure; testable by longitudinal or quasi-experimental design.
2. Work engagement is positively associated with employee well-being (β = .888).	2. Employee participation in implementation decisions increases perceived control and engagement. Requires a participation measure and pre/post implementation data.
3. Once engagement is included, the direct digitalization–well-being association is not statistically significant (β = .097, p = .069); the indirect association through engagement is significant (β = .557).	3. Bidirectional communication of the rationale for change reduces ambiguity and resistance. Requires a communication-quality measure.
4. Digitalization and well-being are supported as second-order constructs, and engagement as a global factor, with acceptable fit, reliability, and convergent validity in this sample.	4. Digital leadership and technostress moderate the observed associations. Requires adding both as measured moderators.
5. Engagement and well-being are statistically distinguishable but highly proximal (latent r = .949), and directionality cannot be adjudicated with these data.	5. Removing obsolete processes, rather than layering new tools onto them, is what converts digitalization into a job resource. Requires process-level data before and after redesign.
	6. A staged implementation that begins with visible workflow problems outperforms broad rollouts in resource-constrained settings. Requires an intervention or comparative-case design.
	7. The mechanism varies by sector, organizational size, and digital maturity. Requires a sample with sufficient representation of each stratum and invariance testing.

Note. Only the left column reports results of this study. The right column states propositions drawn from the JD-R and COR frameworks and from prior literature; none of the corresponding variables was measured here.

Overall, the findings refine the capability-based interpretation of digital transformation. Digitalization may provide the technological and organizational conditions for improvement, while engagement appears to represent the motivational process through which those conditions become statistically connected with employee well-being. The two possibilities identified by JD-R are central here: digitalization can conserve resources by simplifying work and building competence, or consume them when it adds demands without adequate support, and human-centered implementation is the effort to shift that balance toward resources. The observed model is consistent with this account, but causal direction, sector variation, the empirical separability of engagement from well-being, and the implementation practices responsible for the associations all remain to be established.

VI. LIMITATIONS

Several limitations qualify these findings. First, the cross-sectional design precludes causal inference and cannot rule out reverse or reciprocal dynamics between the study variables [36], [37]; the reverse-ordering model fit these data equally well, so longitudinal or panel designs are needed to establish temporal precedence, and intervention designs are needed to establish that changes in digitalization produce subsequent changes in engagement and well-being.

Second, engagement and well-being were empirically distinguished through four convergent procedures, yet their latent correlation of .949 and HTMT values up to .950 for the social and job-satisfaction facets indicate substantial conceptual and measurement overlap. The magnitude of the indirect effect and the 90.7% of explained variance are therefore partly attributable to that proximity, and the mediating role of engagement should be regarded as provisional until it is re-examined with instruments designed to maximize facet-level separation, or with a design that measures the two constructs at different times.

Third, all three instruments were developed for this study from published conceptual frameworks. Their internal structure, reliability, and convergent validity are reported in full, but no measurement-invariance evidence exists across countries, sectors, or organizational sizes, so the scores support within-sample modeling rather than comparison between groups or settings.

Fourth, the exclusion of 22 cases with completion times above the interquartile-range upper bound rests on a weaker rationale than the lower-bound screen, since slow completion may reflect careful rather than careless responding [29]. The criterion was pre-specified and applied uniformly, and the two screens are reported separately in Section III-A, but the analytic sample is to that extent a product of a conservative design choice; replication should report estimates with and without an upper-bound time screen.

Fifth, the non-probabilistic convenience sample was concentrated in education (47.7%) and services (28.6%) and drawn through professional and social networks. The findings should not be generalized to the broader Honduran workforce, to other emerging economies, or to sectors such as manufacturing, agriculture, or informal employment without qualification, particularly given evidence that digitalization effects vary by firm size and sector [40]. Comparative studies across sectors, organizational sizes, and levels of digital maturity are the most direct way to strengthen the regional contribution of this line of work.

Sixth, all variables were self-reported, introducing risks of social desirability and common method variance, although the measurement-model comparisons argue against a dominant single-method factor [35]. Seventh, the model did not include potential moderators or mediators such as digital leadership, digital literacy, technostress, or workload change, each of which could condition the strength of the observed associations [8], [15] and each of which is invoked in the practical discussion only as a theoretically derived proposition.

VII. Conclusion

Digital transformation in emerging economies may contribute to employee well-being, but not automatically. In this sample of 220 Honduran workers, organizational digitalization was associated with employee well-being indirectly, through work engagement, with no statistically distinguishable direct association once engagement was modelled. The evidence is cross-sectional and the mediator is highly proximal to the outcome, so the result is best stated as a pattern of association consistent with an a priori theoretical model, and not as a demonstration that digitalization causes engagement or that engagement causes well-being. Within those bounds, the study contributes context-specific evidence from an underrepresented Central American setting, a multidimensional operationalization of digitalization whose measurement properties are reported in full and can be replicated elsewhere, and an explicit separation between what the model supports and what remains a theoretically derived proposal. For entrepreneurship, innovation, and regional-development practice, the implication is that digital and AI-enabled transformation is better managed as a human-centered organizational capability, pairing technology investment with employee-centered implementation, than as an infrastructural upgrade alone. Establishing whether that pairing actually produces gains in engagement and well-being requires longitudinal and intervention-based research across sectors, and this study should be read as motivating that agenda rather than as settling it.

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