

## Strategic drivers of green employment in firms: environmental awareness, resilience, and technology

### *Conciencia ambiental, resiliencia y tecnología: estrategias clave para impulsar el empleo verde empresarial*

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**Abstract:** this study investigates the associations between individual factors and organizational outcomes related to sustainability, with a focus on the implementation of green jobs and green behaviors. Specifically, the analysis examines (a) the relationship between green awareness and green jobs, (b) the association between resilience and green awareness, and (c) the mediating role of technology acceptance in the relationship between green awareness and green jobs. A sample of 302 workers in Spain was analyzed using a PLS-SEM model (SmartPLS) with validated scales for technology acceptance, green awareness, green jobs/skills, and resilience (Likert 1–7). The results indicate that green awareness is positively associated with green job and behavior performance, resilience is positively related to green awareness, and technology acceptance partially mediates the effect of green awareness on green jobs. Among the control variables, education level does not show a significant effect, while job category is negatively associated with green jobs, possibly due to limited opportunities for action at lower hierarchical levels. Due to the cross-sectional design, these findings should be interpreted as associative rather than causal. Overall, the results highlight that integrating pro-environmental behavior and technology adoption provides insight into the attitude–behavior gap in the green transition and underscores the importance of selecting and developing resilient employees with ecological values, as well as designing user-centered green tools, training, and working conditions that support the translation of attitudes into environmental performance.

**Keywords:** green awareness, resilience, technology, green jobs, pro-environmental.

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**Resumen:** este estudio examina cómo factores individuales se asocian con resultados organizativos vinculados a la sostenibilidad, con foco en la realización de empleos y conductas verdes. Se evalúan (a) la relación entre conciencia verde y empleos verdes, (b) la asociación entre resiliencia y conciencia verde y (c) el papel mediador de la aceptación tecnológica en el vínculo entre conciencia y empleos verdes. Con una muestra de 302 trabajadores en España, se estimó un modelo PLS-SEM (SmartPLS) utilizando escalas validadas de aceptación tecnológica, conciencia verde, empleos/habilidades verdes y resiliencia (Likert 1-7). Los hallazgos muestran asociaciones coherentes con las hipótesis: la conciencia verde se relaciona positivamente con el desempeño de empleos/conductas verdes; la resiliencia se asocia positivamente con la conciencia verde; y la aceptación tecnológica presenta una mediación parcial y significativa, atenuando el efecto directo de la conciencia sobre los empleos verdes. En las variables de control, el nivel educativo no muestra un efecto significativo, mientras que la categoría laboral se relaciona negativamente con los empleos verdes, lo que podría reflejar menor margen de actuación en niveles jerárquicos inferiores. Dado el diseño transversal, estos resultados deben interpretarse como relaciones asociativas y no como evidencia causal. A la luz de los resultados, se sugiere que integrar el comportamiento proambiental y la aceptación tecnológica ayuda a comprender la brecha actitud-comportamiento en la transición verde y apuntan a la conveniencia de seleccionar y desarrollar talento resiliente y con valores ecológicos, así como de diseñar herramientas y formación verdes centradas en el usuario y condiciones de trabajo que faciliten transformar actitudes en desempeño ambiental.

**Palabras clave:** conciencia verde, resiliencia, tecnología, empleos verdes, proambiental.

## Introduction

Sustainability is no longer considered a secondary issue but has become a strategic pillar of decision-making (García-Salirrosas, 2023; Hermundsdottir and Aspelund, 2022). The climate crisis, along with social and institutional pressure, is driving organizations to integrate environmental criteria into their strategy (Daddi *et al.*, 2016). This shift is reflected in the rise of green jobs, which provide the skills and practices needed to operate and compete with a smaller environmental footprint, facilitating the adoption of low-carbon and circular models based on resource efficiency. From a microfoundations perspective, the focus is on the individual, cognitive, motivational, and behavioral mechanisms that enable the effective implementation of sustainability. The aim is to identify which environmental beliefs and knowledge—such as green awareness; which psychological willingness—such as the resilience to sustain decisions under cost and time pressures; and which tool-adoption capabilities—such as technological acceptance—drive strategic guidelines to translate into daily routines, operational decisions, and green behaviors in everyday work.

Green jobs are defined as those jobs that, across various sectors (agriculture, industry, services, R&D, administration), contribute substantially to preserving or restoring environmental quality (Bohnenberger, 2022). At the organizational level, this involves incorporating practices, routines, and standards that align performance with environmental objectives

and integrate environmental management into competitive strategy (Hart, 1995).

In this process, the role of employees and their attitudes is decisive, because environmental policies only have an impact when they translate into habits, decisions, and operational standards in the workplace (Norton *et al.*, 2015). Likewise, many pro-environmental behaviors are discretionary, such as energy conservation, waste separation, or eco-improvement proposals; therefore, they depend largely on values and motivations in addition to formal rules. In fact, a significant number of sustainability failures can be due to difficulties in implementation and adherence, rather than strategic design.

In this context, employee green consciousness—understood as the degree of sensitivity, knowledge, and personal commitment to environmental protection in the workplace—is associated with a higher likelihood of engaging in pro-environmental behaviors at work (Dumont *et al.*, 2017; Paillé and Boiral, 2013; Katz *et al.*, 2022; Alherimi *et al.*, 2024). Consequently, the first objective is to analyze the relationship between employee green consciousness and the performance of green jobs/behaviors (Paillé *et al.*, 2014; Alt *et al.*, 2016).

Another individual variable of interest is employee resilience, defined as the ability to adapt, learn, and overcome adverse situations or changes (Connor and Davidson, 2003). Since the implementation of sustainable practices often requires adjustments to routines and work methods, more resilient employees tend to cope better with these challenges and may show a

greater willingness toward eco-friendly behaviors (Norton *et al.*, 2015; Paillé and Boiral, 2013; Avey *et al.*, 2008). From this perspective the second objective arises: to analyze the relationship between employee resilience and their green consciousness.

However, even if an employee holds strong environmental values, this does not in itself guarantee that such awareness will translate into observable results at work. This difference is related to the well-known attitude–behavior gap, which has been extensively documented in environmental research (An *et al.*, 2022; Blake, 1999; Gifford, 2011; Kollmuss and Agyeman, 2002). In the organizational context, it could be argued that technology acceptance acts as an enabling mechanism that facilitates this translation: when employees perceive technologies as useful and easy to use, the likelihood of incorporating sustainable practices into their daily routines and decisions increases, in line with classic models of technology acceptance (Davis, 1989; Venkatesh *et al.*, 2003) and with evidence on “green” information systems that promote pro-environmental behaviors at work (Chen and Tung, 2014). When green practices depend on digital tools or clean technologies, their acceptance determines whether awareness translates into observable actions. Therefore, the third objective is to analyze the mediating effect of technology acceptance on the relationship between green awareness and green jobs/behaviors.

Regarding the research gap and originality, although the literature has separately analyzed the relationship between environmental awareness and pro-environmental behaviors and has developed robust models of technology adoption, it is still limited the evidence that integrates within a single explanatory framework the micro-foundations, enabling the conversion of a “green” orientation into operational outcomes within the organization. This study aims to bridge that gap by proposing and testing a model that connects (i) a relevant individual psychological resource (resilience) as a precursor to (ii) green consciousness, and explains its translation into (iii) green practices/behaviors through a conversion mechanism based on

technology acceptance.

Thus, the study does not merely replicate known relationships in a new context but explicitly addresses the “how” of implementation: why environmental motivation does not always translate into action and under what instrumental conditions it can do so, addressing critiques regarding the accumulation of constructs without enough details of the micro-mechanisms underpinning the day-to-day implementation of sustainability (Aguinis and Glavas, 2012). In summary, the article explicitly links individual drivers (green awareness and resilience) with organizational outcomes (green practices/behaviors) and incorporates technological acceptance as a mechanism that converts attitudes into environmental performance.

The theoretical framework underpinning the hypotheses and the proposed research model is developed below.

## Relationship between green consciousness and green jobs

We understand green consciousness as the degree to which a person is aware of environmental problems, is sensitive to them, and makes a personal commitment to protect the environment (Kim and Lee, 2023); it can be understood as a cognitive and motivational antecedent. According to the Theory of Planned Behavior and the Value-Belief-Norm model, this willingness translates into pro-environmental intentions and behaviors when the individual perceives that they can act (perceived control) and that they should do so (moral obligation) (Ajzen, 1991; Bamberg and Möser, 2007).

In the organizational context, greater green awareness increases the relevance of ecological goals and the alignment between personal values and the company’s environmental practices. This encourages employees to seek out or take on positions with a greater environmental component or, alternatively, to redesign their own work by incorporating tasks aimed at reducing impacts, such as resource conservation, waste prevention, or process improvement (Boiral, 2009; Norton *et al.*, 2015). From the

Motivation-Opportunity-Ability perspective, green consciousness acts as an internal motivation that drives the search for opportunities and the adoption of sustainable routines; even when opportunities are limited, it manifests in everyday behaviors (energy conservation, recycling, proposals for environmental improvements, among others) that progressively “green” the workplace (Paillé and Boiral, 2013).

Green consciousness reinforces self-determination because it fosters the internalization of ecological values: when a person integrates environmental protection into their value system and identity, acting sustainably ceases to be perceived as an external demand and comes to be experienced as a personal choice. In terms of Self-Determination Theory, this internalization increases autonomous regulation (greater value coherence and sense of purpose) and, therefore, enhances persistence even when green behaviors involve effort or costs (Deci and Ryan, 2000; Gifford, 2011).

For its part, empirical evidence consistently shows that both attitudes and environmental awareness are positively associated with sustainable behaviors at work, such as environmental citizenship, eco-initiatives, and job-specific behaviors oriented toward sustainability. Furthermore, it has been documented that these behaviors enhance the environmental component of jobs (Paillé *et al.*, 2014). Thus, it can be observed how theory and accumulated findings support the notion that greater green awareness translates, through intention, personal norms, and value congruence, into a higher probability of holding and performing green jobs.

Consequently, Hypothesis 1 is proposed.

*H1: Employee green consciousness is positively related to green jobs.*

## Relationship between resilience and green consciousness

Resilience provides psychological resources—such as self-efficacy, hope, and optimism—that broaden cognitive openness and the willingness to explore alternatives, fostering

sustained attention, learning, and reflection on environmental impacts and solutions, in line with resource conservation theory and the theory of positive emotion expansion and construction (Hobfoll, 1989; Fredrickson, 2001). In the workplace, this “reserve” of resources makes it easier to reframe sustainability initiatives as manageable challenges rather than threats, which increases sensitivity toward ecological goals and promotes the internalization of pro-environmental values and norms (Bakker and Demerouti, 2007).

Likewise, resilience is considered a component of psychological capital, understood as a higher-order positive resource composed of developable personal capacities that support well-being and performance. In its classical formulation, psychological capital integrates self-efficacy, hope, optimism, and resilience. Specifically, resilience provides the capacity to recover and adapt in the face of adversity, maintaining effort and learning in the face of demands and setbacks (Luthans *et al.*, 2006; Avey *et al.*, 2011). Based on these approaches, it is argued that more resilient employees tend to exhibit greater green consciousness, as they have more resources to sustain focus, reinterpret obstacles, and consolidate frameworks for action aligned with sustainability (Avey *et al.*, 2011). Based on these arguments, the following hypothesis is proposed.

*H2: Employee resilience is positively related to their green consciousness.*

## The mediating role of technology acceptance

Employees’ willingness to accept and implement innovative technologies amplifies the effect of their environmental awareness on sustainable work practices. Several recent empirical studies indicate that technological innovations can promote sustainability by facilitating new forms of environmental participation and making green behavior more accessible (An *et al.*, 2022; Leesakul *et al.*, 2022). In this regard, in the consumer sector, it has been noted that cer-

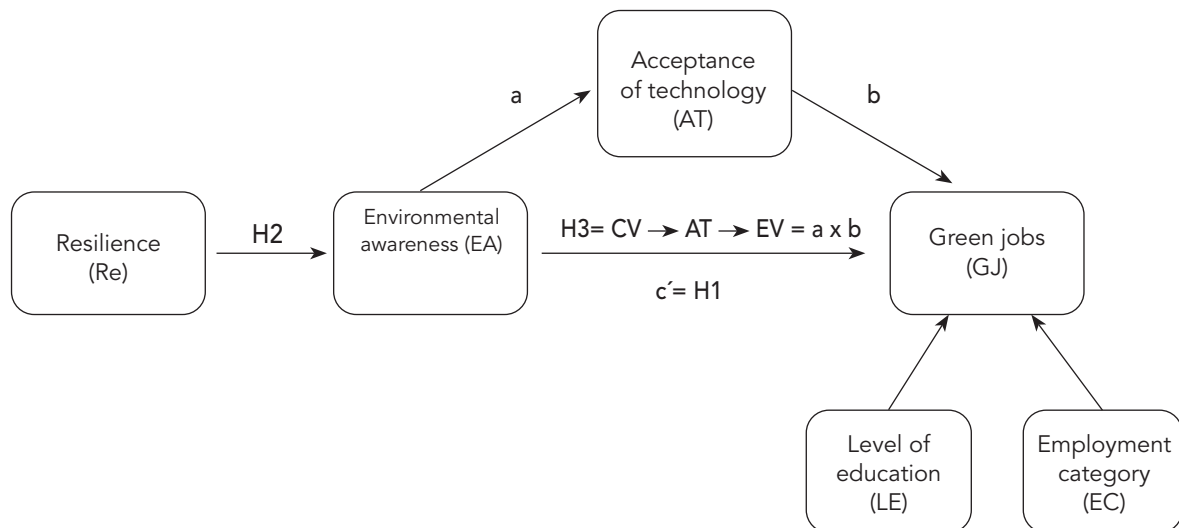
tain technologies (digital payments) mediate the relationship between people's ecological awareness and their actual green habits, enabling more environmental actions (An *et al.*, 2022). By analogy, in a company, an environmentally committed employee will need appropriate tools and systems to translate their good intentions into concrete actions, such as using carbon footprint monitoring software or optimizing processes via Internet to save resources, among other measures. If the employee shows resistance to new technologies, it is likely that even with high environmental awareness, they will fail to improve the environmental performance of their role. In fact, a lack of technological acceptance among workers has been identified as one of the main barriers to the adoption of sustainable practices and green digital transformation in organizations (Leesakul *et al.*, 2022). Conversely, a workforce open to technological innovation will be more able to implement environmental improvement initiatives. For all these reasons, Hypothesis 3 is proposed.

*H3: Technology acceptance positively mediates the relationship between employee green awareness and outcomes in terms of green jobs.*

Additionally, the theoretical model considers two relevant demographic control variables: employee educational level and job position. Educational attainment is typically associated with greater environmental knowledge and a better understanding and implementation of sustainable practices (Dietz *et al.*, 1998; Franzen and Meyer, 2010; Gifford and Nilsson, 2014), as well as being linked to the green competencies required by ecological transitions. For its part, the type of position/hierarchical rank largely determines opportunities for action: managers and executives have formal levers to make decisions and introduce green policies, while operational roles channel sustainability through everyday behaviors and environmental citizenship (Boiral, 2009; Norton *et al.*, 2015). Controlling for education and position allows for better isolation of the effects of the study's main variables (awareness, resilience, and technology) on green jobs/behaviors, reducing confounding biases linked to differences in human capital and discretionary power (Norton *et al.*, 2015).

Figure 1 illustrates the analytical model and the hypotheses proposed in the study.

**Figure 1**  
Proposed analysis model



Note. Own elaboration.

## Materials and Methods

### Study participants

The sample consisted of 302 workers ( $n = 302$ ) residing in Spain, selected through voluntary non-probabilistic random (convenience) sampling. Potential respondents were invited to participate through online outreach, professional social media, and institutional contacts, and access was provided via a link to the questionnaire. Participation was anonymous and voluntary, and before starting the survey, an informed consent form was presented explaining the study's objective, the academic nature of the research, and the aggregated use of the data. The inclusion criteria were: (a) being of legal age, (b) being employed at the time of response, and (c) completing the questionnaire in its entirety; as exclusion criteria, incomplete or duplicate records, or those from participants who did not meet the above criteria, were discarded. Data collection was conducted via an online survey between November 2024 and May 2025, following a cross-sectional design.

### Instruments and Measures

To measure the constructs, items were taken and adapted from instruments previously used in the literature, distinguishing between established psychometric scales and empirical operationalizations. Specifically, resilience was measured using an abbreviated version of the CD-RISC scale (Connor and Davidson, 2003), which has been extensively validated in previous studies. Technology acceptance was operationalized using items from Weiss *et al.* (2016), adapted to the organizational context of this study. The constructs of green jobs and green skills were measured using items derived from previous work on the green transition and the sustainable labor market (Martínez-Fernández *et al.*, 2010; Renfors, 2024), adapted for individual surveys.

The final questionnaire consisted of 53 items. Of these, 16 items corresponded to the main constructs analyzed in the model (tech-

nology acceptance: 4 items; resilience: 4 items; green jobs: 4 items; green skills: 4 items), while the rest were allocated to control variables, job characteristics, and sociodemographic data. All items were translated and adapted into Spanish, following a semantic adaptation procedure and evaluated using seven-point Likert scales (1 = strongly disagree; 7 = strongly agree). A pilot test was conducted with 30 employees to assess the clarity, comprehensibility, and cultural appropriateness of the items, with minor wording adjustments made prior to the final data collection.

### Data Analysis

The objective of the research was to model the relationship between environmental awareness and green jobs, incorporating two key theoretical extensions: (a) the association between resilience and green awareness, and (b) the mediating effect of technology on the link between environmental awareness and green jobs. Additionally, controls were held for educational level and job position. For this purpose, PLS-SEM with SmartPLS was adopted, following the recommendations of Hair *et al.* (2011), for the following reasons: (1) The main interest is to explain and predict the presence (or intensity) of green jobs based on green consciousness, considering resilience as an antecedent and technology as an explanatory mechanism (mediation). PLS-SEM maximizes the explained variance of the endogenous constructs. (2) PLS-SEM is appropriate for a sample size of 302 subjects and for variables measured on ordinal scales (Likert-type).

Given these methodological criteria, PLS-SEM with SmartPLS aligns with the explanatory nature of the study, accommodates mediation and formative specifications, and provides modern diagnostic tools to support robust conclusions on how resilience fosters green awareness and how technology mediates its translation into green jobs.

## Results and discussion

### Sample characteristics

The study was based on 302 participants and featured a business structure dominated by medium and large organizations: 43.0% come from companies with more than 99 employees and 39.8% from firms with 10–99 employees, while only 17.2% work in microenterprises (1–9 employees). By sector, Services (60.9%) predominated over Industry (39.1%). In terms of human capital, the sample is highly qualified: 59.5% hold a university degree, 35.5% have a high school diploma or vocational training, and 5.0% have a primary or secondary education. By job category, employees predominate (56.6%), followed by middle managers (23.5%) and executives (17.9%) (see Table 1).

The composition of the sample—which is dominated by medium- and large-sized organizations, features a greater presence of the service sector, and reflects a high level of edu-

cation—is appropriate and consistent with the study’s objective, as these are environments where sustainability is typically more institutionalized in the form of policies, procedures, and management tools, thereby increasing the likelihood, observing the translation of green awareness into pro-environmental practices and behaviors.

Likewise, the higher educational level facilitates the understanding of environmental initiatives and messages, reducing biases due to a lack of environmental literacy and allowing for a more precise evaluation of the individual mechanisms analyzed.

This configuration does not invalidate the findings but rather delimits their scope: the results are particularly informative for organizations with greater capacity to implement sustainability practices and constitute a relevant basis for future replication in microenterprises or sectors with a lower degree of environmental formalization.

**Table 1**  
*Study Participants*

Variables	N	%
<b>Company size</b>		
1 to 9 employees	52	17.2
10 to 99 employees	120	39.8
99+ employees	130	43.0
<b>Sector</b>		
Industrial	118	39.1
Services	184	60.9
<b>Level of education</b>		
Primary and secondary education	15	5.0
High school or vocational training	108	35.5
Bachelor’s degree	179	59.5
<b>Job category</b>		
Executive	54	17.9
Middle management	71	23.5
Clerk	177	56.6
N	302	100

*Note.* Own elaboration.

## Measurement Model

The first step in evaluating the measurement model was to analyze the reliability and validity of the indicators. As shown in Table 2, the com-

posite reliability indicates an adequate level of internal consistency for most constructs. Next, convergent validity and discriminant validity are examined.

**Table 2**  
*Measurement model results*

Construct	VIF	Factor loading	Cronbach's $\alpha$	FC	AVE
<i>Technology acceptance</i>			0.821	0.823	0.651
Trust in new technologies	1.871	0.929			
Readiness for new technologies	1.815	0.805			
Increased efficiency through technology	1.472	0.777			
Ease of use of technologies	1.882	0.816			
<i>Environmental awareness</i>			0.702	0.703	0.501
Integration of environmental legislation	1.384	0.708			
Reduction in consumption	1.815	0.702			
Innovative use of resources	1.349	0.738			
I understand the concept of "greenwashing"	1.146	0.701			
<i>Green jobs</i>			0.797	0.799	0.624
Opportunity for stable/sustainable employment	1.728	0.796			
Valuation of green companies	1.606	0.791			
Promotion of economic development	2.142	0.863			
Career opportunities	1.368	0.704			
<i>Resilience</i>			0.703	0.710	0.616
The emotionally strong person	1.506	0.783			
* The person who adapts to change	-	0.564			
The person is optimistic	1.318	0.819			
The person who handles unexpected events	1.323	0.750			

*Note.* VIF: Variance inflation factor, CR: Composite reliability, AVE: Average variance extracted. \* The item has a low factor loading and was therefore removed.

Convergent validity was assessed in Table 3 following Fornell and Larcker (1981), such that the average variance extracted (AVE) values must be  $> 0.50$  (Table 2). Multicollinearity was also verified: all variance inflation factors (VIF) were  $< 3.3$ , a threshold commonly accepted as indicative of the absence of problematic collinearity.

AVE was used for both convergent validity (Table 2) and discriminant validity (Table 3). The square root of the AVE (on the diagonal) was calculated and verified to be greater than the correlations between paired constructs. Additionally, the heterotrait-monotrait ratio (HTMT) was used in Table 3 to confirm discriminant validity; none of the values exceeded 0.90, thus meeting this criterion (Henseler *et al.*, 2015).

**Table 3**  
Results of the measurement model. Discriminant validity

	Fornell-Larcker criterion						Heterotrait-monotrait ratio (HTMT)					
	AT	EA	GJ	Re	LE	EC	AT	EA	GJ	Re	LE	EC
AT	0.807						AT					
EA	0.272	0.685					CV	0.370				
GJ	0.382	0.642	0.790				EV	0.471	0.853			
Re	0.509	0.374	0.281	0.785			Re	0.664	0.539	0.371		
LE	0.218	-0.282	-0.161	0.008	1.000		Ne	0.242	0.363	0.180	0.049	
EC	0.139	-0.225	-0.215	0.048	0.363	1.000	Cl	0.151	0.320	0.138	0.053	0.326

Note. TA: Technology Acceptance, EA: Environment Awareness, GJ: Green Jobs, Re: Resilience, LE: Level of Education, CL: Employment Category.

## Structural model

two models in the study related to structural evaluation.

Table 4 presents the main parameters of the

**Table 4**  
Structural model results

Relationships	Model 1			Model 2			Supports
	R <sup>2</sup> GJ=0.421			R <sup>2</sup> EA=0.139; R <sup>2</sup> AT=0.118; R <sup>2</sup> GJ=0.464			
	Trajectory coefficients	t-value	Confidence interval	Trajectory coefficients	t-value	Confidence interval	
H1: EA'GJ	0.636***	16.308	0.575; 0.702	0.438***	8.053	0.436; 0.644	Sí
H2: Re'EA				0.474***	7.078	0.291; 0.467	Sí
EA'AT = a				0.372***	5.540	0.179; 0.377	
AT'GJ = b				0.257***	4.629	0.171; 0.353	
Control variables							
LE	0.049	0.966	-0.050; 0.148	-0.021	0.426	-0.119; 0.077	
EC	-0.092	1.751	-0.195; 0.011	-0.122**	2.315	-0.227; -0.022	

Note. TA: Technology Acceptance, EA: Environment Awareness, GJ: Green Jobs, Re: Resilience, LE: Level of Education, CL: Employment Category.

Model 1 shows the total effect of green awareness on green jobs, which was significant ( $c = 0.636^{***}$ ). Model 2, which includes the mediating variable, shows how the effect of environmental awareness on green jobs decreases, although it remains significant when technology acceptance is included ( $c' = 0.438^{***}$ ). Therefore, H1 is supported, indicating that there is a positive and statistically significant relationship

between green consciousness and green jobs.

Furthermore, in the same Table 4 (in Model 2), a statistically significant effect can be observed between resilience and green consciousness ( $0.474^{***}$ ), which allows for the testing of H2, which states that resilience is significantly and positively related to green consciousness. To test H3, it was verified that paths a ( $0.372^{***}$ ) and b ( $0.257^{***}$ ) were statistically significant (see

Table 4). Thus, the apparent decrease in the direct effect and the magnitude of the regression coefficients for *a* and *b* indicated the potential indirect effect of green consciousness on green jobs, with technology acceptance as the mediating variable (H3).

To confirm Hypothesis 3, the indirect effect was evaluated. The results show partial mediation by technology acceptance in the relationship between green consciousness and green

jobs, as the direct effect remained significant, albeit with a smaller magnitude, while the indirect effect (H3) was also significant (0.070\*\*) (see Table 5). Likewise, the variance explained by mediation (VAM) was calculated, which determines the size of the indirect effect ( $a \times b$ ) relative to the total effect (*c*). When the VAF exceeds 20% (in this case, VAF = 28.66%; see Table 5), partial mediation is considered to exist (Hair *et al.*, 2014).

**Table 5**  
Structural model results, mediation effects

Relationship	Total effect on GJ (Model 1)					Direct effect on GJ (Model 2)					Indirect effect on GJ (Model 2)					
	Path	t	Lower	Upper	Hypothesis	Path	t	Lower	Upper	Hypothesis	Estimated point	t	Lower	Upper	Sig.	VAF
GJ	$c = 0.636^{***}$	16.308	0.558	0.689	H2	$c' = 0.438^{***}$	8.053	0.442	0.620	H3	0.070**	2.765	0.035	0.116	Yes	28.66 %
<b>Control variables</b>																
LE	0.002	0.040	-0.052	0.145		-0.058	1.142	-0.115	0.080							
EC	-0.067	1.480	-0.193	0.011		-0.037	0.780	-0.223	-0.016							

Note. GJ: Green jobs, LE: Level of Education level, EC: Employment category, BCCI: Bias-corrected confidence interval. VAF: Variance accounted for. Sig.: Significance.

Among the control variables, level of education (-0.037) was not significant; conversely, occupational category (-0.122\*\*) was significant. Therefore, as one moves from “Executive” to “Middle Management” and “Employee,” the value of the dependent (or latent) variable decreases.

In terms of explained variance, Model 1 shows moderate-to-high explanatory power for green jobs ( $R^2$  Green Jobs (GJ) = 0.421). By incorporating technological acceptance as a mediator (Model 2), the explained variance in green jobs increases to  $R^2$ GJ = 0.464, suggesting that the technological mechanism adds incremental explanatory power. Likewise, resilience explains a portion of environmental awareness ( $R^2$  Environmental Awareness (EA) = 0.139) and environmental awareness explains technology acceptance ( $R^2$  Technology Acceptance (TA) = 0.118), indicating that the model captures a chain of psychological and instrumental effects.

In terms of magnitudes, the total effect of environmental awareness on green jobs is high ( $c = 0.636$ ), and it decreases when mediation is introduced ( $c' = 0.438$ ), remaining significant, which is consistent with partial mediation. The indirect effect (EA'TA'GJ) is significant (0.070) and accounts for approximately 28.66% of the total effect (VAF), supporting the notion that technology acceptance acts as a relevant, though not exclusive, “bridge” for translating green awareness into green performance.

## Discussion of Results

### H1. Environmental awareness and its relationship with green jobs/behaviors

The first hypothesis posited a relationship between environmental awareness and green jobs (or behaviors). The results indicate that em-

employees' environmental awareness is positively and significantly associated with the performance of green jobs/behaviors. This pattern is consistent with established motivational frameworks, such as the Theory of Planned Behavior and the Value–Belief–Norm model, according to which personal attitudes and norms, when the individual perceives control and moral congruence, translate into intention and action (Ajzen, 1991; Bamberg and Möser, 2007).

From an organizational perspective, environmental awareness increases the priority of ecological goals and the alignment of values with sustainable routines, which facilitates both a preference for tasks with environmental content and the pro-environmental reconfiguration of the job (Norton *et al.*, 2015; Boiral, 2009). The existing literature supports this link: published meta-analyses and employee-level empirical studies have documented positive relationships between green attitudes and values and pro-environmental behaviors at work, including environmental citizenship and eco-initiatives, which in turn contribute to “greening” everyday activities (Paillé *et al.*, 2014; Katz *et al.*, 2022). In line with this, the results of the present study support H1.

### *H2. Resilience and its relationship with environmental awareness*

The second hypothesis proposed a relationship between resilience and employee environmental awareness. The results support this: greater resilience is associated with higher levels of environmental awareness. Resilience provides psychological resources, such as self-efficacy, hope, and optimism, which foster greater attentional breadth and a more active exploration of the environment, as predicted by resource conservation theory and the theory of expansion and construction (Hobfoll, 1989; Fredrickson, 2001).

In contexts of environmental change, such as the adoption of new routines or clean technologies, resilient individuals tend to reinterpret demands as manageable challenges and show a greater willingness to learn about impacts and

solutions, which can reinforce their environmental awareness. Previous evidence supports this relationship: studies on psychological capital, including published meta-analyses, have identified consistent associations between these resources and desirable attitudes and behaviors at work (Avey *et al.*, 2011). In line with this, the findings of the present study support H2.

### *H3. Technological acceptance as a mediator*

The third hypothesis proposed a mediating effect of technology acceptance between environmental awareness and green jobs/behaviors. Significant mediation suggests that technology acceptance acts as a hinge that helps transform environmental awareness into operational outcomes.

In line with the *Technology Acceptance Model* (TAM) and the *Unified Theory of Acceptance and Use of Technology* (UTAUT), perceived usefulness and ease of use condition intention and, ultimately, the actual use of technology (Davis, 1989; Venkatesh *et al.*, 2003). When applied to the field of sustainability, technologies and information systems geared toward environmental goals can reduce implementation friction and provide timely feedback, facilitating the translation of attitudes into pro-environmental behaviors. Thus, recent evidence suggests that technology can act as an intermediary mechanism between awareness and practice by expanding the repertoire of green actions that individuals perceive as feasible and executable (An *et al.*, 2022). Taken together, these arguments are consistent with the observed results and support H3.

### *Alternative Explanations and Conceptual Tensions*

Although the results are consistent with the proposed framework, there are alternative interpretations. First, the directionality between technological acceptance and green performance could be partially inverse or bidirectional: employees more exposed to digital tools or green practices might develop greater acceptance through familiarity or use, or both could

depend on unobserved organizational resources and priorities. Second, given the conceptual proximity between an active pro-environmental orientation and the willingness to adopt instrumental improvements, part of the association between environmental awareness and technological acceptance could reflect an underlying factor, such as a focus on innovation or continuous improvement. Finally, the negative effect of job category suggests that the “opportunity to act” (autonomy, discretion, access to tools) may condition the translation of attitudes into behavior, which opens the door to testing moderators and alternative models in future studies.

### *Control variables (educational level and occupational category)*

Regarding control variables, job category showed a significant and negative effect. This pattern can be interpreted as an effect of opportunities for action: as one moves down the hierarchy, the discretion to modify processes, reallocate resources, or prioritize environmental goals tends to decrease; in the absence of formal levers, pro-environmental attitudes may be less likely to translate into observable behavior. However, the association could also be capturing unobserved organizational conditions, such as the degree of environmental institutionalization, access to training and tools, supervisor support, or the sustainability climate of the department, which vary systematically by category and condition the actual capacity for action. Therefore, the effect suggests less of an “automatic” hierarchical gradient and more of a combination of autonomy, resources, and context that enables or restricts the execution of green behaviors (Boiral, 2009; Norton *et al.*, 2015).

For its part, educational level did not show significant effects in line with previous literature, and is interpreted primarily as a model adjustment variable, associated with differences in environmental literacy and the ability to process complex information.

### *Contributions to the Literature*

This study integrates frameworks of pro-environmental behavior and technology acceptance by demonstrating that the acceptance of green technologies acts as a mechanism that helps convert environmental awareness into green behaviors and jobs, providing an explanation for the gap between attitudes and behavior (Kollmuss and Agyeman, 2002; Davis, 1989; Venkatesh *et al.*, 2003). Furthermore, it situates environmental awareness within psychosocial resources by demonstrating the facilitating role of resilience, consistent with Resource Conservation Theory and the resource expansion and construction approach (Hobfoll, 1989; Fredrickson, 2001; Avey *et al.*, 2011).

### *Implications for management*

The findings suggest three levers directly linked to the estimated model: (1) developing and channeling environmental awareness toward specific tasks and routines, including clear objectives and practices, and operational communication of environmental goals; (2) strengthening resilience resources that facilitate openness to learning and persistence in the face of demands for change; and (3) increasing the acceptance and effective use of sustainability-oriented technologies through training, support, and user-centered design (Davis, 1989; Venkatesh *et al.*, 2003). In this way, these actions help ensure that pro-environmental attitudes translate into daily practice.

### *Conclusions*

The results show that environmental awareness drives the performance of green jobs and behaviors, and that resilience fosters the development of such awareness. Furthermore, technological acceptance acts as a key bridge for transforming pro-environmental attitudes into concrete actions. Therefore, organizations should promote ecological values, resilience, and user-oriented training/technologies to accelerate an effective sustainable transition.

From a management perspective, these results suggest treating sustainability as a matter of daily implementation, not just strategic formulation. To achieve this, action should be taken on three complementary ways: (1) clarifying what “green work” means in each role through operational objectives, simple indicators, and observable routines; (2) strengthen personal resources, such as resilience, that sustain persistence when cost, time, or workload pressures arise; and (3) provide tools and systems geared toward environmental goals that reduce friction, facilitate information sharing, and reinforce habits, such as decision guides, consumption tracking, or reminders of best practices. In this way, these actions increase the likelihood that environmental awareness will translate into verifiable and sustained performance.

This study has limitations that open up opportunities for further research. First, the cross-sectional design and the use of self-reports at a single point in time limit causal inference and increase the risk of common method bias and social desirability bias; to mitigate this, anonymous and voluntary participation was ensured, it was indicated that there were no right or wrong answers, and the academic purpose was emphasized; furthermore, the VIFs (also used as a diagnostic for collinearity) do not suggest that common method bias substantially distorts the estimates. Nevertheless, the results should be interpreted as associations consistent with the theoretical framework; therefore, future research should employ longitudinal designs or interventions, for example, training in green technologies or resilience programs, and multiple data sources (supervisors/peers, tool usage logs, objective impact metrics) and incorporate additional tests for common method bias, such as (i) a theoretically unrelated marker variable and (ii) the assessment of the prevalence of a single factor in exploratory analyses. Second, although robust errors were applied, endogeneity was not comprehensively addressed; future studies could use instruments or quasi-experimental designs to strengthen internal validity. Third, replication is warranted with additional tests of measurement validity (invariance) and with alternative models where appropriate. Fi-

nally, generalizability may depend on the context; future replications should be expanded to multisectoral and multilevel samples and incorporate contextual conditions not measured here (support/environmental justice, psychological safety, leadership) that could trigger the translation of attitudes into behavior.

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Authors	Contributions
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<b>Diego Sesma-Martín</b>	Conceptualization, research, methodology, original draft, writing. Review and editing.
<b>Claudia Tobías Marín</b>	Conceptualization, formal analysis, research, methodology, writing. Original draft, writing. Review and editing.
<b>Begoña Berges Cordón</b>	Conceptualization, data curation, formal analysis, methodology, original draft, writing.

## Statement on the use of artificial intelligence

The authors **DECLARE** that, in the preparation of the article titled: "Green Consciousness, Resilience, and Technology: Strategic Keys to Promoting Green Jobs in the Workplace," Artificial Intelligence (AI) was not used at any stage of the process.