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Effects of technostress on continuance commitment and organizational performance in Chilean higher education institutions

Efectos del tecnoestrés sobre el compromiso de continuidad y el rendimiento organizativo en instituciones de educación superior chilenas

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Abstract: in the digital age, the use of multiple technologies and the need to continuously adapt to different tools and platforms generate new pressures and demands for workers. In this context, the present study examines the effect of technostress and job satisfaction influence in continuance commitment and organizational performance in Chilean universities. To this end, a questionnaire previously adapted and validated from previous studies was administered to civil servants and administrative staff at universities in southern Chile who use digital technologies in their work. A total of 240 valid responses were obtained and analyzed using structural equations (PLS-SEM). The results show that technostress has a positive and significant effect on commitment to continuity, an atypical finding that contradicts the prevailing literature, which traditionally associates technostress with negative consequences on work attitudes. In addition, it was confirmed that job satisfaction is a determining factor in linking commitment and organizational performance. These findings contribute to the literature on technostress in university settings by demonstrating that, under certain institutional conditions, technostress can coexist with attitudes of adaptation and job retention. In addition, the results offer relevant information for promoting digitization strategies aimed at strengthening job satisfaction and people management in digitized environments.

Keywords: technostress, technology, job satisfaction, continuance commitment, organizational performance, universities, digitization, PLS-SEM.

Resumen: en la era digital, el uso intensivo de tecnologías y la necesidad de adaptarse de manera continua a las distintas herramientas y plataformas generan nuevas presiones y exigencias para los trabajadores. En este contexto, el estudio analiza el efecto del tecnoestrés y la satisfacción laboral en el compromiso de continuidad y el rendimiento en instituciones universitarias de Chile. Para ello, se aplicó un cuestionario adaptado y validado desde estudios previos, dirigido a funcionarios y administrativos de universidades del sur de Chile que utilizan tecnologías digitales en su trabajo. Se obtuvieron 240 respuestas válidas, analizadas mediante ecuaciones estructurales (PLS-SEM). Los resultados evidencian que el tecnoestrés presenta un efecto positivo y significativo sobre el compromiso de continuidad, lo que constituye un hallazgo atípico y contrario a lo reportado por la literatura predominante, que tradicionalmente asocia el tecnoestrés con consecuencias negativas en las actitudes laborales. Además, se confirma que la satisfacción laboral constituye un factor determinante en la vinculación del compromiso y el rendimiento organizativo. Estos hallazgos aportan a la literatura sobre el tecnoestrés en el ámbito universitario al demostrar que sus efectos no son homogéneos ni exclusivamente negativos, sino dependientes del contexto institucional. Desde una perspectiva práctica, los resultados ofrecen información relevante para el diseño de estrategias de digitalización orientadas a fortalecer la satisfacción laboral y la gestión de personas en entornos digitalizados.

Kalabras clave: tecnoestrés, tecnología, satisfacción laboral, compromiso de continuidad, rendimiento organizativo, universidades, digitalización, PLS-SEM.

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Introduction

Technology in the digital age has transformed personal and work environments through the integration of resources, tools, and processes that drive innovation and organizational efficiency (Saidy *et al.*, 2022). Higher education institutions have progressively incorporated information systems and technologies for both academic activities and administrative management, particularly through the implementation of academic management platforms, institutional information systems, digital processing tools, and collaborative work solutions (Suresh and Mohanty, 2023). This process has required their employees to acquire new digital skills and continuously adapt to the technological changes accompanying the transformation of higher education (Heo and Jung, 2020). The COVID-19 pandemic has added complexity to the international debate on the risks and benefits associated with technologies, especially in the educational and academic context (Suresh and Mohanty, 2023).

The intensive incorporation of technologies has also generated new stress among workers, a phenomenon identified as technostress. This manifests itself in the face of technological complexity, insecurity regarding one's own digital skills, the need for constant training, the pressure for constant connectivity, and continuous technological changes—factors that can generate stress and overload in users (El Kiassi and Jahidi, 2023). These conditions directly affect well-being, behavior, and job satisfaction (Wang and Rashid, 2022).

Technostress manifests in business, organizational, and technological contexts, as well as in the field of higher education. Although the literature on technostress has grown in recent years, empirical studies conducted in higher education institutions, particularly in Latin America, remain limited (Herrera-Sánchez *et al.*, 2023) and focus on specific contexts where the dynamics of digitalization, working conditions, and institutional resources exhibit different characteristics (Saidy *et al.*, 2022). This limits regional empirical research, hindering the understanding of the impact of technostress on the well-being and performance of university staff, creating a significant gap that this study aims to address. The literature has emphasized the negative effects of technostress on organizational commitment, leaving potential adaptive responses by workers to technological demands in specific institutional contexts largely unexplored.

In Chile, digitalization has advanced, and more than 94% of households report having their own internet access, with digital connectivity serving as a basic service and a tool that

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enables a range of rights such as health, education, and work (Subsecretaría de Telecomunicaciones, 2023). However, the adoption of technologies in education was forcibly accelerated by the COVID-19 pandemic, driving the implementation of virtual and hybrid modalities (Comisión Económica para América Latina y el Caribe, 2021). However, faculty and administrative staff adopted these technologies without possessing the necessary digital skills, creating a significant barrier to digital transformation processes in higher education. Hence, it is interesting to study how technostress shows in university institutions where digitization impacts both the management and work life of their staff.

In this context, the present study aims to analyze the effect of technostress and job satisfaction on the commitment to continuity and organizational performance of administrative staff at Chilean universities, using a structural equation model based on partial least squares (PLS-SEM).

The main contribution of this study is to demonstrate a positive effect of technostress on continuance commitment, a finding that contrasts with the classical literature and raises the need to revise traditional theoretical models of technostress in light of digital transformation processes in higher education institutions. Furthermore, it offers valuable insights to design strategies related to people management and the use of digital technologies in the digital transformation process.

The study is structured as follows: first, a review of the literature on technostress, job satisfaction, continuance commitment, and organizational performance; followed by the study's hypotheses. Next, the methodology used, the main results of the analysis, and their corresponding discussion are presented. Finally, the conclusions and limitations of the study.

Technostress

According to Salanova (2003), technostress is the inability of individuals to cope with new technologies and can be interpreted as a mismatch between the user's demands and available resources, or as affective symptoms and anxiety related to technologies. For De Oliveira *et al.* (2025), it constitutes mental stress created by using technology, resulting in strong emotional responses associated with fear and anxiety. According to Al-Ansari and Alshare (2019), the experience of technostress is due to the attempt to manage digital technologies that are constantly changing and evolving in work environments. In this sense, technostress is directly associated with the stress experienced by people due to the use of digital technologies, and is considered a negative psychosocial effect of using these tools. This phenomenon is structured into three main dimensions: (a) affective symptoms linked to anxiety and fatigue, (b) unfavorable attitudes toward digital technologies, and (c) negative perceptions regarding one's own technological skills and competencies (Salazar-Concha *et al.*, 2022).

The creators of technostress state five dimensions: technological overload, technological intrusion, technological complexity, technological insecurity, and technological uncertainty (Ragu-Nathan *et al.*, 2008). These dimensions measure the levels of technostress experienced by employees in organizations that arise from the use of technology in the workplace, manifested through the development of physiological and psychological reactions (Kumar, 2024).

Technological overload describes an increase in the pace and volume of work, causing employees to perform their tasks at a rapid pace and spend more time on work. Technological intrusion refers to the invasive effect of technologies, which generates feelings of control and excessive connection to them, with the aim of staying in contact with supervisors and coworkers both during and outside work hours (Tarafdar *et al.*, 2015). When technology is perceived as too complex to perform a task or integrate into work, an employee may experience technological complexity. This is associated with situations where users feel inadequate regarding their skills and are forced to devote time and effort to learning and understanding aspects of the technology, causing the employee to feel intimidated and insecure (Harunavamwe

and Ward, 2022). Technological insecurity refers to what workers experience when they fear losing their jobs and being replaced by new information systems or by better-trained employees with greater technological skills (Tarafdar *et al.*, 2019). Technological uncertainty describes situations or feelings of bewilderment caused by constant changes and updates in technology (Alcas *et al.*, 2019; Herrera-Sánchez *et al.*, 2024).

Job satisfaction, commitment to stay, and organizational performance

Job satisfaction is understood as the degree to which employees' needs are met by the organization, reflecting their well-being within the work environment. This construct is associated with the favorable or unfavorable emotions and perceptions that employees develop toward their professional activity (Alcas *et al.*, 2019). It also represents an emotional state arising from employees' appreciation of their jobs and the organization in relation to the stimuli they receive that allow them to meet their needs and expectations in exchange for performing their duties within the organization (Pedraza, 2020). In this sense, it constitutes an element that directly influences occupational health, commitment, and workers' positive attitudes toward their performance (Chiang-Vega *et al.*, 2021).

Commitment to continuity reflects the extent to which employees perceive the costs associated with leaving the organization. According to Becker (1960), an individual incurs a choice cost when they tie their interests to a process, or activity from which it is difficult to disengage in the medium term through a binding choice, such as, in this case, the decision to leave the organization. According to Santiago-Torner (2023), the reasons why an employee with a high level of continuity commitment remains in the organization include the following: a) fear of losing job stability, b) loss of status or professional recognition, c) the psychological and material costs associated with severing the employment relationship, and d) the accumulation of personal and social investments that employees make over time. According to Morais *et al.* (2024), factors such as congruent leadership and organizational support practices intensify commitment among employees with greater tenure. Taken together, these findings demonstrate that tenure and personal investment contribute to maintaining the employment relationship and a sense of belonging within the organization.

Organizational performance has been analyzed from various perspectives, considering the influence of multiple factors and conditions both within and outside the organization. In this regard, over time, non-financial and/or subjective variables have been incorporated to capture information about the organizational environment (Valenzuela and Martínez, 2015). According to Gutterman (2023), the measurement of organizational performance should not be limited solely to traditional financial indicators but should incorporate non-financial factors such as internal processes, innovation, and employee well-being. In the education sector, organizational performance improves processes and the quality of service offered to the academic community, which must be aligned with human resource competencies (Iqbal *et al.*, 2025); this is an important element for improving digitalized environments, where such performance depends largely on adaptability and technological innovation (Tarafdar *et al*., 2019).

Research hypothesis

The literature acknowledges the existence of a relationship between technostress and organizational factors, particularly in digitalized contexts (Tarafdar *et al.*, 2015; Zumayyah *et al.*, 2023; Kumar, 2024; Magno, 2020). Employees' perceptions of technologies can influence their assessment of various work- and organization-related aspects, affecting their work attitudes and behaviors, which are directly linked to individuals' organizational commitment (Heo and Jung, 2020). From this perspective, technostress is a relevant phenomenon for understanding workers' attitudinal responses in digitized environments.

The uncertainty stemming from continuous changes and updates in technologies can generate concerns and additional pressure on

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employees, which encourages them to engage in ongoing training (Harunavamwe and Ward, 2022). In the educational field, technostress takes on specific characteristics associated with institutional processes and the demands inherent to academic work. Empirical evidence shows that professors experienced difficulties adapting to online classes, reporting work overload associated with a lack of experience and insufficient technological competence compared to in-person teaching (Alcas *et al.*, 2019). Authors such as Herrera-Sánchez *et al.* (2024) note that university faculty who combine teaching duties with administrative responsibilities face high work demands, which can impact their well-being and professional performance. Technological overload and the demand for constant connectivity negatively affect faculty members' occupational well-being, organizational commitment, and job satisfaction (Saidy *et al.*, 2022).

Technostress tends to lead to a decrease in organizational commitment (Tarafdar *et al.*, 2015). However, continuance commitment follows a different logic than affective and normative commitment, as it is primarily linked to the perception of costs associated with leaving the organization (Santiago-Torner, 2023). Therefore, the relationship between technostress and continuance commitment may be moderated by the institutional context, the type of tasks, and job stability conditions. In highly digitized university settings, exposure to technological demands can coexist with perceptions of job continuity, professional adaptation, and the need for continuous updating (Hessari *et al.*, 2024), resulting in differentiated effects on continuance commitment. In this regard, even though technostress can undermine work well, and emotional connection to the institution (El Kiassi and Jahidi, 2023), it can also increase the perception of organizational dependence in contexts characterized by contractual stability, cumulative technological specialization, and limited external job alternatives (Taneja and Singh, 2018). Under these conditions and considering the features of the Latin American university context, growing technological demands may reinforce administrative staff's decision to remain, which leads to the following hypothesis:

H1: Technostress has a significant effect on administrative staff's commitment to remain with the organization.

Recent literature confirms that job satisfaction is associated with higher levels of organizational commitment and a greater intention to remain, highlighting the role of commitment as a mechanism that reinforces the positive effects of job satisfaction and reduces turnover intention (Wang and Rashid, 2022; Arce and Rojas, 2020; Olvera *et al.*, 2022). This link is explained by the fact that job satisfaction reinforces perceptions such as organizational justice, the quality of interpersonal relationships, and identification with institutional values (Olvera *et al.*, 2022). Research in higher education indicates that job satisfaction positively influences organizational commitment, which is associated with higher levels of retention and performance in the university context (Wang and Rashid, 2022). Furthermore, job satisfaction among academic and administrative staff is related to greater institutional identification, lower turnover, and better perceived performance, especially in contexts of organizational change and digitalization (Chiang-Vega *et al.*, 2021; Olvera *et al.*, 2022).

However, these effects do not operate in isolation but are shaped through interlinked relationships between work attitudes and organizational outcomes. In this regard, Arce and Rojas (2020) argue that satisfied and committed employees demonstrate greater retention within the organization and, furthermore, adopt prosocial behaviors oriented towards achieving institutional objectives. In this regard, Hernández *et al.* (2024) state that a high degree of job satisfaction has beneficial effects on organizational performance, as it can act as either a driver or a hindrance to achieving organizational objectives. Consequently, employee job satisfaction has a positive impact on organizational performance.

Job satisfaction has been linked to improvements in the quality of institutional services, reduced turnover, and greater effectiveness in digital processes. In the context of digital transformation in Chile, satisfied employees are more willing to use institutional information systems,

which positively impacts overall organizational performance. Therefore, job satisfaction and commitment to continuity can act as precursors to performance by fostering alignment between personal and institutional goals. Based on the above, the following hypotheses are proposed:

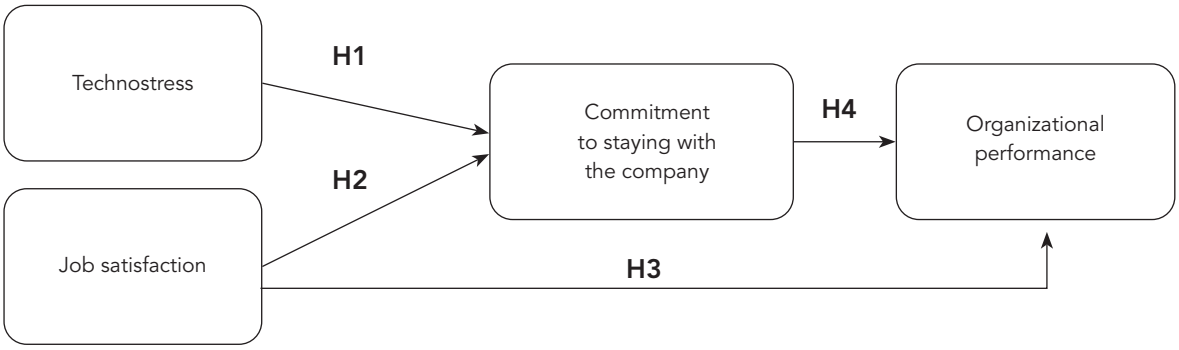
H2: Job satisfaction among administrative staff positively affects commitment to stay.

H3: Job satisfaction among administrative staff positively affects organizational performance.

H4: The continuity commitment of administrative staff has a positive effect on organizational performance.

Figure 1 shows the research model.

Figure 1.
Research Model



Materials and Methods

The study aims to validate the proposed hypotheses through an empirical analysis conducted in higher education institutions. To this end, a questionnaire adapted to the Chilean educational context and validated by experts in information technology and educational management studies was applied. Data were collected between April and July 2024 by administering a questionnaire via the *Google Forms* platform. Additionally, in-person visits were conducted with staff members to increase the response rate.

Participants were selected through non-probabilistic convenience sampling, targeting administrative staff at universities located in southern Chile—specifically in the Biobío and Ñuble regions—who use digital technologies in the performance of their duties and who had been with the organization for at least one year. Participation was voluntary, and all participants provided their informed consent prior to completing the questionnaire.

The measurement instrument was developed based on a review of the specialized literature. To assess technostress, the scale proposed by Tarafdar *et al.* (2019) was used; job satisfaction and commitment to continuity were measured using the scale by Ragu-Nathan *et al.* (2008); while organizational performance was evaluated following the proposal by Cardona and Calderón (2006). All scales used a five-point Likert-type format, with response options ranging from "strongly disagree" (1) to "strongly agree" (5).

The sample consisted of 240 valid responses, which was deemed adequate for structural equation modeling given the number of observed and latent variables in the model (*A-priori Sample Size Calculator for Structural Equation Models*), ensuring stable and reliable estimates of the model parameters.

Descriptive analysis of the data was performed using SPSS software (version 29), and

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partial least squares structural equation modeling (PLS-SEM) was conducted using SmartPLS software (version 4.0). The PLS-SEM technique is widely used in the social sciences for predictive and exploratory models, as it allows analyzing estimates between latent dependent and independent variables (Hair *et al*., 2017).

First, the measurement model—which is reflective and second-order—was evaluated following a two-phase procedure. In the first phase, the first-order dimensions of the technostress construct were evaluated by analyzing the validity and reliability of the items comprising them. Subsequently, these dimensions were grouped to form the second-order construct, whose validity was also evaluated. Once the measurement model was evaluated, the structural model was analyzed, testing the proposed hypotheses (Hair *et al.*, 2017).

Results and Discussion

This section presents and discusses the main results of the study. Table 1 shows the descriptive analysis of the sample, revealing that 56.7% of the participants were men and 43.3% were women. Regarding age range, the largest proportion was concentrated on those aged 30–39 (25.0%) and 40–49 (23.3%), indicating a sample largely composed of individuals in the middle stages of their working lives. Regarding work experience, the sample is heterogeneous, as 29.6% of participants have less than 5 years of experience, 35.0% have between 6 and 10 years, 12.5% have between 11 and 15 years, and 22.9% have more than 20 years of work experience. Half of the participants have a university degree, and the distribution by job category reflects the structure of non-academic staff at Chilean universities, where administrative and technical positions requiring higher education predominate. Finally, the geographic distribution is evenly balanced between the Bío-Bío (45.8%) and Ñuble (54.2%) regions.

Table 3

Selection patterns and trade-offs between attributes (n=391)

Category	Subcategory	Number	Percentage
Gender	Female	104	43.3
	Male	136	56.7
Age Range	Up to 30 years 30 años	17	7.1
	30–39 years	60	25.0
	40–49 years	56	23.3
	50–59 years	44	18.3
	60 or older	38	15,8
Years of working experience	1 to 5 years	71	29.6
	6 to 10 years	84	35.0
	11 to 15 years	30	12.5
	16 to 20 years	12	5.0
	Over 20 years	55	22.9
Employment status	Executive	5	2.1
	Professional	38	15.8
	Technician	80	33.3
	Administrative	117	48.8

Level of education	High school	5	2.1
	Vocational training	38	15.8
	College graduate	120	50.0
	Master's	31	12.9
	Doctor	10	4.2
Type of institution	Public	223	92.9
	Private	17	7.1
Region	Bío-Bío	110	45.8
	Ñuble	130	54.2

First-order measurement model

To evaluate the first-order model, the dimensions comprising the multidimensional techno-stress variable were analyzed, considering the associated items. Both the first-order dimensions and the second-order variables were modeled reflectively in accordance with the recommendations of Hair *et al.* (2017). As part of the results shown in Table 2, it was found that the indicator loadings meet the model's individual reliability requirements, with a value of 0.60 required because this is an exploratory study (Hair *et al.*, 2017). The composite reliability and the extracted average variance meet the accepted parameters (values below 0.70 and 0.50, respectively), satisfying the reliability of the constructs and convergent validity.

Table 2
Loadings, composite reliability, and first-order AVE

	Construct/Item	Loadings	Composite Reliability	Extracted Variance Mean (AVE)
	Technological Overload (SOBT)		**0.833**	**0.868**
TOL1	Technology forces me to work much faster.	0.682		
SOBT2	Technology forces me to do more work than I can handle.	0.840		
SOBT3	Technology forces me to work under very tight deadlines.	0.645		
SOBT4	I am forced to change my work habits to adapt to new technologies.	0.772		
SOBT5	I have a heavier workload due to the complexity of the technology.	0.817		
	Technological Invasion (INVT)		**0.933**	**0.915**
INVT1	I spend less time with my family because of technology.	0.879		
INVT2	I have to stay in touch with my job even during my vacations because of technology.	0.858		
INVT3	I have to sacrifice my vacations and weekends to keep up with new technologies.	0.852		
INVT4	I feel like technology is taking over my life.	0.823		

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Technological complexity (COMPT)			**0.889**	**0.904**
COMPT1	I do not know enough about technology to do my job satisfactorily.	0.811		
COMPT2	It takes me a long time to understand and use new technologies.	0.802		
COMPT3	I do not have enough time to study and update my tech skills.	0.806		
COMPT4	I find that the new administrative staff or employees at this institution know more about computer technology than I do.	0.808		
COMPT5	I often find it too difficult to understand and use new technologies.	0.818		
Technological insecurity (INST)			**0.777**	**0.847**
INST1	I feel a constant threat to my job security due to new technologies.	0.713		
INST2	I have to constantly update my skills to avoid being replaced.	0.702		
INST3	I feel threatened by coworkers with new technological skills.	0.844		
INST4	I do not share my knowledge with my coworkers for fear of being replaced.	0.684		
INST5	I feel that there is less knowledge sharing among coworkers for fear of being replaced by technology.	0.672		
Technological uncertainty (INCT)			**0.976**	**0.892**
INCT1	There are always new developments in the technologies we use at our institution.	0.862		
INCT2	There are constant changes to our institution's software.	0.821		
INCT3	There are constant changes to the computer hardware at our institution.	0.816		
INCT4	There are frequent updates to the computer networks at our institution.	0.782		
Job satisfaction (JS)			**0.885**	**0.927**
SL1	I enjoy doing the things I do at work.	0.913		
SL2	I feel proud to do my job.	0.900		
SL3	My job is enjoyable.	0.886		
Commitment to continuity (CC)			**0.839**	**0.878**
CC1	Much of my life would be disrupted if I decided to leave my institution right now.	0.842		
CC2	At this moment, staying at my institution is a matter of both necessity and desire.	0.780		
CC3	I believe I have very few options to consider leaving this institution.	0.770		
CC4	It would be very difficult for me to leave my institution right now, even if I wanted to.	0.814		
Organizational performance (RO)			**0.957**	**0.949**
RO1	Our institution is successful.	0.833		
RO2	Institutional objectives are fully achieved.	0.823		
RO3	Administrative staff and civil workers are generally satisfied with working at the institution.	0.663		

RO4	The institution is respected by the external community.	0.717
RO5	Our institution understands the needs of its clients.	0.807
RO6	Our institution's future performance is secure.	0.785
RO7	Our institution is capable of reinventing itself.	0.821
RO8	Our institution evolves faster than other universities.	0.723
RO9	Our institution is a model of good coordination.	0.790
RO10	Our institution reacts quickly to changes in the environment.	0.776
RO11	Our institution responds quickly to decision-making in a proactive and informed manner.	0.790
RO12	Our institution is a results-oriented entity.	0.705
RO13	Our institution's resources are used efficiently.	0.734

Note. Prepared by the authors based on results obtained using Smart PLS and the cited authors.

To assess discriminant validity, the Hetero-trait-Monotrait (HTMT) criterion was used. As shown in Table 3, the HTMT values obtained fall within the thresholds recommended in the literature (Henseler *et al.*, 2015), which supports the discriminant validity among the constructs analyzed.

Table 3

First-order discriminant validity (HTMT)

	COMP	CC	INCT	INST	INVT	RO	SL
Continuity commitment (CC)	0.226						
Technological uncertainty (INCT)	0.271	0.125					
Technological insecurity (INST)	0.699	0.188	0.340				
Technological invasion (INVT)	0.425	0.304	0.122	0.465			
Organizational performance (RO)	0.088	0.319	0.245	0.123	0.093		
Job satisfaction (SL)	0.106	0.350	0.085	0.203	0.058	0.396	
Technological overload	0.380	0.201	0.206	0.244	0.528	0.130	0.125

Nota. Prepared by the author based on the results of the Smart PLS software.

Second-order measurement model

The results of the evaluation of the second-order measurement model are presented in Tables 4 and 5. Table 4 shows adequate internal consistency and convergent validity of the constructs. However, the "Technological Uncertainty" dimension was removed because it had a factor loading lower than the values recommended in the literature.

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Table 4
Factors, composite reliability, and second-order AVE

Construct/Item	Loadings	Composite Reliability	Extracted Variance Mean (AVE)
Technostress		0.751	0.822
Technological overload	0.648		
Technological invasion	0.815		
Technological complexity	0.754		
Technological insecurity	0.706		
Job satisfaction		0.885	0.927
SL1	0.913		
SL2	0.900		
SL3	0.886		
Commitment to continuity		0.838	0.878
CC1	0.841		
CC2	0.773		
CC3	0.774		
CC4	0.819		
Organizational performance		0.957	0.949
RO1	0.832		
RO2	0.823		
RO3	0.663		
RO4	0.717		
RO5	0.807		
RO6	0.785		
RO7	0.821		
RO8	0.723		
RO9	0.790		
RO10	0.776		
RO11	0.790		
RO12	0.705		
RO13	0.734		

Note. Prepared based on the results obtained in Smart PLS.

As shown in Table 5, the HTMT values obtained meet the quality criteria recommended in the literature (HTMT < 0.85), confirming the discriminant validity among the constructs of the second-order model.

Table 5
Second-order discriminant validity

	CC	RO	SL
Commitment to Continuity (CC)			
Organizational Performance (RO)	0.319		
Job satisfaction (SL)	0.350	0.396	
Technostress	0.367	0.125	0.137

Note. Prepared by the author using Smart PLS.

Structural model

The evaluation of the structural model includes explained variance (R^2), path coefficients (path coefficients ≥ 0.20), and predictive relevance (Q^2). Statistical significance, estimated using the bootstrapping technique (Hair *et al.*, 2017), was used to validate the hypotheses.

The results are presented in Table 6, showing that all proposed relationships are statistically significant, which supports the formulated hypotheses. Regarding the model's explanatory power (R^2), 18.4% of the variance in continuity commitment and 19.5% of organizational performance were explained by technostress and job satisfaction. These values reflect moderate explanatory power according to Cohen (1988), making them suitable for exploratory research and in complex organizational contexts such as higher education institutions (Bueno-Broterson *et al.*, 2025). Regarding predictive power, the values are positive (Q^2predict), confirming that the model adequately predicts out-of-sample data.

Table 6
Path coefficients, statistical significance, and predictive relevance

Relationship	Path Coefficient	Standard Deviation	t-statistics	Statistical significance (p-values)	Response
H1: Technostress -> Commitment to continuity	0.300	0.058	5.190	0.000	Se soporta
H2: Job satisfaction -> commitment to stay	0.309	0.068	4.562	0.000	Se soporta
H3: Job satisfaction -> Organizational Performance	0.338	0.061	5.532	0.000	Se soporta
H4: Commitment to continuity -> Organizational performance	0.198	0.068	2.928	0.003	Se soporta
	R^2	R^2 adjusted	Q^2predict		
Continuity constraint	0.184	0.177	0.155		
Organizational Performance	0.195	0.188	0.148		

Note. Prepared using the results of Smart PLS (p-value <0.05).

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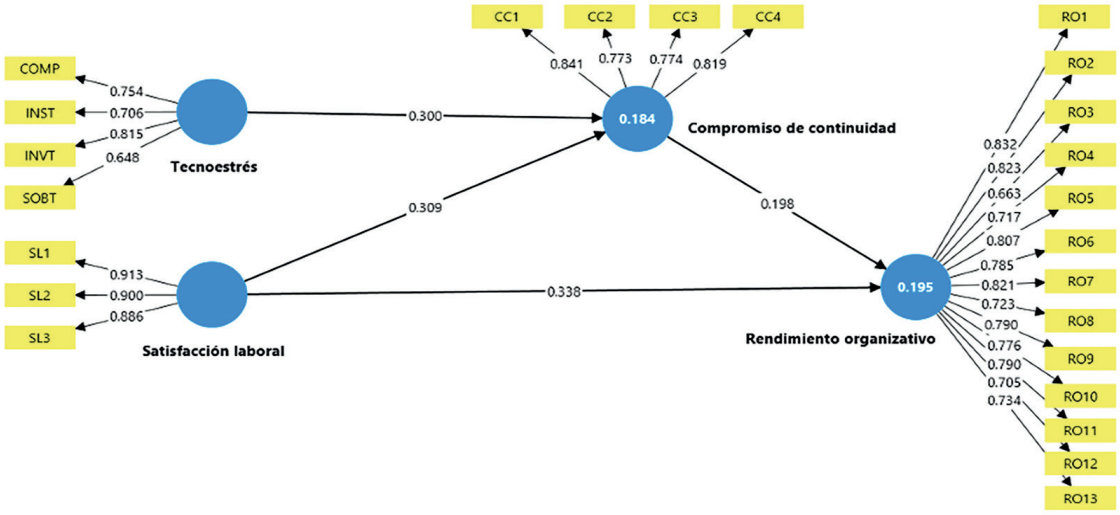
The results of the structural model are shown in Figure 2.

Figure 2
Structural model



Note. Prepared using Smart PLS SEM (version 4.0).

The results obtained provide insight into the impact of technostress and organizational commitment in work contexts characterized by increasing digitalization. A relevant finding is the positive and significant effect of technostressors on continuance commitment, which contrasts with the classical literature, which has generally reported negative effects of technostress on the various dimensions of organizational commitment (Molino *et al*., 2020; Kot, 2022; Tarafdar *et al.*, 2019). However, previous studies have noted that certain technological demands can act as challenging stressors, promoting adaptation and learning processes at work (Kumar, 2024; Saavedra, 2023; Cuervo-Carabel *et al.*, 2020). In this line, Mujtaba and Reis (2013) argue that technostress in educational contexts may reflect problem-solving efforts and the development of creative solutions aimed at improving professional performance. From this perspective, the effects of technostress are not uniform but depend on the organizational context, available resources, and worker characteristics (Califf *et al.*, 2015). This finding suggests that administrative staff in Chilean universities develop adaptive responses to growing digital demands, reinforcing their decision to remain at the institution. It is important to note that this effect should not be interpreted as a strengthening of affective commitment, but specifically of continuance commitment, which is based on the perception of costs associated with leaving the organization (Santiago-Torner, 2023).

From this perspective, contextual and institutional factors become significant. According to Hessari *et al.* (2024), under certain conditions, employees can respond proactively to technostress, transforming it into a stimulus for commitment and improved performance. For Kumar (2024), when support mechanisms and effective organizational management are in place, technostress can promote adaptive learning processes that strengthen the worker's bond with the organization. Likewise, Tarafdar *et al.* (2019) argue that the use of information systems under positive or motivating pressures can increase efficiency (for example, by working faster, reducing time, effort, and errors) and improve individual performance by generating perceptions of stability and continuity.

The descriptive results of the study reinforce this interpretation, as respondents positively value aspects associated with the use of technologies, such as the exchange of technological knowledge among coworkers, the speed of task execution, and involvement in technology optimization processes. These adaptive responses can be interpreted as prerequisites for stability and professional development in highly digitized university contexts, explaning the positive effect of technostress on commitment to continuity.

On the other hand, job satisfaction and commitment to continuity show a positive and significant relationship. This result is consistent with previous studies, demonstrating that satisfied employees develop more favorable attitudes toward their organization and tend to remain with it, especially in the university setting where job stability and satisfaction influence the decision to stay (Wang and Rashid, 2022; Pedraza *et al*., 2021; García-Tamariz *et al.*, 2024). Continuance commitment showed a positive and significant effect on organizational performance, a finding consistent with that reported by Arce and Rojas (2020) in educational contexts, where staff retention is linked to higher levels of institutional performance. Job satisfaction also showed a positive and significant effect on organizational performance, in line with previous research, highlighting its influence on productivity and organizational outcomes (Magno *et al.*, 2020; Hernández *et al.*, 2024; Pedraza, 2020; Pedraza *et al.*, 2021). These results reinforce the idea that job satisfaction is important for the retention of administrative staff and the achievement of organizational objectives in Chilean universities.

Conclusions

The objective of this research was to analyze the effect of technostress and job satisfaction on commitment to continuity and organizational performance among administrative staff at Chilean universities. The results suggest that technostress can coexist with attitudes of adaptation and continuity in the face of growing digital demands. This phenomenon does not always act as a dysfunctional factor; rather, it can even strengthen employees' commitment to the organization under appropriate conditions of institutional support, training, and participation.

From the perspective of the university context, technological demands can be interpreted as functional challenges associated with job stability and continuity, particularly in higher education institutions characterized by relatively stable labor relations and progressive digitization processes. This finding is especially relevant for university management, as it demonstrates that the way in which digital transformation processes are designed and supported directly impacts staff loyalty to the institution.

Regarding the proposed research model, while it captures part of the dynamics of commitment to continuity and organizational performance, there are other contextual and individual factors not incorporated into the model (e.g., leadership, organizational climate, institutional culture) that could increase its explanatory power (R2). Hence, future research could delve deeper into the analysis of moderating effects such as length of service, type of institution, and level of digital experience.

From a theoretical perspective, this research reinforces the need to revise classical theoretical models of technostress in light of current digital transformation processes, especially in education. The findings challenge the traditional view of technostress as exclusively a negative antecedent, showing that, under certain organizational conditions, it can become a catalyst for commitment to continuity and job retention.

From a practical perspective, the results offer useful guidance for human resource management in higher education institutions, highlighting the importance of designing digitalization strategies accompanied by organizational support, continuous training, and opportunities for participation. Within this framework, the findings suggest that technostress can be managed institutionally in a way that it fosters adaptation and job retention. The controlled activation of such demands, accompanied by support policies and training, allows for addressing the high-pres-

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sure environments inherent to digital transformation without compromising the well-being of administrative staff. Thus, the results reinforce the need for university management to address technostress as an adaptive resource that contributes to strengthening commitment to continuity and institutional performance.

Finally, among the study's limitations are the use of non-probability sampling, participant selection, and the focus on universities in southern Chile, which limits the generalizability of the results. However, this geographical limitation opens opportunities for future comparative research in other regions of the country, as well as in different institutional contexts and levels of digital maturity, especially given the atypical result observed in the main hypothesis.

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Author Declaration - CRediT Taxonomy

Authors	Contributions
Sergio Araya-Guzmán	Conceptualization, methodology, formal analysis, original draft, writing.
Yarisel Bueno-Broterson	Methodology, writing, data management, original draft. Review and editing.
Marcela Guiñez-Pérez	Writing, research. Review and editing.
Cristian Salazar Concha	Conceptualization, methodology, formal analysis. Review and editing.

Statement on the use of artificial intelligence

The authors **DECLARE** that, in the preparation of the article titled: "Effects of technostress on commitment to continuity and organizational performance in Chilean higher education institutions," artificial intelligence (AI) was not used at any stage of the process.