

Digital Transformation, Sustainable Management, and Perceptions of Competitiveness in exporting companies in Emerging Countries

Brenda Isabel Pazo Llenque¹ , Miguel Ángel Panta Jacinto² , Percy Hugo Quispe Farfán³ , Jairo Correa Mejía⁴ ,
Liz Margoth Masias Arias⁵ , Carlos Osorio Delgado⁶ , Rosita Elena Cordova Godos⁷ 
^{1,2,7}Universidad César Vallejo, Perú, bpazol@ucvvirtual.edu.pe, mpantaj@ucvvirtual.edu.pe, rosielcordovagodos@gmail.com
^{3,6}Universidad Peruana de Ciencias Aplicadas, Perú, percy.quispe@upc.pe, carlos.osorio@upc.pe
⁴Universidad El Bosque, Colombia, jcorreame@unbosque.edu.co
⁵Universidad Privada del Norte, Perú, lizmasiasarias@gmail.com

Abstract– Within the framework of foreign trade, participating organizations seek to become more competitive and develop capabilities that enable them to adapt to changing environments. In this sense, digital transformation is a fundamental element in remaining relevant in the market. This research analyzed the relationship between digital transformation, sustainable management and the perception of competitiveness among exporting firms in emerging countries that are heavily dependent on foreign trade. The main finding was the identification of a moderate positive relationship between digital transformation and the perception of competitiveness in exporting firms, with a correlation coefficient of 0.640 and a significance level of less than 0.05; furthermore, it was found that there is no significant correlation between digital transformation and sustainable management, nor between perceived competitiveness and sustainable management, which yielded coefficients of 0.048 and 0.008, respectively. The study employed a quantitative cross-sectional correlational design, and questionnaires were used as instruments to measure each variable (validated and reliable according to Cronbach's alpha).

Keywords-- Digital transformation, sustainable management, perception of competitiveness, exports.

I. INTRODUCTION

Digital transformation is a key element in the business world, as adopting new technologies helps improve companies' operational efficiency, providing multiple benefits such as greater process accuracy and resource optimization, which in turn leads to maximized productivity and effective sustainable management. However, it was observed that only 30% of SMEs implemented technological adaptation for the automation of their processes [1]. This shows that in order to implement new technologies, they face major challenges related to the technological gap, which limits their proper adaptation. This is a major disadvantage, as digital transformation has become established as a decisive factor that benefits business competitiveness [2].

Internationally, organizations often face obstacles when adopting digital transformation, including information preservation and security, lack of trust in new technologies, high initial investments required, and technological barriers due to obsolete systems [3]. In addition, low R&D development, lack of financial resources, human capital, and organizational management are reasons why, although progress is being made

in key areas such as cybersecurity (70%) and cloud services (66.2%), entities have very low levels of implementation of new digital tools, suggesting that they still have a long way to go before digitization. as digital transformation cuts across the entire organization and constitutes a change that will affect different areas of a business. It must therefore be carried out gradually, always managing all the impacts it will have on the organization and its employees, who will play a fundamental role in incorporating new technologies and digitization practices, as this may require the acquisition of new digital skills and competencies [4].

Likewise, in Bogotá, Colombia, the situation is no different: export companies have very low levels of digital transformation. For this reason, several programs have been implemented with the aim of reducing barriers and bridging the digital divide. These programs are geared toward the collaborative adoption of modern technologies such as robotics, cloud computing, IoT, big data, and blockchain, which are revolutionizing the way organizations operate, produce, and distribute their products through smart technology, enabling them to remain competitive and manage their sustainability.

Similarly, in the Piura region, according to research carried out at AGN SuperFoods E.I.R.L., it was found that digital transformation is essential for different organizational processes, as it streamlines and improves the steps involved in various industrial aspects, thereby enhancing business competitiveness. However, adapting to this new change represents a significant challenge for the organization, as adopting this new model will involve fundamental changes in the way it works, as well as a cultural change that starts at the top and involves all its employees. This situation highlighted the difficulties they face, as only 73% of Peruvian companies mention that they still have initial digital transformation processes underway, and 56% of these have not yet begun this process. [5]

In Querecotillo, Sullana, there is an export company that faces serious disadvantages caused by the poor implementation of new digital technologies. In a business environment where competition is intensifying, digital transformation has become essential for driving sustainable management to and increase efficiency, competitiveness, and productivity. However, the lack of digital technology means that the company cannot take

advantage of advanced tools such as smart sensors, artificial intelligence, and cloud systems to monitor and manage production, making the process less efficient and more prone to human error.

Thus, the research problem was formulated through the following question: What is the relationship between digital transformation, sustainable management, and the perception of competitiveness in export company in emerging countries? Specific questions included: How is digital transformation related to sustainable management in export company? How is digital transformation related to the perception of competitiveness in export company? How is sustainable management related to the perception of competitiveness in export company?

This study is linked to SDG 8 Decent Work and Economic Growth, specifically target 8.2, as it addresses the issue of digital transformation in export company and explains how this is essential to boost productivity by improving operational efficiency and promoting competitiveness. In addition, this study also aligned with SDG 12, Responsible Consumption and Production, since the integration of digital technologies not only optimizes processes but also promotes more efficient resource management, promoting sustainable practices in production and export. This ensures that economic growth is accompanied by more balanced and sustainable development.

Taking all of the above into account, the following general objective was established: To determine the relationship between digital transformation, sustainable management, and the perception of competitiveness in export company in emerging countries. The specific objectives were: To establish the relationship digital transformation and the sustainable management in the export sector, to determine the relationship digital transformation and to the perception of competitiveness in the export sector, and to determine the relationship the sustainable management and to the perception of competitiveness in export company.

Taking the research objectives as a reference, the general hypothesis was formulated that there is a positive relationship between the variables of digital transformation, sustainable management, and the perception of competitiveness in export company, while the null hypothesis posits that there is no significant relationship between these variables. Likewise, as specific hypotheses, it was proposed that there is a significant relationship between digital transformation and sustainable management, while the corresponding null hypothesis indicates that no such relationship exists. Regarding the perception of competitiveness, the hypothesis was established that it is positively related to the digital transformation of export company, with the null hypothesis being that there is no significant relationship between the two variables. Finally, the hypothesis was formulated that sustainable management is related to export company perception of competitiveness, while the null hypothesis maintains that there is no significant relationship between them.

After researching and selecting information related to the research problem, the most notable previous studies and theoretical elements were presented, both internationally and nationally.

With regard to digital transformation, multiple studies were found, including those by [6], [7], [8], [9], and [10], which investigated the different benefits that digital transformation brings to an organization. In these studies, each author applied a mix of methodologies to carry out their research, including descriptive and quantitative literature reviews and quantitative meta-analytic reviews. Similarly, in their results, they mention that the adoption of new technologies is the secret recipe for different organizations to improve their overall performance and remain viable in the long term, implying that to increase their competitiveness, they must promote their digital transformation.

Similarly, in other studies such as [11], [12], [13], and [14], which used qualitative, narrative literature review, and descriptive methodologies, the main drivers of digital transformation initiatives in different organizations were investigated, and it was concluded that the drivers are both external and internal. For external drivers, both past and future, the focus will always be on maintaining competitiveness and ensuring the survival of companies, while for internal drivers, the focus is on reducing costs and time, improving processes, and reducing human error. They also mention that digital technologies are changing the “rules of the game” in many sectors, as new ways of competing and new ways of strategizing have been created. Therefore, without the right mindset for change, appropriate digital routines, and structural changes, digital transformation efforts will fail.

In turn, in the studies by [15], [16], [17], and [18], which used a quantitative methodology, the authors mention that digital transformation has become a predominant necessity in companies, as it allows for streamlining and improving the steps involved in various industrial aspects, thus enhancing their business competitiveness. However, they found that organizations often face obstacles when adopting digital transformation, including data protection and security, trust, initial investment, technological barriers, R&D, lack of financial resources, human capital, organizational management, senior management's attitude toward experimentation, and lack of digital skills. This is why most entities still have very low levels of implementation of new digital tools, suggesting that they have a long way to go.

In the same vein, in a context of rapid digital evolution, [19] they highlight that consumer and investor expectations are broadening their concept of value creation, which ultimately requires adapting business models towards sustainable management, promoting a balance between economic development, social equity, and environmental sustainability. On the other hand, [20] they highlight that technology is changing many sectors towards the digital sector, which requires professionals to have the necessary skills and education focused on job sustainability. According to [21] and

[22], their literature review articles on this shift toward digitalization point out that it requires solutions that balance operational efficiency with environmental and social sustainability. In this way, the authors highlight the urgent need to integrate sustainability and prepare professionals with digital and sustainable skills to face the challenges of a constantly evolving labor market.

With regard to the digital transformation variable, [23] used Davis's technology acceptance model (TAM) theory in his study, which seeks to explain how users come to use and accept different technologies. He establishes two main reasons for this: the first refers to the perception of usefulness, understood as the level at which an individual believes that a technology optimizes their professional performance. The second relates to perceived ease of use, which is the degree to which an individual believes that using a technology will be effortless.

On the other hand, to explain the variable perception of competitiveness, [24] mentions the Resources and Capabilities theory proposed by [25], who states that these "dynamic capabilities" are fundamental for organizations to mobilize their resources and capabilities effectively. These, in turn, are crucial for companies to adapt to changes in the environment, especially in terms of digital transformation, as they allow for the integration, construction, and reconfiguration of internal resources to take advantage of emerging opportunities and face threats. In this sense, productivity, innovation, and efficiency become key elements: sustainability seeks practices that minimize environmental impact, efficiency optimizes resources to strengthen productivity, and improves innovation capacity, as it allows companies to remain relevant in a constantly evolving market.

Similarly, the theory of competitive advantage, developed by [26], explains how companies can establish a favorable position in their sectors through strategies such as cost leadership, differentiation, and market focus. This theory emphasizes the importance of a company reinventing itself and adapting to the constant changes in each market. Conceptually, it is essential and necessary to differentiate oneself from competitors by offering added value in organizational processes, as evidenced in the results. In addition, it highlights the role of business model innovation in value creation, and applied to the context of digital transformation, it examines how digital technologies can be leveraged to improve competitive advantage.

Once the theories were presented, the variable of digital transformation was conceptually defined, citing [27], who in his literature review research used an exploratory study methodology to propose a definition of digital transformation, concluding that it is the adaptation that a company must make to thrive in the digital environment. This process integrates digital knowledge with certain traditional industry methods, with the aim of differentiating the offering to customers and achieving high levels of efficiency, competitiveness, and profitability. In addition, these authors highlight some key factors that help to better understand digital transformation in

organizations, which is why the following dimensions were presented to measure the variable: change management, digital skills, and technological innovation.

In the same vein, it is important to conceptually define the terms related to the variable perception of competitiveness, which according to [28] is the ability of a company to provide products or services that surpass those of its competitors, arising from the combination of productivity, efficiency, and digital innovation, which are essential for the effective adoption of business model innovation. Thus, the dimensions and indicators presented for the first dimension, productivity, are: increasing and improving productivity and economic growth; for the second dimension, innovation, the indicators are: number of technological innovations and number of process innovations; and for the dimension of efficiency: satisfaction time, responsiveness, and management.

II. METHODOLOGY

The research carried out was applied in nature, as it addressed a specific problem faced by the organization with regard to digital transformation, process automation, and digital literacy. It also addressed how digital transformation relates to sustainable management and the competitiveness of exporting companies, since, according to [29], all knowledge generated by basic research is used in applied research. Therefore, it can be said that this type of study incorporates all existing knowledge in a given field to try to solve specific problems. In addition, it was developed using a quantitative approach, since it was proposed to measure and analyze real data in the context of exporting companies. As pointed out by [30], who explains that this approach is characterized by being measurable, allowing data to be represented in numbers, figures, and percentages, which facilitated analysis through statistical procedures.

At the same time, it adopted a non-experimental research design, as the information collected was analyzed, focusing on measuring and observing the correlation between the variables, without intervening in the elements of the study, as mentioned by [31], who stated that in non-experimental research there is no direct manipulation of the variables or control over the conditions of the study, so only observation and data collection take place without intervening in the situation.

In addition, the study had a cross-sectional design, as it evaluated the relationship between digital transformation, sustainable management and the perception of the organization's competitiveness at a specific moment in time, without the need to wait for long periods of time. In relation to this, [32] mention that cross-sectional designs only measure variables within a specific time frame, implying that the study will only be applied at a specific moment in time.

Finally, the study was correlational in scope, since the variables of digital transformation, sustainable management and perception of competitiveness were evaluated together, which made it possible to determine the degree of relationship between the two, as mentioned in [33], which states that the

main objective of correlational studies is to identify whether there is a relationship between two variables.

With regard to the population, [34] defined it as a group of subjects, units, or objects of interest, which may include people, objects, transactions, or events that are of interest to study. We thus defined the study population as consisting of 40 workers at the Peruvian organic banana export company and 25 workers at the Colombian coal exporting company, and their selection was based on the following exclusion and inclusion criteria.

The inclusion criteria were: employees belonging to the accounting, treasury, human resources, logistics and export, certification, production, and general management departments, who had also worked at the export company for more than two years. Exclusion criteria were: workers not belonging to the accounting, treasury, human resources, logistics and export, certification, production, and general management departments, or interns, and those who had been with the export company for less than two years.

Similarly, with regard to the sample and sampling, a census sample was used, since according to [35] a census sample is equivalent to the total population and is used when the study population is small, i.e., less than 30 individuals. For this reason, the present study used a sample of 40 workers from the organic banana agro-export company from Peru and in the case of Colombia, 25 workers from the coal exporter company.

In line with the same line of thinking regarding data collection techniques and instruments, surveys and questionnaires were used as techniques and instruments, respectively. According to [36], surveys are a method used in research to collect data from a group of people with the aim of achieving specific goals. In addition, it mentions that the questionnaire is a research instrument composed of a series of questions addressed to individuals to respond to the objectives of the study. A questionnaire previously validated by expert judgment was used. Similarly, Cronbach's alpha was applied to determine the reliability of the instrument, yielding a reliability coefficient of 0.904 for the digital transformation questionnaire, 0.943 for the competitiveness questionnaire and 0.81 for sustainable management questionnaire.

In relation to the method used to analyze the data, Microsoft Excel was first used to generate a database based on the responses obtained through the questionnaire, which were recorded on a Likert scale, assigning a numerical value to each option selected by the respondents. Next, the SPSS program was used to facilitate the correct analysis of the data, the creation of pivot tables, and the various statistical tests, allowing us to identify the level of reliability of the instrument to be used and the correlation between the variables.

III. RESULTS

Digital transformation has become a key factor in strengthening sustainable management and the competitiveness of organizations, particularly in sectors such as exports. The objective of this section is to present, clearly and precisely, the results obtained regarding the relationship between the

variables studied: digital transformation, sustainable management, and the perception of competitiveness. To this end, statistical analyses were used to identify the degree of correlation and determine whether it is significant. The results provide a quantitative basis for understanding how the components of digital transformation and sustainable management can affect the level of competitiveness of exporting companies.

CORRELATION BETWEEN DIGITAL TRANSFORMATION, SUSTAINABLE MANAGEMENT AND PERCEPTION OF COMPETITIVENESS

With regard to the overall objective, which is to determine the relationship between digital transformation, sustainable management, and the perception of competitiveness in exporting firms, the results show that the only statistically significant relationship is between digital transformation and the perception of competitiveness, with a correlation coefficient of 0.640 and a significance level of 0.000 ($p < 0.05$), indicating a moderate positive relationship. This means that as companies strengthen their digitalization processes, their perception of competitiveness also improves.

However, when analyzing the relationship between sustainable management and the other variables, it is observed that it does not show a significant relationship with digital transformation ($\rho = 0.048$; $p = 0.701$) or with the perception of competitiveness ($\rho = 0.008$; $p = 0.950$), since in both cases the significance level is greater than 0.05. Therefore, although one of the relationships between variables is significant, it cannot be asserted that there is a positive and significant joint relationship among the three variables evaluated. Consequently, the general hypothesis is partially accepted, given that digital transformation does influence the perception of competitiveness, but sustainable management does not show a significant association with the other two variables within the organizations studied.

TABLE I
CORRELATION BETWEEN DIGITAL TRANSFORMATION AND SUSTAINABLE MANAGEMENT

Spearman's rho		Digital Transformation	Sustainable Management
Digital Transformation	Correlation coefficient	1,000	,048
	Sig. (two-tailed)	.	,701
	N	65	65
Sustainable Management	Correlation coefficient	,048	1,000
	Sig. (two-tailed)	,701	.
	N	65	65

With regard to the first specific objective, which aims to establish the relationship between digital transformation and sustainable management in exporting companies, the results show a correlation coefficient of 0.048 and a significance level of 0.701 ($p > 0.05$), thus demonstrating that there is no

significant relationship between the two variables; consequently, the null hypothesis is accepted and the specific hypothesis is rejected, as this result indicates that, within the companies analyzed, actions related to digital transformation are not yet aligned with environmental, social, or economic sustainability strategies. In other words, although there may be certain technological advances or process automation, these are not necessarily being used to optimize resource use, reduce environmental impacts, or strengthen sustainable practices within the organization.

Likewise, this result could be due to the fact that companies are still in an early stage of technology adoption, focusing their efforts primarily on improving operational and administrative processes rather than on integrating sustainability objectives. In the international context, this represents a significant limitation, as these markets currently demand increasingly competitive companies that incorporate technology and sustainability together to ensure productive efficiency and environmental responsibility.

TABLE II
CORRELATION BETWEEN DIGITAL TRANSFORMATION AND PERCEPTION OF COMPETITIVENESS

Spearman's rho		Digital Transformation	Perception of competitiveness
Digital Transformation	Correlation coefficient	1,000	,640**
	Sig. (two-tailed)	.	,000
	N	65	65
Perception of competitiveness	Correlation coefficient	,640**	1,000
	Sig. (two-tailed)	,000	.
	N	65	65

** . The correlation is significant at the 0.01 level (two-tailed).

Based on the results presented in Table 2, it can be observed that the correlation between digital transformation and the perception of competitiveness is moderately positive and significant, with a coefficient of 0.640 according to Spearman's Rho coefficient. This indicates that greater digital transformation is associated with greater competitiveness, primarily due to the significant benefits that digitization brings. This finding reflects that when exporters effectively manage aspects such as change management, improving their workers' digital skills, and investing in technological innovation, positive outcomes in terms of competitiveness are generated, which are reflected in indicators such as productivity and efficiency.

Furthermore, a two-tailed significance value of 0.000 was obtained, confirming that this relationship is statistically significant, representative, and can be generalized to the entire population. Similarly, since the significance level of 0.000 is less than 0.05 ($0.000 < 0.05$), the null hypothesis is rejected and the alternative hypothesis is accepted, meaning that there is a significant relationship between digital transformation and the

perception of competitiveness, which supports the validity of the following statement: investing in digital transformation can be key to improving exporters' competitiveness in the market.

TABLE III
CORRELATION BETWEEN SUSTAINABLE MANAGEMENT AND PERCEPTION OF COMPETITIVENESS

Spearman's rho		Sustainable Management	Perception of competitiveness
Sustainable Management	Correlation coefficient	1,000	,008
	Sig. (two-tailed)	.	,950
	N	65	65
Perception of competitiveness	Correlation coefficient	,008	1,000
	Sig. (two-tailed)	,950	.
	N	65	65

Finally, regarding the third specific objective, which aimed to determine the relationship between sustainable management and the perception of competitiveness, a correlation coefficient of 0.008 and a significance level of 0.950 ($p > 0.05$) were obtained, indicating that there is no significant relationship between the two variables, and thus the corresponding null hypothesis is accepted. This result highlights that sustainability-related practices are not yet perceived by employees as a determining factor in improving business competitiveness within the organizations under study.

IV. DISCUSSIONS

Digital transformation is a key factor in boosting competitiveness and improving sustainable management among exporters. As noted in the background section, the implementation of digital technologies improves an organization's efficiency, competitiveness, and profitability [37]. Based on the results obtained from the questionnaires, it is evident that both companies have begun to incorporate digital management systems, as well as monitoring platforms and other tools, which has allowed them to increase their operational efficiency. This has not only improved their ability to meet demand but has also strengthened their image among international business partners and customers, which directly impacts their level of competitiveness. However, it has also become evident that they are neglecting sustainable management, highlighting the need to integrate sustainable strategies more effectively with digitalization processes to achieve truly comprehensive business competitiveness.

According to the findings of this study, which aimed to determine the relationship between digital transformation and the perception of competitiveness among exporting companies, a moderate and significant positive correlation was observed between the variables, with a coefficient of 0.640 based on Spearman's Rho coefficient. These results suggest that greater digital transformation is associated with greater

competitiveness. This finding also indicates that when exporters effectively manage aspects such as change management, the development of digital skills among staff, and the incorporation of technological innovations, they can improve their level of competitiveness, which manifests itself in increased productivity and greater operational efficiency. The results obtained are consistent with those reported by [38], who found a high positive correlation of 0.859. The authors assert that, to achieve an efficient digital transformation, the adoption of digital technology and the management of digital culture must be properly integrated with the company's various processes, thereby strengthening its business competitiveness.

Similarly [39], they argued that companies in the textile sector are implementing digitization processes that are reflected in significant advances in digital transformation through their ability to adapt to the technological and cultural changes demanded by the current environment. It is therefore highlighted that this improvement in competitiveness is an essential factor for the sustainable success of organizations, as it allows them to remain relevant in increasingly dynamic and demanding sectors. Along the same lines, [40] concluded that if organizations want to increase their competitiveness, they must first improve their digital transformation, which will depend on investment, the adoption of digital technologies, and cultural and social changes within the organization. On the other hand, [41] Oduro et al. (2023), based on their meta-analytic review, found that digital technologies have a moderate impact on company performance but a much greater impact on innovation, which demonstrates the great importance of digital technologies, as they are the secret recipe for different organizations to improve their overall performance and remain viable in the long term, implying that to increase their competitiveness, they must drive their digital transformation.

With regard to the specific objective of determining the relationship between sustainable management and the perception of competitiveness in exporting firms, the results showed that there is no significant correlation, suggesting that both firms are prioritizing immediate economic and operational considerations over long-term sustainable strategies, which limits the perception of their impact on competitiveness. These results are supported by the findings of [42], whose research indicates that proper sustainability management and the adoption of technology directly impact business performance. They also note that exporting firms are demonstrating strong dynamism in leveraging dynamic capabilities for long-term technology adoption, which has a positive impact on their business competitiveness. Similarly, [43] notes that sustainable management involves adopting a new perspective on the various aspects of business operations, implying that if organizations wish to survive and thrive in today's world, they must focus on long-term innovation; but to do so, the organization and its leaders must be flexible, adaptable, quick to react, and capable of reorganizing their talent, resources, and competencies in order to generate new opportunities that enhance their business competitiveness.

Accordingly, [44] points out that without the right mindset to manage sustainability, the efficient implementation of digital routines, and the necessary structural modifications, attempts at digital transformation will not succeed, as these new, better-equipped organizational forms help to create value, which is reflected in the creation of a competitive advantage for the organization. With regard to the results of [45], who mention three basic capabilities that are necessary for organizations to transform digitally and thus strengthen their competitiveness, among which we have digital detection, reconfiguration, and digital leverage, these capabilities are key aspects for a successful transformation. Similarly, [46] emphasizes in its research the main drivers of digital transformation in organizations, which are external and internal. Regarding external drivers, both past and future, the focus will always be on maintaining competitiveness and ensuring the survival of companies through sustainable management, while, in the case of internal drivers, the focus will be on reducing costs and time, improving processes, and reducing human error.

With regard to the first objective, which aimed to establish the relationship between digital transformation and sustainable management in the export sector, the results showed that there is no significant relationship between the two variables. This indicates that, among the exporting companies analyzed, digital transformation is not yet directly linked to practices aimed at organizational sustainability. However, various studies suggest that digital transformation and sustainability should be developed in a complementary manner within modern organizations. In this regard, [47], [48], [49], and [50] agree that digital transformation requires professionals with digital skills adapted to new business models, as these competencies enable the optimization of processes, improved operational efficiency, and the promotion of innovation within organizations. Likewise, they argue that technological literacy and the strengthening of digital capabilities contribute to sustainable business performance, as they facilitate the identification of opportunities and challenges related to digitalization and the efficient management of resources; furthermore, they emphasize that digital competencies must be integrated with social and environmental sustainability criteria to promote a more balanced and comprehensive business development.

These On the other hand, [51] and [52] argue that technological innovation and the integration of digital technologies enable significant improvements in processes, products, and services, fostering more efficient and sustainable operations. They also emphasize that digital connectivity and the overcoming of organizational barriers are fundamental elements for optimizing resources and strengthening companies' ability to adapt to dynamic and competitive environments. From this perspective, technology represents not only a tool for increasing productivity but also a means of developing sustainable organizational practices.

Similarly, [53] and [54] assert that digitalization and sustainability are redefining organizations' business models, particularly in small and medium-sized enterprises seeking to

adapt to the demands of the global market. The authors highlight that digital technologies enable the generation of sustainable value, strengthen competitiveness, and promote long-term organizational changes. Furthermore, they note that many companies are incorporating basic digital technologies and business systems as part of their innovation and sustainability strategies.

V. CONCLUSIONS

It is concluded that digital transformation, sustainable management, and the perception of competitiveness are partially related in both of the exporting companies analyzed, as the results showed that there is only a positive and significant relationship between digital transformation and the perception of competitiveness, while sustainable management did not show a significant relationship with the other variables studied.

With regard to the first specific objective, it is concluded that there is no significant relationship between digital transformation and sustainable management in exporting companies, as a Spearman correlation coefficient of 0.048 and a significance level of 0.701 ($p > 0.05$) were obtained. This demonstrates that the implementation of technological tools and digital processes within companies is not yet oriented toward sustainable practices related to the efficient use of resources, environmental sustainability, or social responsibility.

With regard to the second specific objective, the study concludes that there is a moderate and significant positive relationship between digital transformation and the perception of competitiveness among exporting firms, with a Spearman correlation coefficient of 0.640 and a significance level of 0.000 ($p < 0.05$). This indicates that strengthening digital transformation directly contributes to improving organizational competitiveness.

Finally, regarding the third specific objective, it is concluded that there is no significant relationship between sustainable management and the perception of competitiveness, as a Spearman correlation coefficient of 0.008 and a significance level of 0.950 ($p > 0.05$) were obtained. This indicates that the sustainable practices implemented within companies are not yet perceived as determining factors for improving organizational competitiveness. Furthermore, it is inferred that sustainability is not yet part of a consolidated business strategy that generates visible impacts on the organization's productivity, innovation, or efficiency.

ACKNOWLEDGMENT

A la Dirección de Investigación de la Universidad Peruana de Ciencias Aplicadas por el apoyo brindado para realización de este trabajo de investigación a través del incentivo UPC-EXPOST-2026-1.
Funding: Universidad Peruana de Ciencias Aplicadas / UPC-EXPOST-2026-1.

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