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*Scientific articles*

## **Agenda 2030 en el contexto de la educación superior y su incidencia en la contribución de la creación de valor compartido**

***2030 Agenda in the context of Higher Education and its impact on the contribution to the creation of shared value***

***A Agenda 2030 no contexto do ensino superior e o seu impacto na contribuição para a criação de valor partilhado***

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### **Resumen**

La educación superior es generadora de conocimiento y contribuye a la gestión de desarrollo sostenible desde su quehacer institucional y su vinculación con el entorno empresarial y social. El artículo, por tanto, tiene como objetivo evaluar el contexto de las universidades públicas en la Agenda 2030, y su incidencia en la contribución de la creación de valor compartido en el sistema empresarial en Los Cabos, Baja California Sur, México. La metodología utilizada fue un estudio de caso de enfoque mixto con alcance exploratorio y descriptivo. Para ello, se efectuaron entrevistas con actores claves en la educación superior, así como una encuesta al alumnado de las carreras de Administración, Turismo y Negocios. Los resultados muestran no solo que las universidades públicas están priorizando los objetivos de desarrollo sostenible (ODS) 4, 9, 5, 8 y 3, sino también que el alumnado conoce la Agenda 2030 y elabora proyectos para su consecución a un nivel básico. Por su parte, las empresas priorizan los objetivos de desarrollo sostenible 8, 3 y 5, y desarrollan estrategias transversales de creación de valor compartido. Se concluye, por ende, que la universidad y las empresas del destino internacional de Los Cabos tienen acciones iniciales a través de

buenas prácticas de gestión de desarrollo sustentable, lo que incide positivamente en la creación de valor compartido en la región.

**Palabras clave:** objetivos de desarrollo sostenible, enseñanza profesional, estrategia empresarial, turismo.

## Abstract

Higher education generates knowledge and contributes to sustainable development management through its institutional activities and links with the business and social environment. The article evaluates the context of Higher Education Institutions in the 2030 Agenda and its impact on the contribution to the creation of shared value in the business system in Los Cabos, Baja California Sur, Mexico. The methodology used was a mixed approach case study with an exploratory and descriptive scope. It included interviews with key stakeholders in higher education and a survey of management, tourism, and business students. The results showed that public higher education institutions prioritize SDGs 4,9,5,8,3, and 15; and promote SDG communication. Students have a good level of competence to manage projects is 3.6 (5). For their part, companies prioritize SDGs 8,3,5,12, and 2, and carry out cross-cutting CSV and SDG strategies. It is concluded that students from their academic training at the public IES developed the capacity to manage SDG projects for the creation of shared value, while companies in the tourist destination of Los Cabos carry out good practices of SDG management and creation of shared value.

**Keywords:** Sustainable Development Goal, University, strategies, Tourism Business System.

## Resumo

O ensino superior gera conhecimento e contribui para a gestão do desenvolvimento sustentável a partir do seu trabalho institucional e da sua ligação com o ambiente empresarial e social. O artigo, portanto, tem como objetivo avaliar o contexto das universidades públicas na Agenda 2030 e seu impacto na contribuição da criação de valor compartilhado no sistema empresarial de Los Cabos, Baja California Sur, México. A metodologia utilizada foi um estudo de caso de abordagem mista com escopo exploratório e descritivo. Para tal, foram realizadas entrevistas com atores-chave do ensino superior, bem como um inquérito a estudantes dos cursos de Administração, Turismo e Negócios. Os resultados mostram não

apenas que as universidades públicas estão priorizando os objetivos de desenvolvimento sustentável (ODS) 4, 9, 5, 8 e 3, mas também que os estudantes conhecem a Agenda 2030 e desenvolvem projetos para alcançá-la em um nível básico. Por sua vez, as empresas priorizam os objetivos de desenvolvimento sustentável 8, 3 e 5 e desenvolvem estratégias transversais para a criação de valor compartilhado. Conclui-se, portanto, que a universidade e as empresas do destino internacional de Los Cabos têm ações iniciais por meio de boas práticas de gestão do desenvolvimento sustentável, o que impacta positivamente na criação de valor compartilhado na região.

**Palavras-chave:** objetivos de desenvolvimento sustentável, educação profissional, estratégia empresarial, turismo.

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## Introduction

University institutions play a fundamental role as generators of knowledge for various actors in their community, which is why they have the potential to make significant contributions to the achievement of the sustainable development goals (SDGs) at the local level. In fact, the evident impact of the university on its immediate environment, the growing demand for education oriented to sustainability, and the promotion of links with various actors (such as government, industry, and the community) have promoted a comprehensive model of a responsible university committed to its community (Gaete and Álvarez, 2019). Thus, and from their substantive functions—that is, teaching, research, and extension of services (Viveros, 2023)—university institutions promote economic and social development (Fernández, 2018).

In this sense, the Sustainable Development Solutions Network (SDSN) of Australia, New Zealand and the Pacific (SDSN, 2017) maintains that the university plays a crucial role in the development of skills, competencies and attitudes in its students, who will be future professionals responsible for implementing sustainable development objectives in companies, while contributing with solutions and innovations in their environment.

From the above, it is understood the importance of raising awareness among universities regarding the 2030 Agenda to integrate it into the curricular map of their different careers, since this will serve to develop greater knowledge, awareness, and intentionality among students to contribute to the achievement of these objectives (Cosme, 2018). In other words, if students understand the SDGs from their academic training, upon entering the labor

market they will have developed transversal skills that will allow them to function as collaborators and entrepreneurs with a management perspective based on sustainability, an approach that is essential, especially in the context of the search for sustainable tourism.

Companies, according to the perspective of Porter and Kramer (2011), can generate shared value (CVC) by integrating solutions to social and environmental problems in the community where they operate into their business strategy and value chain. Therefore, it can be stated that current university students see themselves as future decision-makers in companies in the short term. Due to this, members of the university community – managers, administrators and teachers – must carry out actions in their daily work – teaching, networking and research – to address sustainable development and contribute to the comprehensive training of university students.

In this context, Los Cabos, located as the third most relevant tourist destination in Mexico, aligns its public policy with the 2030 Agenda through the Municipal Development Plan 2021-2024 (PMD of Los Cabos, 2021), which is based on a particular approach to the search for sustainable tourism, hence it is relevant to examine the environment of the public universities in the region.

From this, the following questions arise: what is the level of competence that students acquire in their university education to address the needs established by the 2030 Agenda? And what are the good practices, opportunities, and strengths of public universities in relation to the SDGs and the creation of shared value in the business system of the municipality of Los Cabos, from the perspective of university students?

Consequently, the research objective is set to evaluate the context of public universities within the framework of the 2030 Agenda and its impact on the contribution of the creation of shared value in the business system of Los Cabos, Baja California Sur, Mexico.

## Theoretical framework

The 2030 Agenda is made up of 17 sustainable development goals (SDGs), 169 goals and 232 indicators (Cendán , 2021), which have a global dimension by covering the participation of 193 countries that are members of the United Nations Organization ( UN) (2022). Since these are voluntary recommendations, each country responds according to its level of commitment by establishing specific goals and indicators (García *et al.* , 2021; Lange *et al.* , 2019; Mohamed and Noguchi, 2019). Figure 1 shows the 17 SDGs.

**Figure 1.** Sustainable Development Goals



Source: United Nations (2022).

In this context, the university stands as the starting point for inclusion due to its fundamental role as a trainer and developer of human capital, hence its collaboration through university extension and local development promotes the integration of a function social (Cosme, 2018). In correspondence with this, the 2030 Agenda highlights the functions of universities, specifically in terms of nine of the SDGs: 2, 3, 4, 7, 8, 9, 13, 14 and 17, so, to a certain extent, universities around the world are working on its implementation (International Association of Universities, 2020). Specifically, the contributions of universities focus on four key areas: 1) education, 2) research, 3) management, and 4) governance and social leadership. Therefore, it is pertinent that education is based on transversal principles and values of sustainable development and considers environmental, social and economic aspects in a global context with a local focus.

According to Serrate *he to*, (2019), the university must assume the commitment to implement the 2030 Agenda in its institutional activities, which, together with social responsibility, is presented as an agent of change that transforms influential actions in the graduation profile of the student body, so that they—whether in the roles of entrepreneurs, businessmen or collaborators—make decisions based on sustainability and the work context.

On the other hand, and from the perspective of teaching, Ramos (2020) explains that higher education institutions have a deep-rooted commitment to the development of competencies that address the 2030 Agenda. Thus, both the research generated at the university and the inclusion of study plans stand out as the main contributions of universities to sustainable development. For this reason, and to document experiences, it is relevant to map the activities of universities committed to the 2030 Agenda, so that areas of opportunity

can be identified, since the majority of integration initiatives carried out by transversal subjects are not adequately documented. Consequently, it is proposed to replicate the successful experiences among teachers in the reformulation of study programs for their integration.

For example, in Cuba, according to Alonso *et al.* (2021), the contribution of higher education to the SDGs is not limited exclusively to SDG 4 *quality education*; rather, the university plays an integral role in all its processes, encompassing both undergraduate and graduate, science, innovation, technology and networking. These authors identified three sectors in the region with a specific institutional strategic plan: SDG 2, *zero hunger*, with the strategic sector of food production; SDG 6, *clean water and sanitation*, with the strategic sector of hydraulic and sanitary networks; SDG 7, *affordable and non-polluting energy*, with the energy sector, and SDG 11, *sustainable cities and communities*, with the construction sector. To do this, they established a control system for the strategic project that includes evaluation standards, indicators, processes and strategic objectives.

The above shows that the link between the university and the company is presented as a crucial aspect, since it facilitates the integration of the SDGs from the classroom to the environment. Valle and Tapia (2019) demonstrated, through a quantitative study, that internal factors are determining factors in the creation of this connection. The authors identified that the area of linkage, collaborative work and development of human talent is the most significant factor, which is why they concluded that the collaborative link between the university and the company generates synergistic strategies.

In relation to university social responsibility (RSU) as a primary axis for sustainability, Llerena *et al.* (2020) explain that the close relationship between the RSU and the 2030 Agenda lies in the transversality of functions inherent to the university, which contextualize the vision with the environment. Although there is interest in working on RSU, the authors point out that it has not yet been consolidated as a transversal approach beyond the mission and vision of the university.

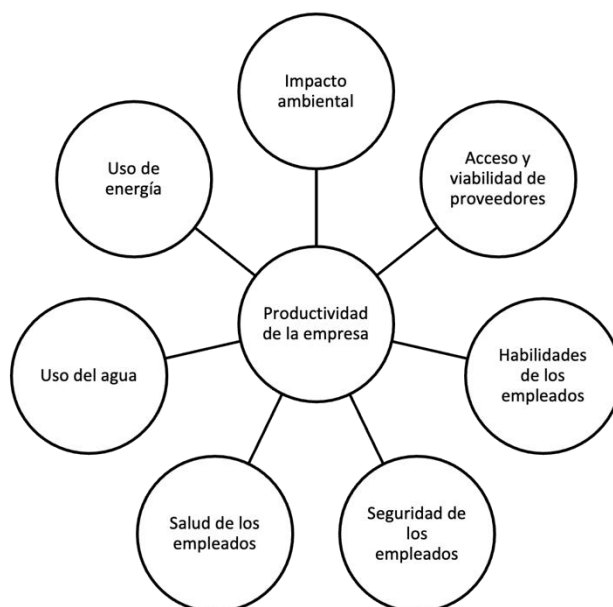
In Mexico, García *et al.* (2021) indicate that there are no studies on the 2030 Agenda from institutional functions (teaching, research, management, extension and culture) or at the international level. In this context, they analyzed the substantive functions and observed that it is feasible for universities to promote compliance with the Agenda autonomously, through links with the public and private sectors, which is why they highlight that SDGs 4, 8, 1, SDG 12 and 17 are the ones that present the greatest relationship for this purpose.

### Creating shared value

The competitiveness of a company and the health of the communities where it operates are intrinsically linked. Therefore, the creation of shared value (CVC) is presented as a comprehensive management approach that encompasses various disciplines and is applied to different factors and sectors, including tourism. CVC's strategy aims to improve both the economic situation of the company and the quality of life of the communities to generate a strengthening of long-term competitiveness.

The integration of sustainable management maximizes positive results for both the company and the resident communities, resulting in mutual benefits. According to Porter and Kramer (2011), the creation of shared value implies that companies contribute to improving economic and social conditions in the communities where they operate. This approach focuses on identifying and expanding the connections between economic and social progress. Consequently, an intrinsic connection is established between the competitive advantages of a company and its ability to contribute to the solution of social problems in its environment. Figure 2 illustrates these connections in more detail.

**Figure 2.** Connection between competitive advantage and social problems



Source: Porter and Kramer (2011).

Shared value initiatives entail innovation that manifests itself at three levels: 1) reconceive products and markets, 2) redefine productivity and the value chain and 3) allow the development of local clusters (Melamed -Varela *et al.* , 2018); For their part, Morales *et al.* (2014) explain a conceptual model to generate synergy between the university and companies for CVC and social innovation. Table 1 shows each of them.

**Table 1.** Synergy of companies and universities for the CVC

Company	University
Productivity. Employment stability. Equitable remuneration. Gender equality. Training and updating. Balance in work and private life. Corporate social responsibility. Internal R&D capabilities.	Human resources and R&D materials. Generation, use, application and exploitation of knowledge. Design of postgraduate courses in specific sectors. Generation of new technologies. Designs of continuing education programs. Scientific-technical advisory services.

Source: own elaboration based on Morales *et al.* (2014).

Various studies have highlighted that, as a tourist destination grows, the resident community often does not perceive tangible benefits. Companies' lack of understanding of the interdependence between business and social outcomes can result in missed opportunities for innovation, growth and social impact. In this sense, strategic theory points out that “it motivates to strengthen the operation's tourism value chain by incorporating the concept of value and generating opportunities for economic and social development” (Espinoza and Pérez, 2019, p. 144). Therefore, universities play a crucial role in contributing to the transfer of knowledge, since they allow the formation of intellectual capital.

Despite the background that reveals theoretical contributions and some isolated cases of good practices in universities at the international and national level in relation to the 2030 Agenda, no studies were found that address the transversality of the SDGs in universities and their implication in the sector. business in the specific context of Baja California Sur and Los Cabos, Mexico.

Public universities in the municipality of Los Cabos have an average of approximately 20 years since their opening. They include a state decentralized technology center and a state university, both carrying out the substantive functions of teaching, outreach and research. Together, they have an enrollment of 3,747 students, of which 31 % are enrolled in the four



careers selected for the study, given that these areas of knowledge are directly related to the labor market in the tourism sector.

Los Cabos, Mexico, stands out as a resilient tourist destination, as it has the ability to adapt to changes in adverse scenarios, even in the face of the covid-19 pandemic (Lacruhy and Perpuli, 2021). This place is characterized by effective collaboration between the public and private sectors, as well as efficient strategic management of key actors, both public and private, in complicated situations (Lacruhy, 2022). The constant growth of the tourist destination in recent years has led to considering the generation of human capital as an area of opportunity, since historically it has depended on the importation of human talent from other regions of the country and abroad.

Currently, university students in the region manage to successfully enter the labor market even before graduation, in some cases through internships, professional residencies and social service.

## **Material and method**

### **Methodology**

The research had a mixed approach of exploratory, descriptive, and explanatory scope (Hernández and Mendoza, 2018) with a cross-sectional design through a multiple case study (Creswell, 2013). To do this, the problem statement was contextualized, as well as the variables. The research objective was to evaluate the context of public universities in the 2030 Agenda and its impact on the contribution of creating shared value in the business system. The study area was limited to Cabo San Lucas and San José del Cabo, Los Cabos, Baja California Sur, Mexico.

Likewise, a literature review was carried out in databases such as Dialnet, Elsevier, Scielo and Redalyc, with the following inclusion criteria: years of publication 2012-2023, research articles and open access. The search keywords were sustainable development goals, university, and strategies.

### **Sample**

Based on a non-probabilistic sample by experts, two public universities with related careers in Administration and Tourism were first selected. Table 2 specifies the careers of each one.

**Table 2.** Delimitation of HEIs in the municipality of Los Cabos of the case study

Public universities	Careers
Technological Institute of Higher Studies of Los Cabos.	Administration Engineering. Bachelor's Degree in Tourism.
Autonomous University of Baja California Sur academic extension of Los Cabos.	Bachelor's Degree in Business and Economic Innovation. Bachelor's Degree in Tourism Services Management.

Source: self made.

Subsequently, a sample distribution table by major was prepared based on the statistics of the Secretariat of Public Education of Baja California Sur (2022), of the majors of the public universities mentioned previously. The population was 1,161 students and the sample was simple random, made up of 174 students, based on the following criteria: a) students from public universities in the municipality of Los Cabos, b) studying Engineering in Administration, Lic. in Tourism, Bachelor of Tourism Services Management and Bachelor of Business and Innovation, c) enrolled in the current semester and d) interest in participating in the study.

The students surveyed were made up of 52 % of Decentralized Technological and 48 % of state public university. In relation to gender, 52 % was female and 48 % male. Table 3 shows the sampling distribution.

**Table 3.** Sampling distribution table

Career	Percentage
Administration Engineering	44 %
Bachelor of Tourism	23 %
Bachelor of Business and Innovation	15%
Bachelor's Degree in Tourism Services Management	18 %
Total	100 %

Source: self made

### Instrument

A hybrid questionnaire was designed with 33 questions, which was validated by three experts in education and sustainability. A Cronbach's alpha coefficient of 0.961 was obtained, therefore it is concluded that this value shows strong internal consistency in the instrument used. Table 4 shows the Cronbach's alpha coefficient for each item.

**Table 4.** Questionnaire design for IES students

Dimension	Variables	Cronbach's alpha
Student Profile	University of origin.	.964
	Career.	.966
	Gender.	.966
SDG	Level of knowledge of Agenda 2030.	.958
	Integration of SDGs in the University.	.957
	SDG Integration Advancement.	.959
	Activities of the 2030 Agenda at the University	.961
	Actions carried out by the University.	.961
	Level of skills for project development.	.959
	Comprehensive projects that contribute to the SDGs.	.959
	Matters related to the SDGs.	.959
	Communication of SDG actions from the IES.	.959
CVC	Level of knowledge of CVC.	.961
	Carrying out CVC projects.	.957
	CVC university programs.	.957
	CVC business model design capacity.	.958
	Which is it?	.958
Job profile	Labor.	.961
	Position.	.959
	Size of the company.	.959
	Economic activity.	.959
	Location.	.959
SDG and CVC good practices	Company actions to improve the tourist destination of Los Cabos.	.958
	Elements of strategic planning and SDGs.	.956
	Level of knowledge to include the SDGs in the company's operation.	.958
	SDG contribution in companies.	.956
	Company's ability to contribute to social problems.	.956
	Axes of shared value.	.956
	CVC programs.	.956
	Competitive advantages in sustainability axes.	.956
Strategies of ODS and CVC companies.	.958	

	CVC opportunities in companies.	.951
	Strengths of SDG and CVC in companies.	.951

Source: self made

### Data collection procedure

The instrument was applied electronically, through Google Forms, between October and November 2022. The quantitative data were analyzed through descriptive statistics (first in Excel and later in SPSS) and the qualitative data in a variable categorization matrix according to the research objective.

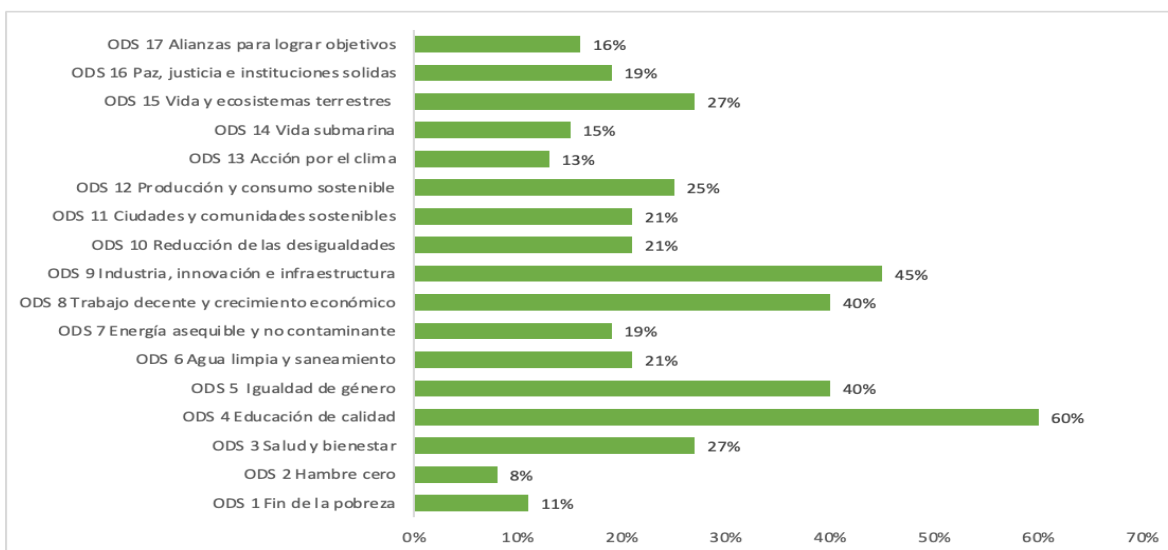
## Results

### Perception of contribution of Sustainable Development Goals at the university

Of the total student body, 60 % consider that the university has integrated the SDGs into academic activities. However, regarding the degree of knowledge they have about the 2030 Agenda, 49 % consider it basic, 35 Average % and only 16 % advanced.

The priority SDG for universities was SDG 4 *quality education* and the one with the least integration was SDG 8 *zero hunger*. This is related to the university courses that are offered. Figure 3 shows the integration of the SDGs in the university.

**Figure 3.** Integration of SDGs in Public Universities in Los Cabos, Mexico



Source: self made

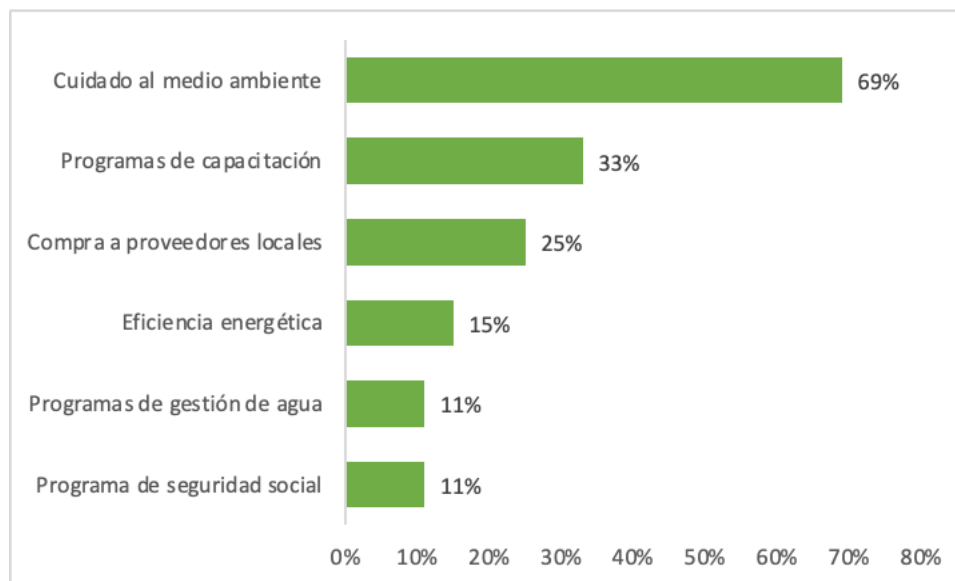
The inclusion of the 2030 Agenda was classified into three levels: priority SDGs (60 % to 40 %), progress (39 % to 19 %) and less integration (18 % to 0 %). Consequently, SDGs 4, 9, 5 and 8 are priorities for universities; Progress is considered in SDGs 3, 6, 7, 10, 11, 12, 15 and SDGs 1, 2, 14 and 16 are less integrated.

Regarding the actions of the universities, on the 22nd % includes a strategic plan, 37 % sustainability certifications and 42 % communicate their sustainability actions in various media. The 92 % of students identified actions related to the 2030 Agenda through official channels, the corporate website and the social network Facebook. Regarding the dissemination and promotion of the 2030 Agenda, on 36 % of these activities are carried out through projects, 18 % on social networks, 14 % in forums, 14 % in research colloquia, 12 % in conferences and 7 % was distributed in other media.

With respect to the curricula, these have sustainable development subjects on the grid (52 %), Agenda 2030 (25 %), environmental protection (13 %), business and economy (10 %). The students agree that they have developed innovation projects, project design, strategic plans, theses, and research transversal to the 2030 Agenda.

About the degree of knowledge about CVC, 68 % evaluated it as basic, intermediate 28 % and advanced 4 %. Figure 4 shows the programs of public universities. In order of relevance, the students indicated care for the environment (69 %), training programs (33 %), purchases from legal suppliers (25 %), energy efficiency (15 %), social security programs (11 %) and water management (11 %). Figure 4 shows the programs that can generate CVC in the public universities in the study.

**Figure 4.** Programs that contribute to CVC in public universities



Source: self made

The inclusion of topics related to strategic management, the research workshop, the research seminar and the innovation environment in the curricula occurs in the final semesters, where CVC is addressed, which is a recent theory in the sciences. administrative.

It is important to highlight that students who have taken these subjects are able to identify in their university study program that they contribute to the generation of CVC strategies in companies from the generation of integrative projects, professional residencies or thesis; However, they recognize that their skills are basic because they have not designed enough CVC strategies in their projects, which represents an area of opportunity in their training.

Below are some of the students' opinions about CVC: “Yes, investment projects with shared value strategies always attract more attention than other projects that do not practice it” (P27); “We have managed to identify the points in already established tourism companies, so I consider that we will be able to put them into practice if necessary” (P056), “Yes, I shared ideas about the implementation of the use of renewable resources in a tourism company” (P88), and “I am in the process of one, in which the objective is to work with the Sustainable Development Goals and generate a social and economic impact” (P109).

Finally, there is a relationship between the SDGs and CVC, both in theory and in practice, confirming that it is a tool to effectively address social and environmental challenges.

Now, considering the previous elements, a SWOT analysis was carried out on the contribution of the public universities of the municipality of Los Cabos, Mexico, to the 2030 Agenda and the impact on the CVC is shown in table 5.

**Table 5.** SWOT analysis contribution of the SDGs in universities

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• The students recognize the integration of the SDGs in academic activities.</li> <li>• The priority focus is SDG 4 (quality education).</li> <li>• The students identify specific actions of the universities aligned with the SDGs.</li> <li>• The students have developed projects related to the SDGs.</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• The level of knowledge of the students is not advanced.</li> <li>• Non-career SDGs require greater interest.</li> <li>• They do not have an SDG management program.</li> <li>• Requires greater training on SDGs and CVC in the university community.</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Increase the level of knowledge and application of projects on the SDGs and CVC in students.</li> <li>• Increased dissemination and promotion of SDGs.</li> <li>• Inclusion of CVC in subjects from initial training.</li> <li>• Creation of social innovation and SDG management laboratories.</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Very few projects address SDG and CVC strategies.</li> <li>• Low presence of advanced competencies in both SDG and CVC axes.</li> <li>• Lack of advanced understanding for developing SDG and CVC projects.</li> </ul>

Note. The SWOT analysis addresses the contribution of public universities to the SDGs.

Source: self made

## **Perception of good practices of Sustainable Development Goals in companies for the Creation of Shared Value in the tourist destination of Los Cabos**

Students who dedicate themselves to both study and work have a unique perspective that enables them to evaluate whether good practices related to SDG management in favor of CVC in the workplace are being implemented in their places of employment - that is, companies. tourist destination. The 47 % of the students are working, distributed in the following positions: administrative (42 %), operational (43 %) and entrepreneur 15 %.

Regarding the characteristics of the companies in the study, 70 % is located in Cabo San Lucas and 30 % in San José del Cabo. The size of the companies is distributed as follows: 46 % is micro, 28 % small, 16 % median and 10 % big. Six predominant economic activities stand out:

1. Food preparation 21 %.
2. Retail trade 17 %.
3. Health services 9 %.
4. Temporary accommodation services 9 %.
5. Tourist services 9 %.
6. Real estate services 8 %.

On the other hand, the 60 % of companies carry out actions that contribute to improving the tourist destination of Los Cabos. The elements of strategic management that include sustainable development in companies are the following: strategies (45 %), objectives ( 38 % ), mission (26 %), vision (21 %) and only 20 % does not include them. The level of knowledge of companies in relation to the SDGs is as follows: 62 % is basic, 27 *Intermediate* % and only 11 % advanced. Figure 5 shows the inclusion of the SDGs in companies.

**Figure 5.** Inclusion of SDGs in companies



Note. SDG contribution of companies in Los Cabos, Mexico

Source: self made

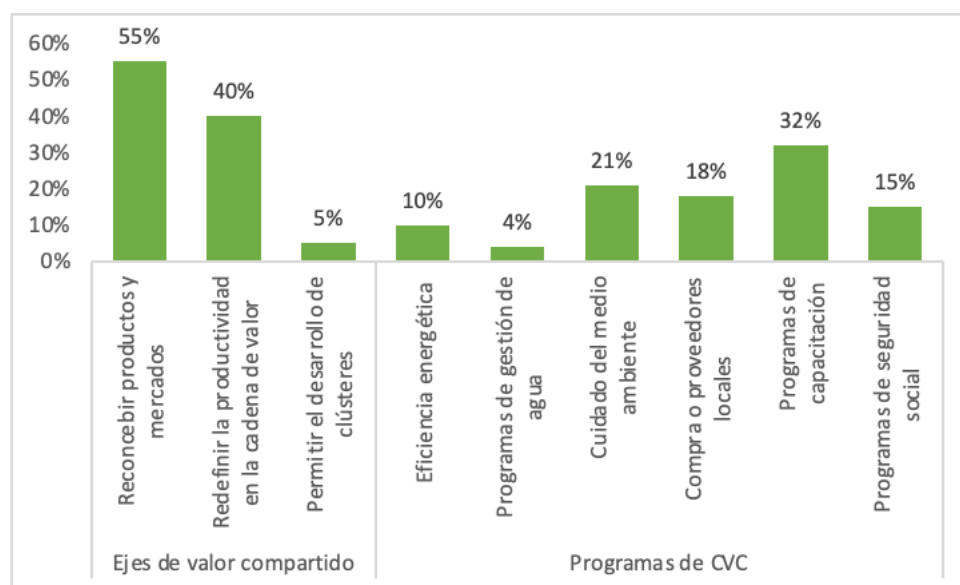


The inclusion of the 2030 Agenda was classified into three levels: priority SDGs (40 % to 20 % ), progress (19 % to 10 %) and less integration (8 % to 0 %). Consequently, SDGs 8, 3, 5 and 12 are a priority for companies, progress in SDGs 1, 2, 4, 6, 7, 10 and 17 and less integrated SDGs 11, 13, 14 and 16.

In relation to CVC, the level of the company's ability to go beyond satisfying customer needs to address social problems based on the business model, 63 % is basic, 25 % intermediate and 12 % advanced, which is consistent with the size of the company.

Regarding the CVC axes and programs, Figure 6 shows that the shared value axis with the greatest impact is reconceiving products and markets with 55 %, while among the CVC programs, training, environmental care and purchasing from local suppliers stand out, and the one with the least impact is water management. Figure 6 describes the shared value axes and their business programs.

**Figure 6.** Shared value axes and their programs



Note. The three shared value innovation axes contribute to companies' CVC programs.

Source: self made

Companies have a proactive role in improving the environment of the communities in which they operate. The business models of the companies in Los Cabos present good practices and the research allowed the identification of strategic actions and the SDGs, it should be noted that it depends on the size of the company. Table 6 details each of them.

**Table 6.** CVC and SDG good practices

CVC Levels	Social problems	Strategic actions	SDG
Redefine productivity and the value chain	Environmental impact	Recycling of batteries, cardboard and glass and cooking oil.	SDG 12, 13, 14, 15, 16 and 17
		Use of biodegradable elements	
		Sustainable development projects.	
		Forums that contribute to the care of the environment.	
		Use non-reusable materials as little as possible.	
		Protection of flora and fauna.	
		Stop and reverse land degradation.	
Reconceive products and markets	Access and viability of suppliers	Buy from local suppliers.	SDG 12
Redefine productivity and the value chain	Employee skills	Promote environmental care in commercials.	SDG 4 and 8
		Training of collaborators.	
	Employee Safety	Living wage	SDG 4 and 8
		Hiring young people from the region	
	Employee health	Registration in IMSS.	SDG 1,2,3 and 8
	Water use	Water reuse.	SDG 6 and 11
		Water use programs.	
Water care signs.			
Energy usage	Energy efficiency programs.	SDG 7 and 11	

Note. Companies have strategies that help improve the conditions of social problems in Los Cabos, Mexico, so they contribute directly and indirectly to the SDG goals at the local level.

Source: self made

In relation to the strengths of the companies and their link with the CVC and SDG, the following can be mentioned:

*SDG 6: water*

- Awareness of water use.

*SDG 8: decent work and economic growth*

- Corporate social responsibility strategies.
- Sustained economic growth.
- Hiring multidisciplinary personnel.
- Hiring of young people from the state.
- Decent work: social security and incentives.
- Reduction of inequalities through competitive salaries.
- National and international certifications.

*SDG 9: industry, innovation, and infrastructure*

- National and foreign investment.
- Infrastructure development.

*SDG 14: marine life*

- Wildlife protection programs.
- Beach cleaning.

*SDG 15: terrestrial ecosystems*

- Environmental care programs.

*SDG 7: alliances to achieve objectives.*

- Public and private collaboration.

The areas of opportunity, in terms of the SDGs and CVC in companies, were:

- Promoting gender equality: Strengthen gender equality programs and policies in the workplace to ensure diversity and inclusion.
- Promotion of circular economy: Training for the design of strategies for business models.
- Sustainable waste management: Development of waste management strategies to minimize environmental impact.
- Strategic sustainability plans: Develop plans that integrate SDG management as a business strategy.
- Sustainability reports: Generate sustainability reports with indicators aligned to the SDGs to allow the measurement of impacts and transparency.

## Discussion

Borroto (2019) argues that university education plays a crucial role in the transformation of society, since universities manage the knowledge and training of various key actors in society. In this sense, the study carried out provided a detailed vision based on the students' perception of the sustainable development goals (SDG) and the creation of shared value (CVC) in two areas. Firstly, the context of higher education was explored in relation to the impact on university life and, secondly, the students inserted in the labor market were evaluated as collaborators who have developed competencies with the aim of determining whether the Companies in the municipality carry out good practices in SDG for the CVC.

In the context of public universities in Los Cabos, the priority SDGs were identified (in order of relevance: 4, 9, 5, 8, 3 and 15) in the Administration, Tourism and Business majors, objectives that are focused on the axis of people and prosperity. On the other hand, the study by Juárez *et al.* (2022) analyzed the environmental area degrees in study programs in Mexico and found that the programs address SDGs 6, 7, 13, 14 and 15, which focus on the planet and prosperity axis. It is observed that each career promotes the SDGs according to the professional profile, with the axis of prosperity being a priority in both cases.

On the other hand, it can be stated that the public universities in the study carry out pro-SDG actions and activities. One of them has a university social responsibility (RSU) model articulated with the SDGs and is attached to the University Social Responsibility Union (URSLA). The other university, through the Institutional Development Program (Tecnológico Nacional de México, 2012), implicitly addresses the SDGs and goals of the 2030 Agenda, and is structuring a Social Innovation Laboratory as a SDG management tool from the university. linking the resident community and key actors in the region.

In the area of creation of shared value (CVC) from the university, it is observed that the students are mostly in an initial stage, with basic knowledge. However, they show competence in identifying programs both at their university and in the companies where they collaborate, which represents significant progress. Following the reflection of Acosta and Suárez (2016), training processes must facilitate communication between academia and society; In this sense, internships contribute significantly to the training of students.

The actions and activities aimed at promoting the SDGs, as well as business projects, have favored the development of students' skills and analytical capacity to promote CVC. IN this sense, universities are positioned as strategic allies of companies and society to promote

knowledge and good practices (Cosme, 2018). The students, in their role as collaborators, identify strategies, objectives and actions aligned with the SDGs in local companies, which represents significant progress in a tourist destination towards the promotion of sustainable tourism.

Therefore, it is crucial to highlight that companies have an economic, social and environmental impact on the communities where they are established (Lacruhy, 2022). This perspective agrees with the statement of Miguel-Velasco *et al.* (2022), who explain that Oaxacan cities offer opportunities and means of resilience to overcome economic crises.

In summary, the inclusion of these subjects related to the CVC and the SDGs in the curricula reflects a comprehensive educational vision. This approach seeks to prepare students to address global challenges with a local focus and contribute to a more sustainable future.

## Conclusions

The 2030 Agenda and the 17 SDGs represent a significant challenge for public policy, education and the key actors involved. The university, as mentioned above, plays a crucial role in the generation and transmission of knowledge, since it is a key strategic actor in training for sustainability education.

For their part, companies, by hiring young people in the region with a profile that includes skills for design, management, application, and sustainable development, as well as the creation of shared value, will contribute to the development of an administration with a more sustainable vision. These young people, as they advance in their professional development within the organizational structure, will provide analytical skills and assertive decision-making in their environment.

Likewise, it is important to note that studies that address the relationship between the SDGs and CVC in universities are scarce in terms of their application. Therefore, this article contributes to knowledge through a multiple case study in the third international tourist destination in Mexico. The study showed that public universities, in their daily university life, implement strategies, actions and activities for sustainable development, while companies contribute daily to their value chain.

On the other hand, the main strength of the study lies in demonstrating the students' competencies and their ability to develop SDG management projects. Furthermore, by being inserted in the labor market, students observe good practices in companies in the tourist

destination. However, a limitation of the study is that it provides an x-ray from the perspective of administration, business, and tourism students, so it would be pertinent to carry out a study that covers the entire university offering.

In conclusion, it is highlighted that the training of public HEI students develops the ability to manage projects related to the SDGs for the creation of shared value from their academic life. Furthermore, it is evident that companies in the tourist destination of Los Cabos do implement good SDG management practices and creation of shared value.

### Future lines of research

Pending is the study of the transfer of SDG knowledge from teaching, research and links with different sectors, models of university management of SDGs in universities at the state and national level, analysis of the transversality of the SDGs in the study programs, as well as contributions from research projects, residency projects and professional practices to achieve the 2030 Agenda at the local level.

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