

# Effect of Actions Aimed at Addressing Diversity, Equity, and Inclusion Carried out by Private Sector Companies of Costa Rica to Achieve Sustainable Development Goals in 2022

María Luisa González Marín, Marco Antonio Rojo Gutiérrez

Postgraduate Studies Department, International Iberoamerican University, México City, México

## Email address:

marialg30@gmail.com (María Luisa González Marín), marco.rojo@unini.edu.mx (Marco Antonio Rojo Gutiérrez)

## To cite this article:

María Luisa González Marín, Marco Antonio Rojo Gutiérrez. Effect of Actions Aimed at Addressing Diversity, Equity, and Inclusion Carried out by Private Sector Companies of Costa Rica to Achieve Sustainable Development Goals in 2022. *International Journal of Science, Technology and Society*. Vol. 11, No. 4, 2023, pp. 162-174. doi: 10.11648/j.ijsts.20231104.15

**Received:** July 20, 2023; **Accepted:** August 16, 2023; **Published:** August 31, 2023

---

**Abstract:** This research is based on the effect of actions aimed at addressing diversity, equity and inclusion carried out by private sector companies of Costa Rica in 2022, in the following Sustainable Development Goals: 4 -Quality Education, 5 -Gender Equality, 8 -Decent Work and Economic Growth, 10 -Reduction of Inequalities and 16 -Peace, Justice and Solid Institutions, in Costa Rica, during the year 2022 and shows the results of a study based on the application of a mixed methodology. It consists of a quantitative and qualitative analysis with the support of data collection instruments. The instrument used for the collection of quantitative data is a questionnaire. The results obtained from the data collection instrument suggest that private sector companies of Costa Rica that manage the thematic axis of diversity, equity, and inclusion, are directly related to some of the Sustainable Development Goals defined by the United Nations Organization in the 2030 Agenda. It is recommended that companies in the private sector of Costa Rica carry out a meticulous work that evidences the effect that their actions have in the relational dimension of diversity, equity, and inclusion, with the afore-mentioned Sustainable Development Goals. This research offers an-input for these companies to demonstrate the existence of this relationship and its contribution to Costa Rica with the achievement of some Sustainable Development Goals.

**Keywords:** 2030 Agenda, Sustainable Development Goals, Diversity, Equity, Inclusion, Qualitative Analysis, Quantitative Analysis

---

## 1. Introduction

Costa Rica always has been a country favored by its cultural diversity. This characteristic has facilitated its development because of its presence and fusion of ethnic resources and traditions. For example, the initial influence of indigenous and European culture followed by Afro-Caribbean and Asian, makes Costa Rica a varied country with its own style. Precisely, the first workers of Chinese origin arrived in the country in 1855, who became, after the Afro-descendants, the most relevant group in the genetic conformation of Costa Ricans, and today, their essential contributions are recognized in the construction of the Costa Rica of today.

At current times, when it comes to learning about the approaches that the educational and business sectors take to

diversity, equity, and inclusion management, it is essential to take a look at this historical context; foreign direct investment influences Costa Rica, which becomes in more than 300 multinational companies.

Therefore, the interest in developing this research arises, which aims to identify the effect of actions aimed at addressing diversity, equity, and inclusion carried out by private sector companies of Costa Rica in 2022, in the following Sustainable Development Goals: 4 -Quality Education, 5 -Gender Equality, 8 -Decent Work and Economic Growth, 10 -Reduction of Inequalities and 16 -Peace, Justice, and Solid Institutions, proposes in the 2030 Agenda of the United Nations.

Certainly, there has been economic development in the country focused on foreign investment, as the following quote states:

Costa Rica has built a success story in terms of development. This development is explained, in part, by its outward-oriented growth strategy and openness to Foreign Direct Investment (FDI). Since 2000, Costa Rica has managed to diversify its economy, traditionally dependent on agricultural activities, by growing in advanced manufacturing and business services sectors, supported by the free trade agreement with the United States (CAFTA), which allowed a greater flow of FDI. In addition, tax incentives for free trade zones in the country have attracted investment from multinationals and boosted the growth of the professional services sector [1].

The Costa Rican Investment Promotion Agency (CINDE, 2019) is a private, non-political, non-profit organization founded in 1982 and declared of public interest in 1984 [2]. In Costa Rica, it is responsible for promoting the arrival of foreign direct investment in the country. By 2021, it had attracted more than 300 multinational companies in the corporate services, life sciences, advanced manufacturing, light industry, and food industry sectors, generating more than 200,000 direct jobs and more than 50,000 indirect jobs.

## 2. Conceptual Framework

Diversity is understood as all those characteristics that make us unique, for example, in terms of ethnicity, gender, age, disability, sexual orientation, gender identity and expression, schooling, religion, work experience, perspectives, and culture. Currently, society insists on showing us as beings open to change and the recognition of pluralism, heterogeneity, and differences in very diverse areas, ranging from physical appearance to values.

This situation influences many aspects of our lives, especially education, which cannot remain oblivious to these changes because it is a fundamental part of society since it constitutes a means and a tool to improve the quality of life of all people [3].

Equity, considered as equal access to opportunities, provides different levels of support for each need. "Al mismo tiempo, la comunidad internacional ha reconocido que la equidad es un principio fundamental del desarrollo. Se ha argumentado que el nuevo paradigma de desarrollo implica crecer para igualar, e igualar para crecer [4].

Inclusion, which refers to feeling respected, valued, and supported, and ensuring that each individual has the opportunity to be himself or herself at all times and in all places.

Inclusion has become a common word in different areas of human development. Since globalization, everything must be "included". Thus, said word is heard in different environments such as legislation, health, education, international relations, and communications... in general, to point out that it contains or incorporates everything related to the subject to be addressed [5].

The activities carried out by private sector companies in Costa Rica include, among others, informative and formative

experiences aimed at the workforce, such as participation in events to promote and adhere to inclusive principles with a view to positioning themselves as companies respectful of diversity; preparation of statistics to support compliance with the established achievement indicators. The company has also developed support groups, training programs exclusively for women in the areas of technology and leadership, development programs for men, especially about masculinity and the role of men in society, and development programs for fathers to be aware of trends related to conscious parenting. In addition, initiatives are carried out to support issues related to gender balance and equity, the lesbian, gay, bisexual, transsexual, intersex, queer, asexual, and more (LGBTIQA+) community, and inclusive labor insertion, to be congruent with the inclusive corporate philosophy.

Certainly, companies position their intentions and explicitly ratify their commitment through their vision and mission. However, they neglect contextualization and relevance, which refers to understanding the social, historical, economic, and cultural facts that constitute a concrete reality.

### 2.1. Sampling

The sample is defined as the portion of the population or number of individuals to which the measurement instruments are applied. The sample chosen for this research is a subset of the population mentioned before. The quantitative measurement tool, the survey, will be applied to the sampling revealed by the following formula:

$$n = N * \left(\frac{z\alpha}{2}\right)^2 * p * \frac{q}{e^2} * (N - 1) + \left(\frac{z\alpha}{2}\right)^2 * p * q \quad (1)$$

N: Sample size

p: probability of success or occurrence

Q: probability of failure or non-occurrence

E: Sampling error

Z: Value on the standard normal curve for a given confidence level

Data

N=50

Probability of occurrence (p) = 50%.

Probability of non-occurrence (q) = 50%.

d = 3%

Confidence level = 95%

A sample size of 47, rounded down, is obtained. The aspect that the researcher considers when selecting the sample is also considered. For instance, if there is a population of 100 individuals, it will be necessary to take at least 30% in an effort not to have less than 30 cases, which is the minimum recommended to avoid falling into the small sample category.

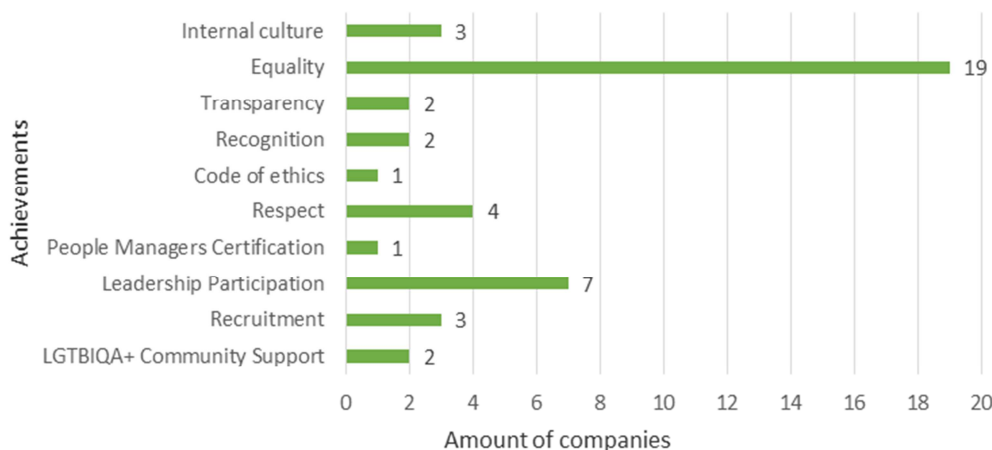
The inclusion criteria should be defined, but are not limited to clinical, demographic, temporal, and geographical characteristics of the subjects that make up the study population and exclusion criteria, which include features of the subjects that may interfere with the quality of the data or the interpretation of the results [6].

## 2.2. Data Tabulation Process

Following the Diversity, Equity, and Inclusion Survey conducted in 47 companies in the private sector in Costa Rica

in 2022, with an average of 1320 employees, the following descriptive analysis of the results obtained is presented to evaluate the impact of the survey in general.

## 3. Results



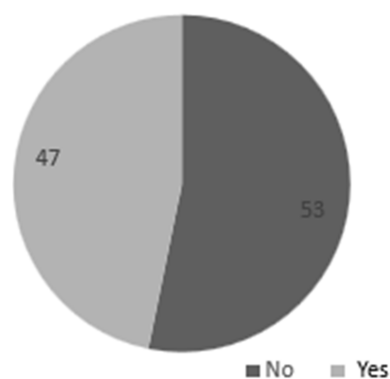
**Figure 1.** Most outstanding achievements made by the companies through diversity, equity, and inclusion actions.

Figure 1 presents the most outstanding achievements that companies have reached through diversity, equity, and inclusion actions; it can be seen how the equality issue stands out with 19 companies, this being considered the most relevant achievement reached by the companies.

**Table 1.** Position measures of the number of employees working in the surveyed companies.

Measures	Value
Minimum	3
Maximum	23000
Mean	1320
Median	400
Mode	1000

Table 1 shows the analysis of the number of employees of the companies surveyed. It is observed that the number of employees ranges from 3 to 23000, where the average is 1320 and the median is 400, indicating that 50% of the surveyed companies have less than 400 employees and 50% have more than 400 employees.



**Figure 2.** In-house training of youth and adults in technical and professional areas carried out by surveyed companies.

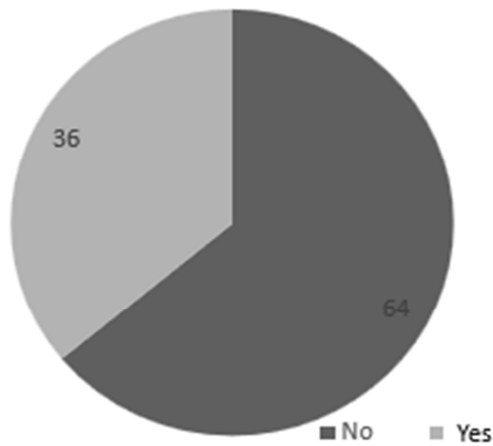
Figure 2 indicates the percentage distribution of companies that have internally trained young people and adults in technical and professional areas. 47% of the companies had been providing it for more than 5 years. However, it can be seen that more than 50% have not provided this type of training.

A division by gender was made in the categories of men, women, and non-binary to identify the number of young and adult men, women, and non-binary who had been subject to this internal training in technical and professional areas, obtaining very similar results, where the maximum in the categories of men and women reached 5000, and in non-binary the maximum obtained was 100. In the case of external training, we obtained very similar results, where the maximum reached 10,000 in the categories of men and women and the maximum obtained 30 in the non-binary category. This last piece of information suggests that companies do not necessarily keep track of non-binary employees.

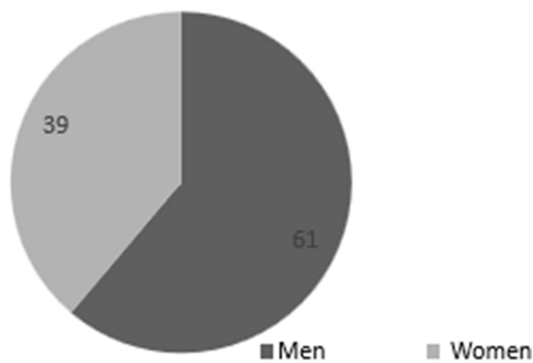
“In STEM fields, according to OECD data, 84 of 25–64-year-old adults with a degree in natural sciences, mathematics, and statistics were employed in 2020 on average across OECD countries, and demand is strong for those with an engineering or ICT degree, where employment peaks close to 90%” [7].

This information refers us to Sustainable Development Goal 4 - Quality Education.

Figure 3 shows the percentage distribution of companies that offered external training to youth and adults in technical and professional areas. There is a strong representation of 64% of companies that did not offer external training to young people and adults in technical and professional areas and, therefore, 36% provide this type of training. This information refers to Sustainable Development Goal 4 - Quality Education.



**Figure 3.** Outsourcing training for young people and adults in technical and professional areas.



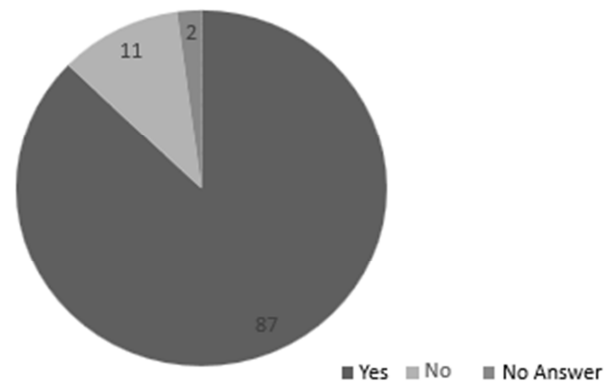
**Figure 4.** Number of women in leadership positions in the surveyed companies.

Figure 4 presents the percentage distribution of gender in leadership positions in the surveyed companies. It is observed that men occupy a higher percentage with 61% compared to 39% of women in leadership positions in these companies.

In the 1990s, with the arrival of INTEL in Costa Rica, the country catapulted towards a transformation of its economic model. It also significantly reduced the digital gap in the following three decades, for example, the manufacture of microchips was the export product that represented the most profits for the country, as well as the export of services and advanced technology, highlighting the local talent that since then exhibits a level of education and bilingualism of the highest level.

“Women in tech are gaining ground as the technology industry—or at least its largest players—makes slow but steady progress in shrinking its gender gap, and women in tech leadership are making the fastest advances. Deloitte Global predicts that large global technology firms, on average, will reach nearly 33% overall female representation in their workforces in 2022, up slightly more than 2 percentage points from 2019. Although the shares of women in technical and leadership roles have tended to lag the overall proportion of women by 8–10 percentage points, they are increasing the most rapidly” [8].

This information points to Sustainable Development Goal 5 - Gender Equality.

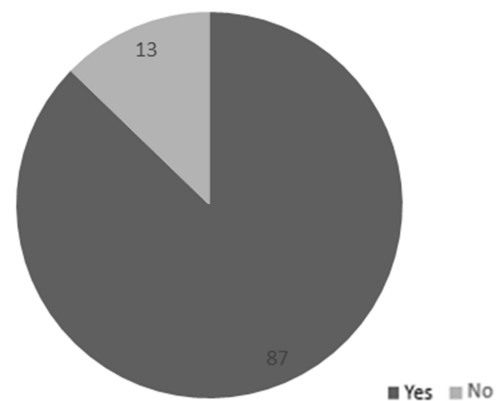


**Figure 5.** Development of strategies for the technological modernization of the surveyed companies.

Figure 5 shows the percentage distribution of the companies surveyed with respect to the development of strategies for technological modernization. It can be seen that 87% of the companies do have a strategy for technological modernization. It is worth mentioning that there is a low percentage of 2% that do not respond and 11% that still do not have any strategy for technological modernization.

Technological modernization places the country in a privileged position in Latin America. Innovation will continue to be the most sought-after objective by companies. Costa Rica has reached 2.41% investment in science and technology as a percentage of Gross Domestic Product -GDP- in 2022. However, this is not enough because the percentages achieved by developed countries represent a minimum of 8%.

This information refers to Sustainable Development Goal 8 - Decent Work and Economic Growth.



**Figure 6.** Implementation of programs to encourage internal innovation in the surveyed companies.

Figure 6 displays the percentage distribution of the companies surveyed on the implementation of programs to encourage innovation internally. There is a high percentage of 87% of companies that stated that they have implemented innovation programs among their employees. This information refers to Sustainable Development Goal 8 - Decent Work and Economic Growth.

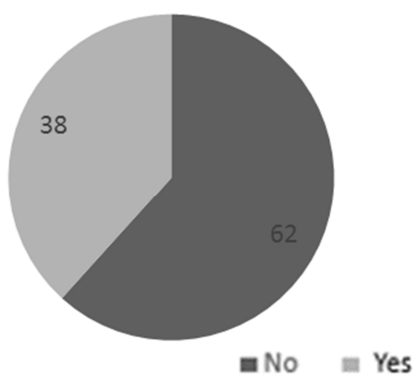
Learning is a socially embedded process that can only be understood by considering institutional and social contexts. Innovation does not occur in a vacuum, and many

macro-socioeconomic factors play an important role in national innovation systems [9, 10]. The institution-based perspective emphasizes the role of institutions in shaping innovation. Therefore, the framework incorporates democracy and social freedom because they represent formal and informal institutional support for knowledge creation and learning [11].

Moreover, innovation generation patterns vary across different settings. Globalization has challenged the traditional role of national states in supporting learning processes. Globalization enables a country to learn, absorb, and imitate the innovative outputs of other countries [9-11].

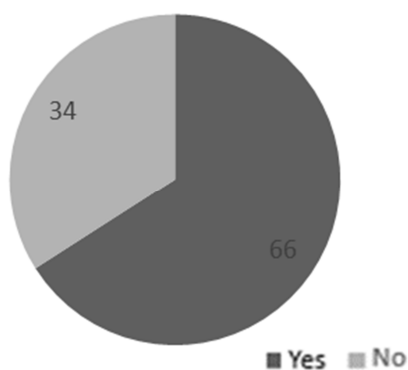
Technological modernization places the country in a privileged position in Latin America. Innovation will continue to be the most sought-after objective by companies.

Costa Rica has reached 2.41% investment in science and technology as a percentage of Gross Domestic Product -GDP- in 2022. However, this is not enough because the percentages achieved by developed countries represent a minimum of 8%.



**Figure 7.** Implementation of programs to incentivize innovation at the external level of the organization.

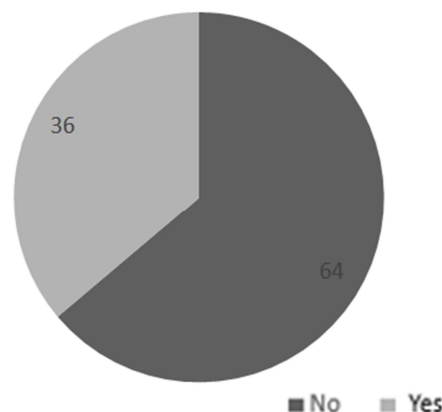
Figure 7 shows that only 38% of the companies surveyed have implemented programs to encourage innovation among people outside the organization. This information refers to Sustainable Development Goal 8 - Decent Work and Economic Growth.



**Figure 8.** Existence of policies or programs that encourage creativity and innovation.

Figure 8 shows a strong representation of 66% of the companies surveyed, which stated that they have policies or programs that encourage creativity and innovation. This

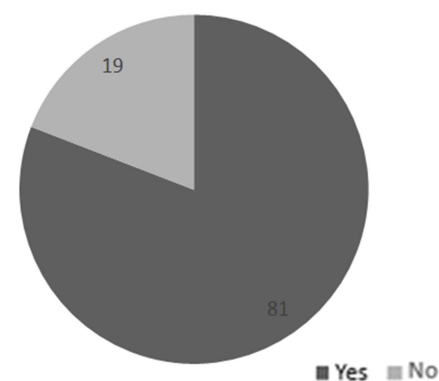
information refers to Sustainable Development Goal 8 - Decent Work and Economic Growth.



**Figure 9.** Number of jobs held by people with special needs or disabilities in the surveyed companies.

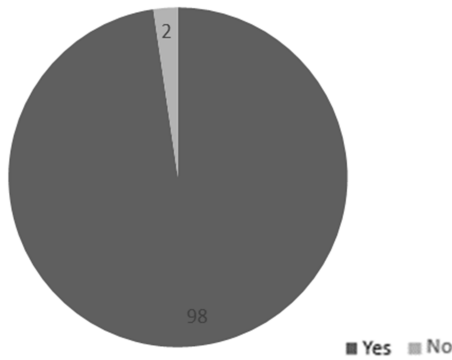
Figure 9 shows that only 36% of the surveyed companies have jobs that are filled by people with special needs or disabilities. This information refers us to Sustainable Development Goal 8 - Decent Work and Economic Growth. By 2020, national statistics reported that 18% of Costa Ricans over 18 years of age are people with some disability, with the aggravating factor that unemployment in this group is 60% higher than that of the general population. Costa Rican Law 7600, which promotes equal opportunities for people with disabilities, was enacted in 1996, but employers are unaware of the benefits of applying it [12].

“The successful employment of persons with disabilities (PWD) turns into an increasingly relevant topic for organizations around the world. Main reasons include a shortage of skilled labor, the demographic change in age which comes with a rising disability prevalence in aging workforces, as well as changes in societal perceptions and legislative frameworks to promote the workforce participation of PWD”. [13]



**Figure 10.** Companies surveyed that have employees between 15 and 24 years old.

Figure 10 shows the percentage distribution of companies that have employees between 15 and 24 years of age. It is important to note that 81% stated that they have employees in this age range. This information refers to Sustainable Development Goal 8 - Decent Work and Economic Growth.



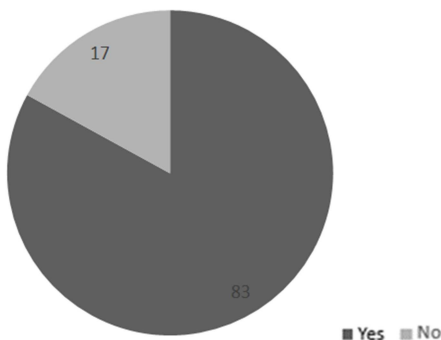
**Figure 11.** Training for young people between 15 and 24 years old offered by surveyed companies.

Figure 11 shows that 98% of the companies surveyed claim to offer training to youth between the ages of 15 and 24. Only one company indicated that it does not offer such training. This information refers us to Sustainable Development Goal 8 - Decent Work and Economic Growth.

Costa Rican labor legislation, through Decree No. 25715 allows, but at the same time protects adolescent labor from the age of 15, under the regulations issued by the Ministry of Labor and Social Security of Costa Rica. It reiterates the prohibition for them to carry out activities classified as dangerous, thus protecting the vindication of the rights of adolescent workers.

Thus, the employer must guarantee a working day that does not exceed 6 hours per day and that the adolescent attends an educational center that guarantees the completion of his or her studies.

Despite their predictive power for career choice, little research has examined the degree to which career aspirations match up to labor demands in the changing world of work. This is especially important to help youth prepare for a future of technological and economic changes. At the same time, automation has eliminated the need for many jobs, displacing workers who often struggle to find new work that makes use of their existing talents [14].

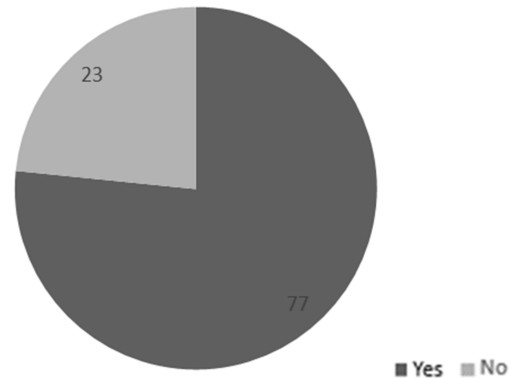


**Figure 12.** Existence of any policy guaranteeing nondiscrimination in the surveyed companies.

Figure 12 shows a strong representation of 83% of the surveyed companies claiming to have a policy that guarantees non-discrimination. This information refers us to Sustainable Development Goal 10 - Reducing Inequalities.

Freedom from discrimination is a fundamental human right.

It is essential for workers to be able to choose their employment freely, to develop their potential to the full and to be rewarded based on merit [15].

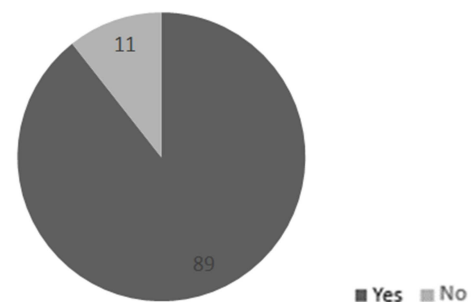


**Figure 13.** Existence of any policy that guarantees salary equity between men and women in similar positions in the surveyed companies.

Figure 13 shows that a percentage of 77% represents the companies that do have a salary policy that guarantees equal pay between men and women in similar positions.

Currently, a reform to Article 69 of the Costa Rican Labor Code aims to give more resources to the Labor Inspection to sanction gaps and would introduce the concept of equal pay. As a result, the country becomes the newest member of the Equal Pay International Coalition (EPIC), a multi-stakeholder alliance led by the International Labor Organization (ILO), UN Women, and the Organization for Economic Cooperation and Development (OECD). The country currently ranks third in the Latin American region with the lowest gender pay gap.

This information refers us to Sustainable Development Goal 10 - Reducing Inequalities.



**Figure 14.** The existence of a Code of Ethics highlighting that corruption and bribery are not accepted in any way in the companies surveyed.

Figure 14 highlights a percentage of 89% of the surveyed companies that do have a Code of Ethics highlighting that corruption and bribery are not accepted in any way.

Assessing the impact of disciplinary codes and codes of ethics on kickback perceptions in public administration independently is an important first step for our understanding of the effectiveness of different anti-corruption tools. Yet, theoretically, these tools may not shape the thinking and the behavior of civil servants in isolation but can be expected to work together. The question is hence how they interact with each other to contain corruption in public administration.



Based on existing literature, disciplinary codes and codes of ethics could be expected to reinforce each other in that one supports and augments the consequences of the other for employee decision-making and behavior [16].

This information refers us to Sustainable Development Goal 16 - Peace, Justice, and Strong Institutions.

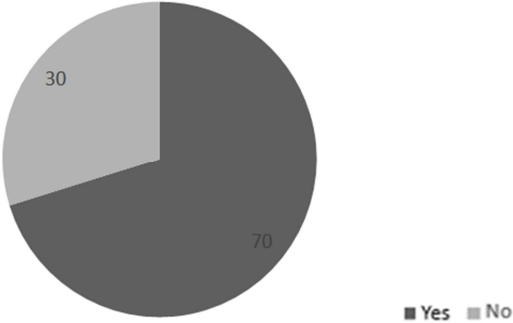


Figure 15. Existence of any program or actions in favor of sustainable development in the surveyed companies.

Figure 15 shows that more than 70% of the surveyed companies claim to have programs or actions in favor of sustainable development.

In order to address sustainability appropriately, companies need to bridge two critical gaps: First, “The knowing – doing gap”: A study by BCG/MIT that I participated in found that whereas 90% of executives find sustainability to be important, only 60% of companies incorporate sustainability in their strategy, and merely 25% have sustainability incorporated in their business model. Second, “The compliance – competitive advantage gap”: More companies are seeing sustainability as an area of competitive advantage, but it is still a minority – only 24%. However, all companies need to be compliant. Management should address these topics separately, not mesh them together. Compliance is holistic, a “must do”. For competitive advantage, only a few materials issues count. Companies that stand out around sustainability address both gaps. They have evolved from knowing to doing, and from compliance to competitive advantage. They also know the risk of getting this wrong. For instance, promising and not delivering, or addressing material issues without being solid on compliance [17].

This information refers to Sustainable Development Goal

16 - Peace, Justice, and Strong Institutions.

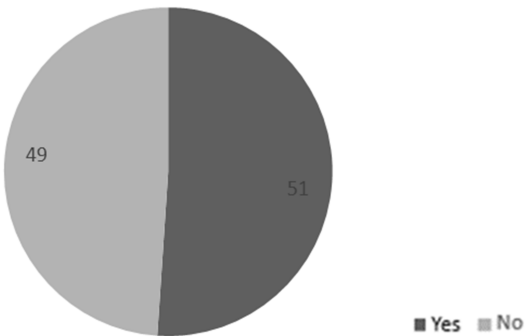


Figure 16. Companies using Vision as a mechanism to affirm their commitment to diversity, equity, and inclusion.

Figure 16 shows 2% difference between companies that use Vision as a mechanism to ratify their commitment to diversity, equity, and inclusion with respect to companies that do not use it.

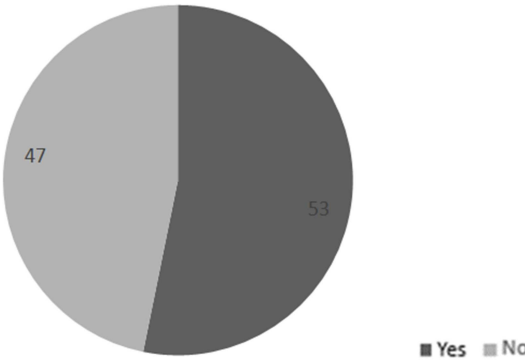


Figure 17. Companies using the Mission as a mechanism to affirm their commitment to diversity, equity, and inclusion.

Figure 17 shows that the percentage of companies using the mission as a mechanism to ratify their commitment to diversity, equity, and inclusion is 6% higher concerning companies that do not use the Mission as a mechanism for this objective.

In comparison with Figure 16, it can be affirmed that the mission is more used by companies by 4% concerning the vision to ratify this commitment.

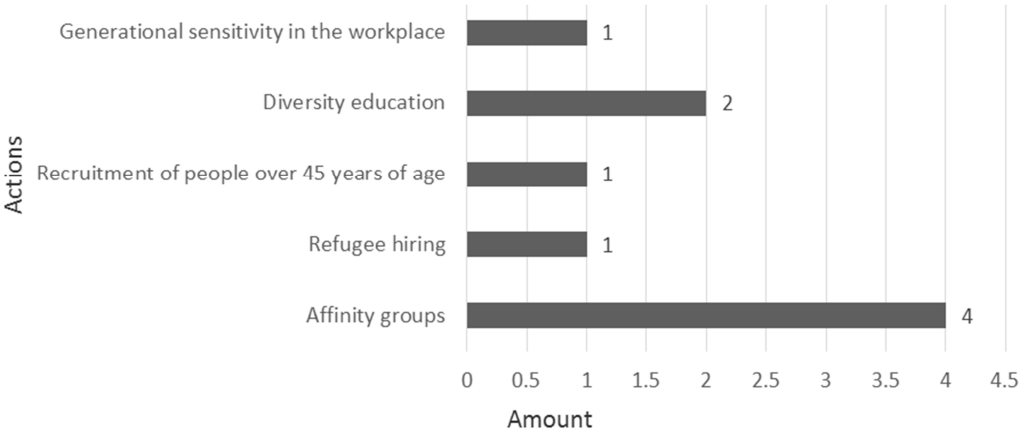


Figure 18. Types of diversity, equity, and inclusion shares on which companies focus.

Figure 18 shows the distribution of the other types of actions that companies focus on for diversity, equity, and inclusion.

#### Regression Models

The following binary logistic models were performed in which the dependent variable or response variable corresponds to the development of the Mechanism to Ratify

its Commitment to Diversity, Equity, and Inclusion, so a binary logistic model (1=Yes, 2=No) is proposed according to whether or not the company develops at least one mechanism. The corresponding analysis was carried out for each model.

For all the analyses a significance level of 0.05 was considered and the following results were obtained:

**Table 2.** Logistic regression coefficients of the model for the dependent variable VISION.

Variable	Coefficient value	Standard deviation	Z-score	Probability
Intercept	-1.30265	1.43188	-0.91	0.363
Education and training	2.0157	0.94285	2.138	0.0325 *
Equal opportunities	-1.80687	1.4165	-1.276	0.2021
Equity and gender	2.11097	1.44239	1.464	0.1433
LGBTQA+ community	-0.81525	0.68484	-1.19	0.2339
Other	-0.05794	0.97139	-0.06	0.9524

Table 2 shows the results of the values of the independent variables for the dependent variable vision, where it is

observed that only the Education and training variable was significant, according to the 0.05 significance level.

**Table 3.** Logistic regression coefficients of the model for the dependent variable Mission.

Variable	Coefficient value	Standard deviation	Z-score	Probability
Intercept	-1.592	1.4316	-1.112	0.2661
Education and training	2.149	0.9422	2.281	0.0226 *
Equal opportunities	-1.688	1.4169	-1.191	0.2335
Equity and gender	2.1974	1.4343	1.532	0.1255
LGBTQA+ community	-0.6139	0.6879	-0.892	0.3722
Other	-0.2655	0.9723	-0.273	0.7848

Table 3 shows that the Education and Training variable stands out as the only significant variable with a significance level of 0.05.

significance, Education and Training, has a fairly wide interval from 0.3293117 to 4.1866175.

**Table 4.** Confidence interval of the logistic model with dependent variable VISION.

**Table 5.** Confidence interval of the logistic model with dependent variable Mission.

Variable	Lower limit	Upper limit
Intercept	-4.2509013	1.546
Education and training	0.3293117	4.1866175
Equal opportunities	-5.1566326	0.7688144
Equity and gender	-0.4328354	5.6142965
LGBTQA+ community	-2.2233119	0.4999211
Other	-1.9979554	1.9372974

Variable	Lower limit	Upper limit
Intercept	-4.549215	1.247788
Education and training	0.4649445	4.3194375
Equal opportunities	-5.0344081	0.8921737
Equity and gender	-0.3365098	5.6863157
LGBTQA+ community	-2.0216085	0.7161541
Other	-2.2096838	1.7306603

Table 4 presents the confidence intervals of the model for the dependent variable Vision. The variable highlighted by its

Table 5 presents the confidence intervals of the model for the dependent variable Mission, where the intervals are quite wide.

**Table 6.** Odds of the independent variables with respect to the models according to their dependent variable.

Variable	Model I	Model II	Model III	Model IV	Model V	Model VI
Intercept	0.27	0.20	0.06	2.03	0.08	0.09
Education and training	7.51	8.58	7.31	1.58	37.91	4.59
Equal opportunities	0.16	0.18	0.60	1.07	0.17	3.27
Equity and gender	8.26	9.00	14.07	1.14	27.69	0.33
LGBTQA+ community	0.44	0.54	2.37	1.41	1.10	0.91
Other	0.94	0.77	24431894.79	24397714.06	1.03	6.23

Notes:

Model I: corresponds to the model with dependent variable Vision.

Model II: corresponds to the model with dependent variable Mission.

Model III: corresponds to the model with the dependent variable Corporate Objectives.

Model IV: corresponds to the model with dependent variable Corporate Values.

Model V: corresponds to the model with dependent variable Corporate Strategy.

Model VI: corresponds to the model with dependent variable Others.



Table 6 shows the results of the odds of the independent variables for each model according to its independent variable. It is observed that, according to the significant variables, Model V, which corresponds to the model with the dependent variable Corporate Strategy, the variable Education and Training presents the largest odds of 37.91, which means that for each unit that the variable Education and Training

increases, the odds of the variable Corporate Strategy increase on average by 37.91 units.

Similarly, for Model III, which corresponds to the dependent variable Corporate Objectives, and for Model IV with the dependent variable Corporate Values, it is observed that the independent variable Others, have quite large odds.

**Table 7.** Logistic regression coefficients of the model with dependent variable VISION.

Variable	Coefficient value	Standard deviation	Z-score	Probability
Intercept	0.5628	3.2983	0.1710	0.8645
Internal training	-1.5106	0.9912	-1.5240	0.1275
External training	-0.5911	1.1333	-0.5220	0.602
Women in leadership	-0.1926	0.1119	-1.7210	0.0852
Men in leadership	0.1101	0.0645	1.7070	0.0879
Technological modernization	-2.8478	1.9147	-1.4870	0.1369
Internal innovation	0.5422	1.9127	0.2830	0.7768
External innovation	1.8007	1.0082	1.7860	0.0741
Creativity and innovation policy	-0.0169	1.1138	-0.0150	0.9879
People with disabilities	-0.7462	0.9014	-0.8280	0.4077
Young employees	2.8990	1.4288	2.0290	0.0425 *
Non-discrimination policy	-2.5958	2.4766	-1.0480	0.2946
Pay equity policy	2.9559	1.4193	2.0830	0.0373 *
Code of ethics	-1.0333	1.6229	-0.6370	0.5243
Sustainable development program	1.5123	1.1060	1.3670	0.1715

Notes:

Model I: corresponds to the model with dependent variable Vision.

Model II: corresponds to the model with dependent variable Mission.

Model III: corresponds to the model with the dependent variable Corporate Objectives.

Model IV: corresponds to the model with dependent variable Corporate Values

Model V: corresponds to the model with dependent variable Corporate Strategy

Model VI: corresponds to the model with dependent variable Others.

According to Table 7, it can be seen that for the model with the dependent variable Vision, the significant variables were Young Employees and Salary Equity Policy.

**Table 8.** Logistic regression coefficients of the model with dependent variable MISSION.

Variable	Coefficient value	Standard deviation	Z-score	Probability
Intercept	0.5225	2.9856	0.1750	0.8611
Internal training	-0.7329	0.9040	-0.8110	0.4175
External training	-1.2053	1.1357	-1.0610	0.2886
Women in leadership	-0.1707	0.1119	-1.5260	0.1271
Men in leadership	0.0977	0.0651	1.5000	0.1336
Technological modernization	-2.4490	1.8329	-1.3360	0.1815
Internal innovation	0.6925	1.8802	0.3680	0.7127
External innovation	1.7237	1.0151	1.6980	0.0895
Creativity and innovation policy	0.2789	1.0522	0.2650	0.7910
People with disabilities	-0.1718	0.8635	-0.1990	0.8423
Young employees	2.4605	1.3462	1.8280	0.0676
Non-discrimination policy	-2.3085	2.1215	-1.0880	0.2765
Pay equity policy	2.7692	1.3536	2.0460	0.0408 *
Code of ethics	-1.0439	1.6066	-0.6500	0.5158
Sustainable development program	0.5872	0.9909	0.5930	0.5535

Table 8 shows that for the model with the dependent variable Mission, only the variable Pay Equity Policy was significant at a significance level of 0.05.

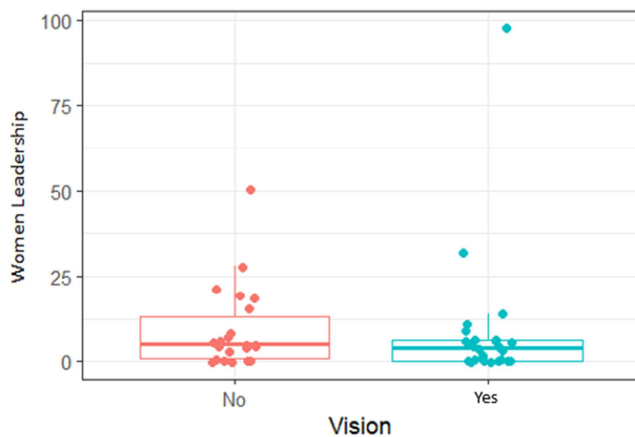
**Table 9.** Odds of the independent variables with respect to the models according to their dependent variable.

Variable	Model I	Model II	Model III	Model IV	Model V	Model VI
Intercept	1.8	1.7	1.1	0.2	81249030113294.2	0.0
Internal training	0.2	0.5	0.2	0.1	0.4	0.3
External training	0.6	0.3	0.4	2.8	0.5	0.4

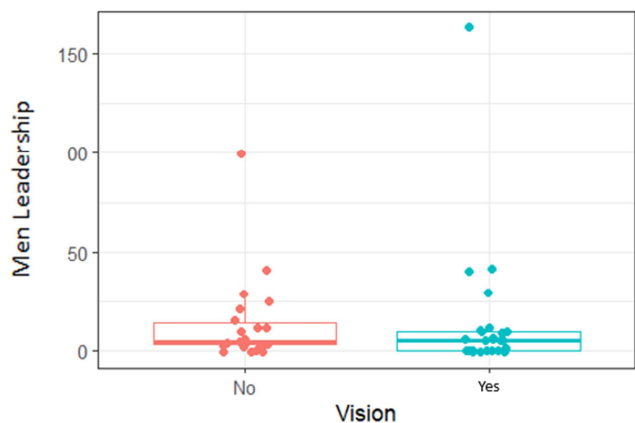
Variable	Model I	Model II	Model III	Model IV	Model V	Model VI
Women in leadership	0.8	0.8	1.0	1.2	0.9	1.0
Men in leadership	1.1	1.1	1.0	0.9	1.0	1.0
Technological modernization	0.1	0.1	0.3	1.4	0.0	0.2
Internal innovation	1.7	2.0	3.8	3922519445.6	0.0	0.3
External innovation	6.1	5.6	0.8	0.0	1.7	1.9
Creativity and innovation policy	1.0	1.3	0.0	0.1	0.3	0.3
People with disabilities	0.5	0.8	0.6	8.7	0.7	1.5
Young employees	18.2	11.7	2.7	1.4	9.4	1.1
Non-discrimination policy	0.1	0.1	1.3	1.4	522674783.6	0.1
Pay equity policy	19.2	15.9	2.6	2.0	0.0	25.0
Code of ethics	0.4	0.4	340555954.3	4.0	2.8	72819912
Sustainable development program	4.5	1.8	0.5	0.8	1.4	0.3

Table 9 shows the results of the odds of the independent variables for each model according to its independent variable. According to the significant variables, Model VI which corresponds to the model with dependent variable Other, the variable Code of Ethics presents the largest odds of 71819912.6.

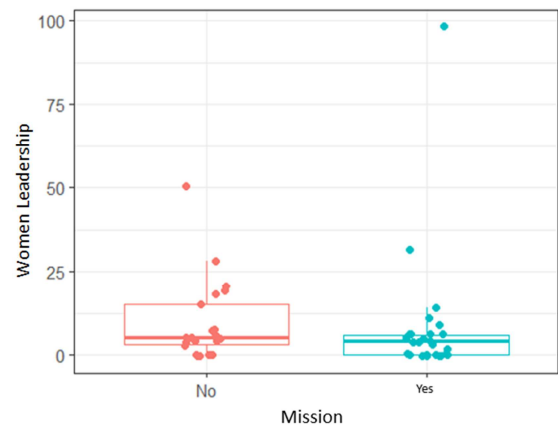
This means that, for each unit that the variable Code of Ethics increases, the odds of the variable Others increase on average by 7181992.6 units. It is considered that, for this second section of models, many odds are presented with considerably large values.



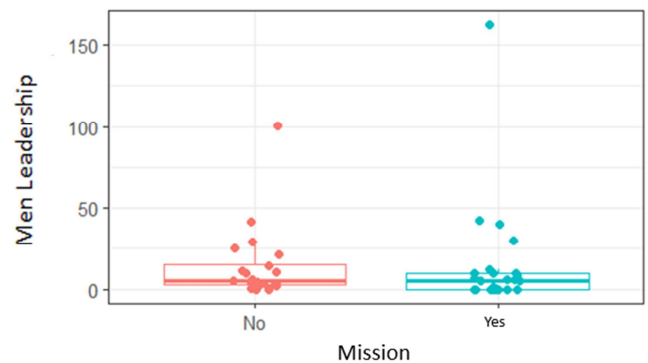
**Figure 19.** Ratio of the number of Women in Leadership Positions according to VISION mechanism.



**Figure 20.** Ratio of the number of Men in Leadership Positions according to the VISION mechanism.



**Figure 21.** Ratio of the number of women in leadership according to MISSION mechanism.



**Figure 22.** Ratio of the number of men in leadership according to MISSION mechanism.

According to Figure 19, it can be seen that there may be a difference in the Number of Women in Leadership Positions with respect to whether the company develops the Vision mechanism or not; in addition, it can be seen that for the Yes category, there is an extreme value, which means that there is a company with a very different or distant number from the other companies.

Figure 20 shows that there seems to be a difference between the Number of Men in Leadership Positions with respect to whether or not the company develops the Vision mechanism. As shown in Figure 19, the Yes category seems to present an extreme value.

Figure 21 illustrates that there seems to be a difference in the Number of Women in Leadership Positions with respect to

whether the company develops the Mission mechanism. In this Figure, two extreme values are observed in the Yes category with respect to the behavior of the other values.

According to Figure 22, there is a slight difference between the number of Men in Leadership Positions with respect to whether the company develops the Mission mechanism.

Each independent variable was associated with one of the five SDGs selected for this research. The independent variables are listed below:

- 1) External training for youth and adults
- 2) Number of women in leadership
- 3) Number of men in leadership
- 4) Technological modernization
- 5) Internal innovation
- 6) Innovation external area
- 7) Creativity innovation policy
- 8) People with disabilities
- 9) Young employees (15 and 24 years old)
- 10) Non-discrimination policy
- 11) Pay equity policy.
- 12) Code of Ethics
- 13) Sustainable development program

The dependent variables indicate whether these were mechanisms that the company developed to ratify its commitment to diversity, equity, and inclusion.

- 1) Vision
- 2) Mission
- 3) Corporate Objectives
- 4) Corporate Values
- 5) Corporate Strategy
- 6) Other

## 4. Conclusion

The results showed that mostly women who co-lead the diversity, equity, and inclusion actions in the 47 companies surveyed are also people with great business experience leading high hierarchical level positions in the Human Resources Departments of these places.

Moreover, Costa Rica and the United States are the countries where most of the headquarters of the companies surveyed are located and most of them have been operating in the country for more than five years. The study reveals that "equality" has been the most significant achievement made by these companies in their management of diversity, equity, and inclusion.

### 4.1. Four Specific Questions Were Formulated to Measure Sustainable Development Goal 4: Quality Education

a. Companies offered internal training in technical and professional areas to young people and adults.

b. In terms of the division gender (men, women, non-binary) related to internal training, companies do not necessarily keep track of non-binary employees.

c. Companies do not offered external training in technical and professional areas to young people and adults. The focus on education is internal to the company and not external. The

companies that do provide it have done so for more than 3 years.

d. The implementation of strategies to develop entrepreneurship skills externally by the companies are not a priority for the private business sector in Costa Rica. Also, 68% of the companies do not implement strategies to develop entrepreneurship skills internally by the companies. This result ratifies that logically entrepreneurship skills would at some point cause a talent drain.

### 4.2. Sustainable Development Goal 5: Gender Equality

a. Number of women in leadership positions.

The result indicated that 39% of leadership positions are held by women. The average number of women in these positions was 12. Likewise, a division by gender was also made it to identify the number of men, women, and non-binary that occupy leadership positions in these companies. The results corroborate that the majority of men occupy leadership positions in the companies surveyed, reaching 61%. The average number of men holding such positions was 19. In regard to non-binary people in leadership positions, the figure obtained was 1. This last figure suggests that companies do not necessarily keep track of non-binary employees.

b. Similarly, the contribution of the private business sector in Costa Rica to this SDG presents a moderate challenge in that there is a clear differentiation in terms of the number of women in leadership positions compared to the number of men who hold such positions in these companies.

### 4.3. Sustainable Development Goal 8: Decent Work and Economic Growth

a. Development of strategies for technological modernization.

The result indicated that 87% of the companies surveyed have strategies for technological modernization.

b. Implementation of programs to encourage innovation internally.

87% of the companies claim to have implemented or to be implementing programs to encourage innovation internally. In 2021, Costa Rica ranked 56th in the world and 3rd in Latin America in the 13th edition of the Global Innovation Index, which confirms the high percentage of affirmative answers to this question.

c. Implementation of programs to encourage innovation externally.

Only 38% of the surveyed companies state that they have implemented or are implementing programs to encourage innovation focused on people outside the organization.

d. Existence of policies or programs that encourage creativity and innovation.

66% of the companies surveyed answered affirmatively to the question of having policies or programs that encourage creativity and innovation.

e. Number of positions occupied by people with special needs or disabilities.

36% of the companies surveyed responded affirmatively. 4

is the average number of people with special needs or disability that occupy a position in these companies, the percentage mentioned above is represented in 12 of the surveyed companies.

f. 81% Companies employing people between 15 and 24 years of age.

By 2022, the youth unemployment rate in Costa Rica reached 34.2%, placing the country with the highest figure in Latin America and above the regional average of 17.6% (ILO, September 2022).

g. Positions held by people between 15 and 24 years of age. Companies reported that these people occupy a wide variety of positions, including internships and, in very similar numbers, operational positions, which highlights the fact that they are not necessarily skilled or semi-skilled positions, especially where skilled or specialized occupations could be offered from the age of 18, which is the age of majority in Costa Rica.

h. Training for young people between 15 and 24 years of age.

98% of the companies responded that they hire people between the ages of 15 and 24; therefore, these recruitments are aimed at offering operational positions or internships to prepare these individuals and access better job opportunities.

The country has designed an evolutionary path in its economic model that has allowed it to migrate from labor-intensive processes to knowledge-intensive processes offering better job opportunities for national talent. The concrete efforts to train young people between the ages of 15 and 24 demonstrate the right path. Companies offer them decent work to seek a sustainable level of economic development for the country.

#### **4.4. Sustainable Development Goal 10: Reduction of Inequalities**

a. The existence of a policy supporting non-discrimination.

The high percentage obtained (96%) confirms that the companies surveyed have a policy that supports non-discrimination.

b. The existence of a policy that guarantees non-discrimination. In this question, the percentage is lower than in the previous question, reaching 83%. This difference suggests that at the level of action, the company does not necessarily have the strength internally, but only has the document.

c. Having a policy that guarantees pay equity between men and women in similar positions. 77% percent of the companies have these policies. On the one hand, it is not common to find wage differences between men and women in similar positions in the private sector in Costa Rica, on the other side, these actions are contrary to what happens in the public sector.

In conclusion, the contribution of Costa Rica's private business sector to this SDG presents a major challenge, despite the efforts aimed at eradicating the pay gap. The arrival of multinational companies in the country between 2001 and 2019 has contributed significantly to improving women's labor insertion opportunities. These measures

facilitate their access to better-quality jobs.

There is no denying the existence of gender pay discrimination, especially in Costa Rica's public sector. Gender stereotypes and discriminatory social norms dominate the market. For instance, the feminization of certain social roles, such as caring for children and the elderly, conceived as a matter of social transfer, alienates women, and slows progress and the elimination of this gap.

#### **4.5. Sustainable Development Goal 16: Peace, Justice, and Sound Institutions**

a. The existence of a code of ethics emphasizes that corruption and bribery are not acceptable. 89% of the companies surveyed have a code of ethics. This document is mostly found in multinational companies, but not all private sector companies have one. However, this set of rules and values, whose purpose is to regulate the behavior of employees in the workplace, is also a great tool to help and guide them, as it defines the moral principles that regulate the exercise of their activities.

b. Existence of any program or actions in favor of sustainable development. An affirmative response was obtained from 70% of the companies surveyed, which stated that they have some program or carry out actions in favor of sustainable development.

In conclusion, multiple efforts are being carried out at the governmental and private levels; however, the COVID-19 pandemic represented a blackout in all social spheres in all countries and has significantly delayed the progress and achievement of the Sustainable Development Goals.

Inclusive economic growth is a national priority. It must be the path we all pursue at the private and public levels. Civil society plays a relevant role and only the conjunction of these three axes will make possible tangible progress for the country. It is expected that the country will show a better relative positioning according to the 2030 Agenda of the United Nations.

Costa Rica's private business sector is key to this progress. Becoming a successful company requires a combination of factors that range from ratifying through its Vision, Mission, Values, Corporate Objectives, and Business Strategy, to its commitment to creating the basis to compete ethically in the market and demonstrate its search for diversity, equity, and inclusion.

Educating and training, offering equal opportunities, ensuring gender equity, seeking job opportunities for people with special needs/disabilities, and supporting the LGBTIQ+ community are some of the focus areas that a successful company must ensure. Much remains to be done, because if we refer to the motto of the United Nations 2030 Agenda, "no one left behind", is the challenge to be pursued.

The review of the regression models reveals that many initial models, after applying the binary backward logistic regression method with the likelihood ratio (LR) criterion, turn out to be very parsimonious; that is, they incorporate few variables, considering that, in addition, the initial models showed few significant variables.

The independent and dependent variables show that the companies surveyed use some mechanisms to ratify their commitment to diversity, equity, and inclusion.

## References

- [1] Deloitte Global. (2021). *Impact Report 2021*.
- [2] Coalición Costarricense de Iniciativas de Desarrollo. (2019). *Agencia Costarricense para la Promoción de las Inversiones, Visión Estratégica 2019-2022*.
- [3] Carolina Cornejo-Valderrama. (2017). Educational Response in the Attention to Diversity from the Perspective of Support Professionals. *Revista Colombiana de Educación*. (73). doi: 10.17227/01203916.73rce75.9.
- [4] Organización de los Estados Americanos. (2016). Informe de la Asamblea General. [https://www.oas.org/es/centro\\_informacion/informe\\_anual.asp](https://www.oas.org/es/centro_informacion/informe_anual.asp)
- [5] Patricia Anabel Plancarte-Cansino. (2017). Inclusión educativa y cultura inclusiva. *Revista Nacional e Internacional de Educación Inclusiva*, (2).
- [6] Arias-Gomez, J., Villasis-Keever, M. A. y Miranda-Novales, M. G. (2016). The Research protocol III. Study population. *Revista Alerg*. 63 (2), 201-206.
- [7] De las Cuevas, Paloma, Maribel García-Arenas, & Nuria Rico. (2022). "Why Not STEM? A Study Case on the Influence of Gender Factors on Students' Higher Education Choice" *Mathematics* 10, (2) 239. <https://doi.org/10.3390/math10020239>
- [8] Susanne Hupfer, Sayantani Mazumder, & Gillian Crossan (2022). Women in tech are cracking the industry's glass ceiling, achieving double-digit gains in leadership roles. *Deloitte*. <https://www2.deloitte.com/uk/en/insights/industry/technology/women-tech-leadership.html>
- [9] Bengt-Åke Lundvall (2016). *The Learning Economy and the Economics of Hope*. Anthem Press.
- [10] Nuno Fernandes Crespo & Cátia Fernandes Crespo (2016). Global innovation index: Moving beyond the absolute value of ranking with a fuzzy-set analysis. *Journal of Business Research*, 69, (11), 5265-5271. <https://doi.org/10.1016/j.jbusres.2016.04.123>
- [11] Haien Ding. (2022). What kinds of countries have better innovation performance?—A country-level fsQCA and NCA study, *Journal of Innovation & Knowledge*, 7 (4). <https://doi.org/10.1016/j.jik.2022.100215>.
- [12] Canossa Montes de oca & Héctor Andrés. (2020). *Challenges for the labor inclusion of persons with disabilities in Costa Rica*. *Economía y Sociedad*, 25 (58), 50-68. <http://dx.doi.org/10.15359/eyes.25/58.4>.
- [13] Aileen Schloemer-Jarvis, Benjamin Bader & Stephan A. Böhm. (2021). The role of human resource practices for including persons with disabilities in the workforce: a systematic literature review. *The International Journal of Human Resource Management*, 33 (1), 45-98.
- [14] Aileen Schloemer-Jarvis, Benjamin Bader & Stephan A. Böhm (2022). The role of human resource practices for including persons with disabilities in the workforce: a systematic literature review, *The International Journal of Human Resource Management*, 33: 1, 45-98. 10.1080/09585192.2021.1996433.
- [15] International Labor Organization. (2022). *Business, Non-discrimination and Equality*. [https://www.ilo.org/empent/areas/business-helpdesk/WCMS\\_DOC\\_ENT\\_HLP\\_BDE\\_EN/lang-en/index.htm](https://www.ilo.org/empent/areas/business-helpdesk/WCMS_DOC_ENT_HLP_BDE_EN/lang-en/index.htm)
- [16] Meyer-Sahling, J.-H., & Mikkelsen, K. S. (2022). Codes of Ethics, Disciplinary Codes, and the Effectiveness of Anti-Corruption Frameworks: Evidence from a Survey of Civil Servants in Poland. *Review of Public Personnel Administration*, 42 (1), 142–164. <https://doi.org/10.1177/0734371X20949420>
- [17] Knut Haanaes & Natalia Olynec. (2022). *Why all businesses should embrace sustainability*. IMD. [www.imd.org](http://www.imd.org)