

SOCIAL RESPONSIBILITY PRACTICES AS A FACTOR IN ECONOMIC BENEFITS

Lorena Miranda Navarro*

Facultad de Responsabilidad Social, Universidad Anáhuac Mexico, Mexico

ABSTRACT

Social responsibility shows an influential evolution at a global level, and the issue is increasingly being observed in alignment with the budgets of organizations. Therefore, some financial institutions interested in regaining the confidence of their investors are voluntarily assuming a set of practices, initiatives, standards, and instruments of international support that take into account both the interest of the organization and the well-being of the interested parties in economic, social and environmental matters. This article focuses on the financial groups that make up the Sustainable Price and Quotation Index, where the evolution and maturity of the information published on their social responsibility practices are examined, and the economic benefit they obtain is evaluated. After the research, it is observed that belonging to a sustainable index contributes to the inclusion of best practices; however, no evidence belonging to the Sustainable IPC influences the economic benefit of the analyzed groups.

Keywords: Financial groups, sustainable index, social responsibility, economic profit, Markowitz Portfolio.

Received: 2 June 2021

Accepted: 29 April 2022

<https://doi.org/10.33736/ijbs.4867.2022>

1. INTRODUCTION

Investor confidence has been affected worldwide by multiple cases of financial frauds observed in the last decade in world-renowned companies (Bugandwa et al., 2021). Under this environment, companies try to develop and implement policies and strategies to grow, consolidate and sustain themselves over time (Arrigoni, 2019). As a result, some financial institutions interested in regaining the confidence of their investors have begun to voluntarily assume a set of practices, initiatives, standards, and instruments of international support that consider both the interest of the organization and the well-being of the interested parties in economic, social and environmental matters (Velte, 2017; Saavedra García, 2011; Jaén & Márquez, 2006). Value creation in organizations implies maximizing their economic value in monetary terms and a social and environmental function (Botticelli, 2018; Foss & Klein, 2018). Thus, Carroll (1991) mentions that obtaining benefits is consistent with adopting a social responsibility for the business (Chakroun & Amar, 2021; Domergue, 2012).

Financial groups and social responsibility are two concepts that seem to have nothing in common; the first concept refers to the collection and placement of monetary resources; the second involves issues related to society, the environment, and corporate governance. However, the union of both

* Corresponding author: Facultad de Responsabilidad Social, Universidad Anahuac, México, Av. Universidad Anahuac 46, Lomas Anahuac, Huixquilucan, Estado de México, C.P. 52786, Mexico. Tel: +52 5518225274; Email: lorena.miranda@anahuac.mx

concepts invites the current competitiveness of organizations to become cooperative, and effectiveness becomes trust (Silva et al., 2021; Felber, 2015). The theory indicates that these practices aim to strengthen the sector's value chain, improve relationships with stakeholders and ensure the sustainability of the business (Pinney et al., 2019).

After the pandemic and the economic, social, and labor consequences of the last financial crisis in 2008, the perception of the actors in the tools of social responsibility and sustainability that are implemented in the investment markets has increased. The Stock Exchanges play a transcendental role in the economic progress of the country to which they belong since they promote new actions, practices, and instruments among the issuers and investors that make up the market.

One of the objectives of this study is to provide a better understanding of how social responsibility investing plays a role in the Mexican capital market in the banking sector. The inclination towards this sector derives from the importance of the financial intermediation activity that is carried out in conjunction with the companies that are part of the economy and its impact at the macroeconomic level to know the influence that social responsibility practices contribute in this sector, strengthening its value chain and its relationship with its stakeholders, ensuring the sustainability of the business, and contributing to its financial performance.

Given the above, the hypothesis that arises is that implementing social responsibility practices pays off for the economic benefit of financial groups that are part of the Sustainable Prices and Quotations Index. The document contributes to the study of financial groups that consider social responsibility practices and belong to a sustainable index, considering a mixed methodology, establishing a documentary, non-experimental and longitudinal public information design. In this sense, evidence of the evolution and maturity of the published information is shown, and the application of the Markowitz's Portfolio Theory for the first time in Mexico in a portfolio that considers social responsibility practices. The article contains five sections, within which this introduction is included as the first section. The second of the sections presents the literature on social responsibility and financial performance. In the third section, the mixed methodology used in this study is presented. Finally, the findings and results are displayed within the fourth section, and the conclusions in the fifth section.

2. LITERATURE REVIEW

2.1. *Social Responsibility Practices*

According to Bowen (1953, as cited in Acquier et al., 2011) believes that Social Responsibility refers to the entrepreneurs' decision-making to promote corporate policies or follow desirable lines of action regarding the objectives and values of society. Although there is currently no consensus in its definition (Ventura, 2007; Neu & Ocampo, 2015; Iyer & Jarvis, 2019), this is not a limitation in seeking ways to commit to its implementation and evaluation (Porter & Kramer, 2006).

In this sense, sustainable international organizations, agreements, and indexes focus on disclosing, making transparent, and unifying how social responsibility practices can be exercised (El Ouadghiria et al., 2020; Dai, 2020). The Global Reporting Initiative (GRI), for example, is an international non-governmental organization that encourages the preparation of sustainability

reports in organizations, regardless of their size, sector, or location. It can establish principles and indicators to measure and communicate sustainability issues transparently (GRI, 2016).

The United Nations Global Compact, in turn, is an agreement that invites companies to voluntarily align their operations and strategies under ten universal principles, supported by four pillars: human rights, the environment, labor standards, and anti-corruption (United Nations Global Compact, 2022).

Likewise, the required sustainable indices, comprehensive stock companies committed to environmental, social, and corporate governance matters. Examples of these indices are the Dow Jones Sustainability Index in the United States, the FTSE4 Good Index in London, the Corporate Sustainability Index in Brazil, and the Sustainable Price and Quotation Index (Sustainable IPC) in Mexico. This last index was created in December 2011 and is targeted at following the stock market behavior of Mexican issuers that have sustainable programs with international protocols (Bolsa Mexicana de Valores, 2022).

The Stock Exchanges play a transcendental role in the economic progress of the country to which they belong since they promote new actions, practices, and instruments among the issuers and investors that make up the market. According to data from the Sustainable Stock Exchanges Initiative (SSE), at the end of 2018, there was an increase of 26% compared to 2016, of stock exchanges that committed to promoting sustainability in their markets. This data includes 78 members from the five continents, where 45,000 companies were registered, representing a market capitalization of more than US\$80trn; In addition, in the latest global review of sustainable investments by the Global Sustainable Investment Alliance (GSIA, 2018), global sustainable investment reached \$30.7 billion at the beginning of 2018, in the five main markets of Europe (46%), the United States (39%), Japan (7%), Canada (6%) and Australia/New Zealand (2%); which reflects that sustainable investment is a growing segment in capital markets around the world.

2.2. Economic Benefit

This research is based on the Theory of Value in its classical, neoclassical, and contemporary approach to understand the concept of economic benefits and its relationship with social responsibility. The term economic benefit in literature has been used in a manner comparable to financial performance or economic performance and refers to fulfilling the firm's economic objectives (Al-Shammari et al., 2021; Venkatraman & Ramanujam, 1987). From the classical approach, the value of a good was strongly associated with the fair price (Cachanosky, 1994). In the neoclassical approach, the value depends entirely on its usefulness for the individual to satisfy his needs, preferences, desires, aspirations and pleasures (Zorrilla, 1996). However, in the contemporary doctrine known as the Welfare economy, the core is the human being, the maximization of social welfare, and concepts such as economic, political, social development, freedom, capacities, and opportunities (Roll, 1994). The evolution of this theory has been in function of conceiving value rather than as a quantifiable figure of a moral and ethical issue of providing justice (Brue & Grant, 2016). In this research, the economic benefit will be understood as the utility or positive value generated by the company, but inherent in social responsibility.

The economic benefit has been commonly evaluated from a financial point of view (Morales & Abreu, 2014a), and measures such as Return on Assets (ROA) and Return on Stockholders' Equity

(ROE) has been applied in the banking sector (Bolibok, 2017; Strumickas & Valanciené, 2006) and in companies that belong to sustainable indices (Kiesel & Lücke, 2019; Puaschunder, 2017; Morales & Abreu, 2015). Nevertheless, it is also possible to evaluate the economic benefit of an organization, from the stock market point of view, using indicators such as the Yield per Share that has been adopted (Morales, 2014), which allows measuring the yield per share in a determined period.

Due to the above, the Markowitz Portfolio Theory (1952, as cited in Franco et al., 2011) will be helpful in this research since it allows us to evaluate whether there are significant differences in the economic benefit of the financial groups that belong to the Sustainable Prices and Quotations Index and those that do not belong to it. The theory is based on diversifying the estimated investments in a portfolio, structuring combinations of assets, and considering the performance and global risk, ever seeking their optimization (Ramírez & García, 2016). This theory has been used in other studies to obtain optimal performance in investment portfolios like retirement funds (Banda et al., 2014) and listed companies on the European and United States stock exchanges (Rzymowski & Surowiec, 2015). This model theory is also of renowned importance as part of international certification in the financial sector (Chartered Financial Analyst (CFA), 2018).

2.3. *Social Responsibility and Its Relationship with the Economic Benefit*

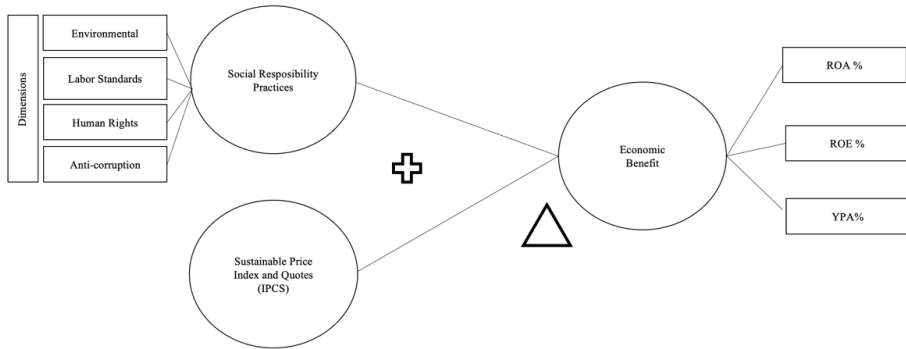
From the perspective of the Resource-based theory, the relationship between Social Responsibility and the economic benefit is presumed positive, since the implementation of Social Responsibility initiatives help create intangible resources, such as the company's good reputation among the stakeholders, who are a fundamental source of wealth for the company (Brunninge et al., 2020; Branco & Rodrigues, 2006). On the other hand, Social Responsibility practices can also lead to a decrease in operating costs by minimizing energy and waste, which also helps improve their financial performance (Terrero-De La Rosa et al., 2017; Agudo-Valiente et al., 2017).

These studies show mixed results. Some researchers have found evidence that maintaining close relationships with stakeholders, based on trust and reciprocity, has an economic benefit, even in market conditions with excessive competition and instability such as the informal economy (Al-Shammari et al., 2021; Villanueva et al., 2018). On the other hand, there is research that indicates that even though investments in Social Responsibility is a growing trend during the last decade (Sciarelli et al., 2019), this has not yet positively permeated the economic benefit of signatures (Alonso-Almeida et al., 2012; Torre Torres & Martínez, 2015; Morales & Abreu, 2014b). Some argue that this happens mainly during the short term, when costs have not yet been recovered (Hang et al., 2019), or when companies have not managed to consolidate the issue of sustainability, nor have they been able to communicate it clearly (Arminen et al., 2016).

The model in Figure 1 identifies the main variables that seek relate in this investigation and develop the following hypothesis:

H1: Implementing social responsibility practices pays off for the financial performance of the financial groups that are part of the Sustainable Price and Quotation Index.

Figure 1: Main Variables

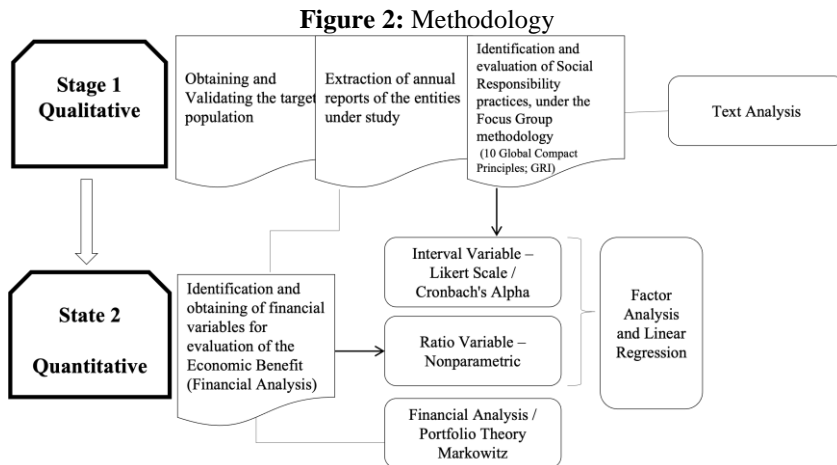


Source: Developed by the author.

3. METHODOLOGY

The methodology considered for this research is of a mixed type with a sequential exploratory design (Creswell, 2003) with the QUAL → QUAN notation diagram (Morse, 1991). This sequential exploratory design initially implies a qualitative data collection and analysis phase, followed by a quantitative data collection and analysis phase. The reason for conducting a mixed methods research is driven by the development objective, which seeks to use the findings of one approach to inform the other and excel in the understanding of the phenomenon (Hanson et al., 2005).

This research seeks to better understand by converging the specific details of qualitative data (social responsibility practices) and the numerical trends of quantitative data (economic benefit) if a sustainable stock market index incorporated by financial groups is related to its economic benefit. It is currently made up of 30 companies, of which two are from the financial sector (Stock Market). The model in Figure 2 shows the relationship of the mixed methodology developed in this research:



Source: Developed by the author.

3.1. Qualitative Phase

The first step was to obtain and validate the population of this research, namely, the financial groups listed on the Mexican Stock Exchange, the second-largest stock market in Latin America. This search generated 23 results for financial institutions.

The second criterion was also that these financial institutions should be listed in the Sustainable IPC of the Mexican Stock Exchange. Although this Index includes 30 companies classified in eight sectors, only two are from the financial industry: Financial Group Banorte (Banorte) and Banco Santander México (Santander). Additionally, Financial Group Banregio (Banregio) and Financial Group Inbursa (Inbursa) were considered the control group to evaluate if there are significant differences in the economic benefit of financial groups. We applied a comparative analysis between financial groups that only belong to the Prices and Quotations Index (Banregio and Inbursa) against those belonging to the Sustainable IPC and the Prices and Quotations Index (Banorte and Santander).

The second step was collecting, reviewing, and analyzing the annual reports and sustainability reports published by both financial groups: Banorte and Santander. The purpose was to identify the practices of Social Responsibility considering the four dimensions of the United Nations Global Compact¹: 1) Human Rights, 2) Labor Standards, 3) Environment, and 4) Anti-corruption reported under the methodology of the GRI². In this stage, it was necessary to standardize the different versions of this methodology presented by each financial group and then examine Social Responsibility practices through text analysis. It was found that from 2010 to 2012, Financial Group Banorte considered the GRI G3 version methodology, while for the 2013-2015 period, it used the G4 version, and for 2016-2019, the GRI Standards version. Financial Group Santander, on the other hand, during the 2010-2013 period, used the G3 version and G4 version for the years 2013 to 2015, and for 2016-2019 the GRI Standards version. As can be noted, the versions of the GRI report considered in each period do not concur in the two financial groups that were studied, so it was necessary to homogenize the versions to carry out an objective and equitable analysis for both corporations.

Once the information was homogeneous, a detailed analysis was carried out in each annual report to recognize the social responsibility practices for each financial group and each year considered in the investigation, and they were qualified and evaluated using the focus group methodology, where experts on the subject were invited to participate using questionnaires, to compare and contrast the information found to evaluate its evolution in the way of presenting the information according to the bases of the GRI, in the dimensions environmental, labor standards, human rights and anti-corruption, which adhere to the principles of the United Nations Global Compact.

The period analyzed was from 2010 to 2019 for each financial group. 730 Social Responsibility indicators were reported under the GRI methodology, broken down as follows: 120 Human Rights; 160 for Labor Standards; 340 on the Environment and 110 on Anti-Corruption.

¹ United Nations Global Compact invites companies to voluntarily align their operations and strategies with the ten accepted universal principles supported by four pillars: Human Rights, Environment, Labor Standards and Anti-Corruption.

² GRI is an independent international organization that has pioneered sustainability reporting since 1997. The GRI Standards are the first global standards for sustainability reporting. They feature a modular, interrelated structure and represent the global best practice for reporting various economic, environmental, and social impacts. In this research, the methodology is considered an instrument to identify the social responsibility practices that constitute the independent variable.

3.2. Quantitative Phase

Once the Social Responsibility practices established by the GRI methodology were approved, the existence and degree of maturity of these practices were immediately evaluated by disclosing the annual reports of the financial groups. For this purpose, we deployed a measurement technique that uses a “disclosure-scoring measure” derived from the content analysis. Previous studies have adopted this methodology (Al-Tuwaijri et al., 2004; Mohammed & Al-Swidi, 2019) to rate the disclosure of critical indicators of Social Responsibility based on disclosures of information. In this technique, weights are assigned to different disclosure elements according to the perceived importance of each component; this allows a structured evaluation while capturing important indicators of Social Responsibility (Ghaderi et al., 2019). Through the focus group methodology, applied to specialists in social responsibility (Krueger & Casey, 2000) and the Likert scale, each of the social responsibility practices was rated and evaluated for each financial group and for each year considered, where the most significant score (+5) was assigned to companies that submitted disclosures related to the four indicators described above. Companies that did not disclose information for a marker received the lowest score (+1), and that there was no evidence that the company did. Once the 730 Social Responsibility practices of each financial group had been carried out, a factor analysis was applied. This analysis was created in the 20th century by Spearman (1904, as cited in Ferrando & Anguiano, 2010), is a multiple regression model that relates latent variables with observed variables and is considered a data reduction technique; its purpose is to find the minimum number of dimensions capable of explaining the complete information contained in the data and the relationship that exists between the items, explaining why some are more related than others.

In addition, Cronbach's Alpha coefficient was applied in order to achieve reliability and validity. Both for multiple regression and Cronbach's Alpha, the support of the statistical analysis software SPSS (version 25) was used. This technique has been used in similar investigations to determine social responsibility factors in various companies (Issarawornrawanich & Wuttichindanon, 2018; Jiang & Wong, 2015; Hornungová, 2014).

At this stage, two extra quantitative analyses were performed. The first is to get the profitability of a portfolio through the Markowitz methodology; the second is to know the relationship between the practices of social responsibility and the financial indicators considered the economic benefit. The selection of a specific profit-risk combination will depend on the investor's greater or lesser aversion to risk. Thus, the risk of a portfolio of assets is not equal to the sum of the risks since they are considered macroeconomic factors that sensitize them. Therefore, for each asset, a logarithmic return is expressed:

$$r_t = \ln(P_t/P_{t-1})$$

where:

P_t : today's asset price

P_{t-1} : yesterday's asset price

Once the yield has been calculated, the Expectancy (mean profitability) and Mean Risk (dispersion, mean per standard deviation) are calculated, which remain constant for a period. The applied formulas were the following:

$$\mu = E(r_i) \quad \sigma = \sqrt{\text{Var}[r_i]}$$

Considering the calculated standard deviation, we proceed to find the optimal percentage to invest in each asset that allows reducing the volatility of the portfolio, that is, to find ω (% of investment), for which it is necessary to derive concerning ω and equalize to zero, the formulas used:

$$\sigma_p = \sqrt{\text{Var}[r_p]} \quad \frac{d[\text{Var}(r_p)]}{d\omega} = 0 \quad \omega = \frac{\sigma_2^2 - \sigma_{12}}{\sigma_1^2 + \sigma_2^2 - 2\sigma_{12}}$$

Knowing the returns and the investment percentage (ω), the portfolio's profitability is calculated including the investment proportion in each of the assets that comprise it:

$$r_p = \omega * r_1 + (1 - \omega) * r_2$$

where:

r_p : portfolio profitability

ω : % of investment

r_1 y r_2 : returns on assets

For the second analysis, we considered three indicators: Return on Assets (ROA), Return on Equity (ROE), and Yield Per Action (YPA). After that, ROA and ROE data were collected from the annual reports, and for the YPA indicator, the historical and daily share price from the Economic database were reviewed. The Markowitz Portfolio model was used to study the YPA variable, taking its everyday prices as a reference, considering both the financial groups under study (Santander and Banorte) and the financial groups of the control group (Inbursa and Banregio). Once the information was consolidated, the Markowitz Portfolio Theory methodology was applied.

Subsequently, these indicators (ROE, ROA, YPA) were used to perform a linear regression that allowed us to analyze their relationship with Social Responsibility practices.

According to Hernández-Sampieri et al. (2018) mention that a linear regression is a statistical model that is associated with Pearson's r coefficient; likewise, it provides the opportunity to predict the scores of one variable from the scores of the other variable. According to Lind et al. (2012) the general formula of the linear regression equation is the following:

$$\hat{Y} = a + bX$$

where:

\hat{Y} : Y prime is read, estimated value of variable Y for a selected X value

a : is the Y intercept. It is the estimated value of Y when X=0

b : is the slope of the line, or the average change in \hat{Y} for each change of one unit in the independent variable X

X: is any value of the independent variable that was selected

4. RESULTS AND DISCUSSION

4.1. Qualitative Analysis

One of the first findings in this research was that the financial sector, despite being concerned about establishing social responsibility practices in their organizations, only two of them are listed in the Sustainable IPC: Banorte and Santander.

During the 2010-2019 period, we observed that there had been a gradual adoption of social responsibility practices in both financial groups and a notable improvement in their reporting. Banorte shows a positive evolution over the years; in 2013, its information begins to be presented more frequently, but in the last periods it has slightly decreased the quality of information; on the other hand, the report analyzed from Santander shows a positive consistency from the beginning.

Although Banorte and Santander are compelled to report these practices according to the GRI criteria, it was found that Banorte fulfilled 75% of the information required by the GRI, while Santander with 80%.

Table 1: Indicators for Each GRI Dimension

Dimensions	TOTAL	BANORTE	SANTANDER
Human Rights	120	120	120
Labor Standards	160	96	117
Environment	340	236	240
Anti-corruption	110	94	110
Total indicators in the period 2010-2019	730	546	587
%	100%	75%	80%

Source: Author's calculations.

From the information presented, both financial groups reflected an opportunity for improvement in the dimension of Labor Standards, specifically on the classifications: Relations between workers and health and safety. Within the identical measurement, the information presented by Santander was of low quality in the areas of Diversity, Equal Remuneration, Evaluation of Labor Practices, and Claims Mechanisms. For the environment dimension, Banorte reflects an opportunity for improvement in the Emissions category, while Santander in the classifications refers to Biodiversity, Transportation, and Water. Figure 3 shows the percentages of progress by indicator.

Figure 3: Percentages of Progress

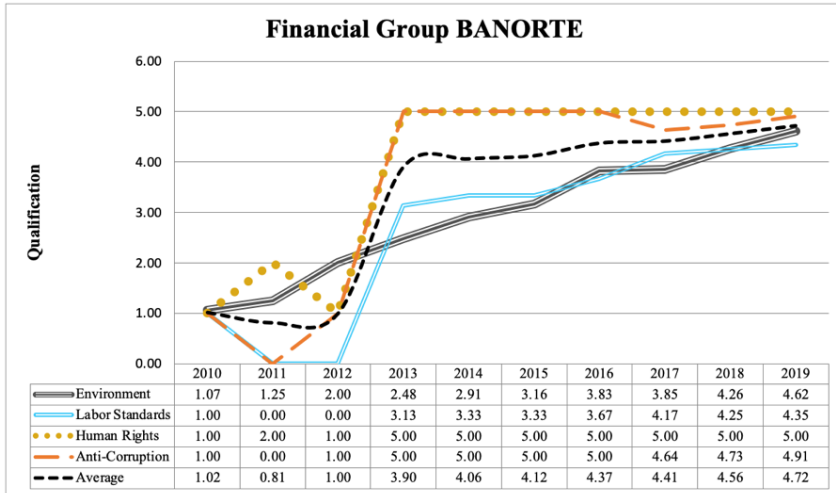
Dimension	Human Rights	Concept	COMPLIANCE			
			BANORTE	SANTANDER	BANORTE	SANTANDER
	G4-HR1-G4-HR2	Investment	69%	80%	MEDIUM	HIGH
	G4-HR3	Nondiscrimination	69%	80%	MEDIUM	HIGH
	G4-HR4	Freedom of association and collective bargaining	69%	80%	MEDIUM	HIGH
	G4-HR5	Child labor	69%	80%	MEDIUM	HIGH
	G4-HR6	Forced labor	69%	80%	MEDIUM	HIGH
	G4-HR7	Security measures	69%	80%	MEDIUM	HIGH
	G4-HR8	Rights of the indigenous population	69%	80%	MEDIUM	HIGH
	G4-HR9	Evaluation	69%	80%	MEDIUM	HIGH
	G4-HR10	Evaluation of suppliers in terms of human rights	69%	80%	MEDIUM	HIGH
	G4-HR11	Evaluation of suppliers in terms of human rights	69%	80%	MEDIUM	HIGH
	G4-HR12	Human rights complaint mechanisms	69%	80%	MEDIUM	HIGH
Dimension	Laboral Standards	Concept	COMPLIANCE			
	G4-LA1-G4-LA3	Employment	64%	69%	MEDIUM	MEDIUM
	G4-LA4	Relations between workers	0%	0%	LOW	LOW
	G4-LA5-G4-LA8	Health and security	40%	31%	LOW	LOW
	G4-LA9-G4-LA11	Training and education	56%	54%	MEDIUM	MEDIUM
	G4-LA12	Diversity	75%	37%	MEDIUM	LOW
	G4-LA13	Equal pay	75%	37%	MEDIUM	LOW
	G4-LA14-G4-LA15	Evaluation of labor practices	87%	0%	HIGH	LOW
	G4-LA16	Grievance mechanisms	100%	0%	HIGH	LOW
Dimension	Enviroment	Concept	COMPLIANCE			
	G4-EN1-G4-EN2	Materials	50%	75%	MEDIUM	MEDIUM
	G4-EN3-G4-EN7	Energy	63%	63%	MEDIUM	MEDIUM
	G4-EN8-G4-EN10	Water	60%	47%	MEDIUM	LOW
	G4-EN11-G4-EN14	Biodiversity	55%	60%	MEDIUM	MEDIUM
	G4-EN15-G4-EN21	Emission	47%	51%	LOW	MEDIUM
	G4-EN22-G4-EN26	Effluents and Waste	32%	43%	LOW	LOW
	G4-EN27-G4-EN28	Products and services	20%	20%	LOW	LOW
	G4-EN29	Regulatory compliance	100%	100%	HIGH	HIGH
	G4-EN30	Transport	60%	40%	MEDIUM	LOW
	G4-EN31	General	60%	20%	MEDIUM	LOW
	G4-EN32-G4-EN33	Environmental assessment of suppliers	60%	0%	MEDIUM	LOW
	G4-EN34	Grievance mechanisms	100%	0%	HIGH	LOW
Dimension	Anti-corruption	Concept	COMPLIANCE			
	G4-SO1-G4-SO2	Local communities	73%	83%	MEDIUM	HIGH
	G4-SO3-G4-SO5	Fight against corruption	73%	83%	MEDIUM	HIGH
	G4-SO6	Public politics	73%	83%	MEDIUM	HIGH
	G4-SO7	Unfair competition practices	73%	83%	MEDIUM	HIGH
	G4-SO8	Regulatory compliance	73%	83%	MEDIUM	HIGH
	G4-SO9-G4-SO10	Social Impact Assessment	73%	83%	MEDIUM	HIGH
	G4-SO11	Grievance mechanisms	73%	83%	MEDIUM	HIGH

Source: Developed by the author.

4.2. Quantitative Analysis

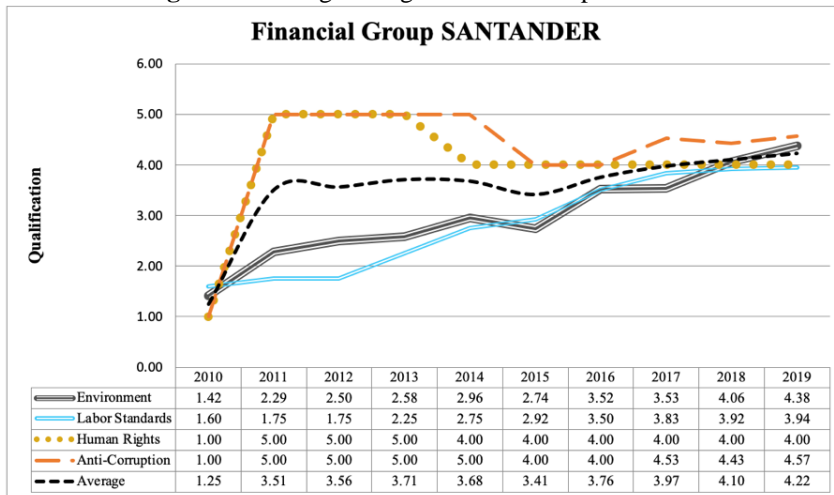
As we mentioned, there is no criterion to compare the social responsibility practices adopted between companies quantitatively. Because of that, we use a methodology (described before) to homogenize the GRI indicators to compare the impact of social responsibility practices. The following graphs show the average of the scores obtained by Banorte and Santander in the four dimensions of the United Nations Global Compact:

Figure 4: Average Rating Financial Group Banorte



Source: Developed by the author.

Figure 5: Average rating Financial Group Santander



Source: Developed by the author.

In both financial groups, the Human Rights and Anti-Corruption dimensions are above the average score obtained individually, while Environment and Labor Standards are below it.

The result of the Cronbach's Alpha Coefficient obtained is shown in Tables 2 and 3:

Table 2: Banorte Financial Group

Realible Statistic	
Cronbach's Alpha	Cronbach's Alpha based on standardized elements
0.984	0.978

Source: Author's calculations.

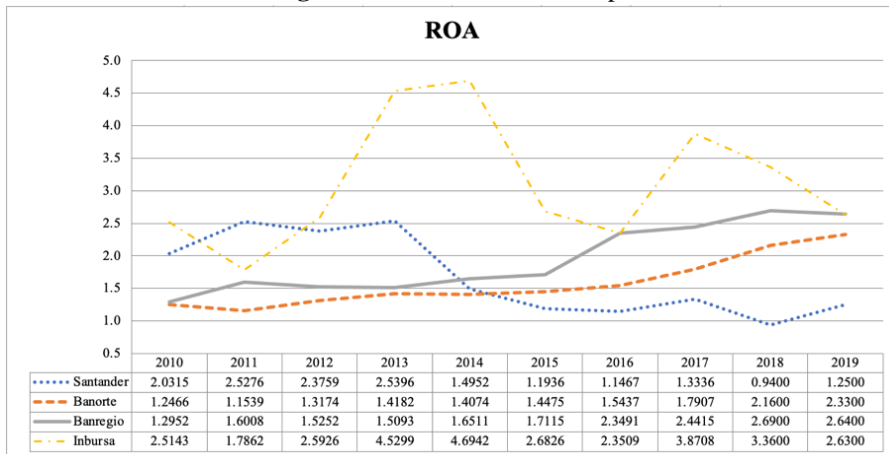
Table 3: Santander Financial Group

Realible Statistic	
Cronbach's Alpha	Cronbach's Alpha based on standardized elements
0.967	0.954

Source: Author's calculations.

The next point to analyze was whether there are significant differences in the economic benefit of the financial groups that belong to the Sustainable IPC and those who do not belong to it. In the graphs that are presented below, there are significant differences in the variables ROA and ROE:

Figure 6: ROA Financial Groups

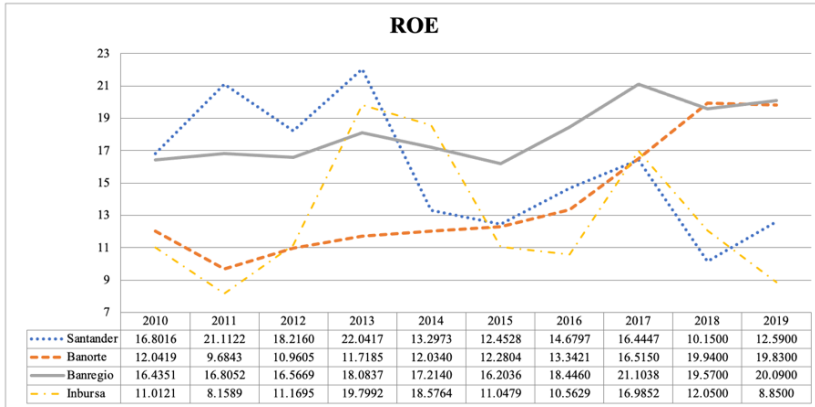


Source: Developed by the author.

In this graph, it is observed that there are significant differences in the ROA variable, which is considered the financial reason par excellence to measure productivity. As can be seen, Inbursa is the one that reported the best performance, while Santander, during the last two years of the analyzed period, had a significant drop. Banregio, unlike Santander, showed a better understanding of the previous two years. In contrast, Banorte presented a very stable performance during the period.

Regarding the ROE variable that indicates the percentage of net profit obtained by shareholders on the capital invested in a company, during the analyzed period, Inbursa and Santander presented surprises in the information, while the data reported by Banregio and Banorte were more stable.

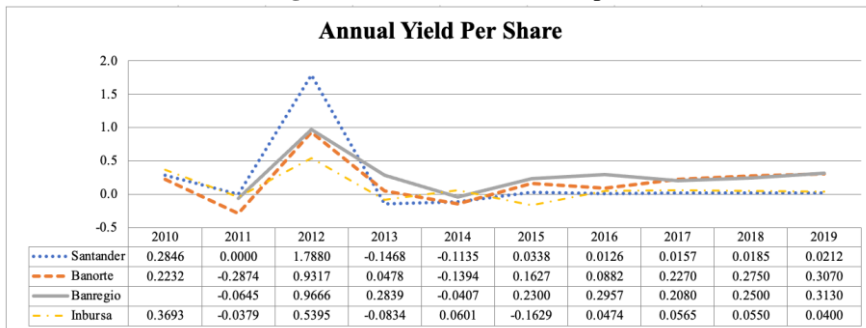
Figure 7: ROE Financial Groups



Source: Developed by the author.

For the YPA variable, Santander shows a rise in its share for the period between 2011-2012, but afterward, both this group and the rest are normalized. Thus, no difference is noted between the financial groups of the study (Banorte and Santander) and the financial groups of control (Inbursa and Banregio).

Figure 8: YPS Financial Groups



Source: Developed by the author.

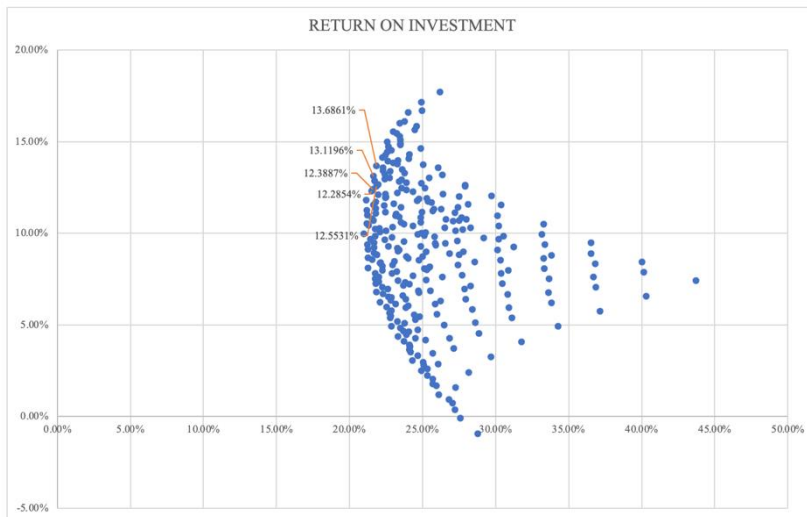
Performing the analysis under the Markowitz Portfolio, it was found that the best investment combination was through a mixture of financial intermediaries that are listed in the Sustainable IPC and the Price and Quotation Index to achieve portfolio diversification and optimize the risk. The proportions to invest were located as follows: 10% in Santander, 20% in Banorte, 60% in Banregio, and finally 10% in Inbursa. With this proportion, the risk level was 21.84%, and the yield was 13.69%.

Table 4: Better Performing Portfolio

Santander	Banorte	Banregio	Inbursa	VOLATILITY	RETURN ON INVESTMENT	SHARE
10.00%	20.00%	60.00%	10.00%	21.8443%	13.6861%	44.11%
Total %	100%					
Risk-Free Rate	4.05%					
SHARPE	44.11%					
Santander	Banorte	Banregio	Inbursa	VOLATILITY	RETURN ON INVESTMENT	SHARE
10.00%	30.00%	50.00%	10.00%	21.6341%	13.1196%	41.92%
Total %	100%					
Santander	Banorte	Banregio	Inbursa	VOLATILITY	RETURN ON INVESTMENT	SHARE
0.00%	20.00%	60.00%	20.00%	21.7078%	12.8519%	40.55%
Total %	100%					
Santander	Banorte	Banregio	Inbursa	VOLATILITY	RETURN ON INVESTMENT	SHARE
10.00%	10.00%	60.00%	20.00%	21.5819%	12.3887%	38.64%
Total %	100%					
Santander	Banorte	Banregio	Inbursa	VOLATILITY	RETURN ON INVESTMENT	SHARE
0.00%	30.00%	50.00%	20.00%	21.5297%	12.2854%	38.25%
Total %	100%					

Source: Author’s calculations.

Figure 9: Efficient Frontier Markowitz Model



Source: Developed by the author.

With the differences observed in the previous graphs and the analysis of the Markowitz Portfolio, it is verified that there are significant differences between the financial groups that belong to the Sustainable IPC and those that do not.

Finally, one of the main objectives of this research was to identify the relationship between social responsibility practices and the economic benefit of the financial groups of Sustainable IPC. For this, once all the social responsibility practices reported by each financial group were evaluated, a factor analysis was performed, which allowed us to reduce data and estimate the effect of the social responsibility practices (independent variable) and with the financial data described: ROA, ROE, and YPA (dependent variable).

The correlation coefficients associated with the four dimensions (Human Rights, Labor Standards, Environment, and Anti-corruption) were positive for both financial groups. Now, in the case of Banorte, it was observed that three of the four dimensions analyzed show significant results in the ROA variable. Although the correlation with Labor Standards was not as high as the other three, it was higher than .50, which is indicative of a positive and significant relationship on this ROA variable. Regarding the ROE variable, its correlation was substantial with the Human Rights and Environment dimensions.

In the case of Santander, it is observed that the Labor Standards and Environment dimensions reflected a positive and significant relationship on the ROA variable, since its correlation is more significant than 0.5, while the Human Rights and Anti-Corruption dimensions are not statistically significant with this variable. For the ROE variable, a correlation greater than .05 was found with the Labor Standards and Environment dimensions, but it is well known that the latter has a more significant relationship.

For both financial groups, no significant results are observed with the Yield per Share variable, and only Banorte seems to have a considerable correlation (0.5813) in the Anti-Corruption dimension.

As a conclusion to this research, we can say that social responsibility as a factor in the economic benefit of financial groups that are part of the Sustainable IPC showed a positive relationship and has contributed to the inclusion of best practices. However, there was no conclusive evidence that belongs to the Sustainable IPC that influences the economic benefit of financial groups.

5. CONCLUSION

As we mentioned at the beginning of this article, one of the main objectives of sustainability indices is to provide confidence to investors worldwide who wish to shape their portfolios with responsible investments. Their trust has been affected by multiple cases of financial frauds caused by mismanagement and lack of ethics.

The banking sector is an important engine for the economic development of the country and has a responsibility to society and the economy to perform its role ethically and transparently, aiming to contribute to a model of economic development that is sustainable and that recognizes the economic, social and environmental needs and constraints of their environment.

In this context, sustainability becomes an increasingly central element for the banking sector, either out of conviction and commitment to adopt best practices and be more responsible for the impacts they generate, or to respond to the demands of increasingly demanding and increasingly informed customers. The growing trend of "sustainable finance" is an indicator of the evolution of a society that demands greater commitment from the banking sector to sustainability.

Likewise, sustainability has become an essential element of the corporate management of banks due to the effect it has on organizational success. Within the banking sector, the impact that sustainability issues have on the business is increasingly evident and better understood, and therefore, on environmental and social issues that were previously not considered within the banks' work, today increasingly integrate into the risk assessment of their portfolios, such as climate change and the risks that this generates.

Similarly, in the banking sector, various initiatives have been developed at the international level that recognizes the fundamental role that it has in promoting the Sustainable Development Goals (SDGs) through the products and services that they offer to the sectors of the actual economy. These sustainable finance or socially responsible investment initiatives focus on Environmental, Social, and Corporate Governance issues.

One purpose of this research was to analyze whether there are differences in the economic performance of financial groups that belongs to Sustainable IPC and those that only belong to the Price and Quotations Index (IPC). The second goal was to identify and evaluate the practices that integrate social responsibility within financial groups considering their evolution, as well as the degree of maturity of the methods, taking as axis the four dimensions of the Principles of the United Nations Global Compact considered in GRI reports: Human Rights, Labor Standards, Environment, Anti-corruption.

As a conclusion, we observed that: 1) there are significant differences between the financial groups that belong to the Sustainable IPC and those that do not belong to it; 2) belonging to the Sustainable IPC has contributed to the inclusion of best practices in financial groups, and although the research showed a significant correlation between social responsibility practices and financial indicators of ROA and ROE; we did not obtain conclusive evidence to say that belonging to the Sustainable IPC directly influences the economic benefit of financial groups.

We believe that the latter may be due to several factors:

1. After identifying and evaluating social responsibility practices, we perceived that organizations had adopted the issue generically and reactively: they execute multiple philanthropy and social responsibility activities without a direct link to the company's strategy. It was more evident in the environmental reports for two reasons: 1) the lack of detailed information and 2) the ecological measures adopted are not permeable to the entire organization, but only to some divisions or regions. Regarding their philanthropy and training activities, these are reported as volunteering and in economic terms, but not as impact activities that strengthen their long-term competitiveness.
2. The institutions that are in the Sustainable IPC are only compelled to report their social responsibility practices without a review or evaluation process, which hinders its adoption

- and effectiveness. We need to remember that the two financial institutions evaluated presented incomplete information concerning the standards established by the GRI.
3. The evolution of social responsibility practices, because the standards established by the GRI have been modified and will be modified. In Mexico, for example, the ESG Index (Environmental, Social, and Governance) has just been adopted and will replace the Sustainable IPC index.
 4. The GRI itself does not offer tools to track and compare the evolution of companies or sectors since using its criteria, only qualitative analysis can be done. In this sense, our research offers a valid and objective methodology that allows comparisons between companies and can be replicated.
 5. The adoption and promotion of social responsibility within companies must have as a fundamental objective that these practices focus on impact activities, that is, planning and promoting a specific and continuous purpose; emphasizing the living conditions of people that promote learning, capacities, and skills generated in stakeholders.

Although one of the limitations of this study was that the sample of our research was limited to two financial institutions, for us, this is a reflection of the little interest that financial institutions have in adopting international standards regarding social responsibility, mostly because they are unaware of the economic impact that the adoption of these practices has on its operation. Hence, our study is an attempt to make this knowledge possible.

The disruptive conditions we are facing have highlighted the importance of being responsible and sustainable with the environment and our stakeholders. For this reason, the banking sector in Mexico is expected to continue advancing towards the incorporation of principles of responsible action towards the environment and people, using its capacities to promote the sustainability agenda in the sector and in the entities with which they are related. Undoubtedly, a culture of measurement and accountability will allow real goals to be set, commitments to be followed up and more agile progress towards a more sustainable banking system.

The fundamental objective of promoting social responsibility within organizations, institutions, or companies should be that their social responsibility practices focus on impact activities, which form the company's strategy are spread horizontally and vertically to the value chain. for the creation of a society with opportunities, inclusion, and transparency. Porter and Kramer (2006) said that: "Corporations have a profound and positive influence on society. The most important thing that a corporation can do for society and for any community is to contribute to a Prosperous Economy".

REFERENCES

- Acquier, A., Gond, J. P., & Pasquero, J. (2011). Rediscovering Howard R. Bowen's legacy: The unachieved agenda and continuing relevance of social responsibilities of the businessman. *Business and Society*, 50(4), 607-646.
- Agudo-Valiente, J. M., Garcés-Ayerbe, C., & Salvador-Figueras, M. (2017). Corporate social responsibility drivers and barriers according to managers' perception; Evidence from Spanish firms. *Sustainability*, 9(10), 1821.

- Alonso-Almeida, M., Rodríguez García, M., Cortez Alejandro, K. A., & Abreu Quintero, J. L. (2012). La responsabilidad social corporativa y el desempeño financiero: un análisis en empresas mexicanas que cotizan en la bolsa [Corporate social responsibility and financial performance: an analysis in Mexican companies listed on the stock market]. *Contaduría y Administración*, 57(1) 53-77.
- Al-Shammari, M., Nath, S., & Rasheed, A. (2021). Corporate social responsibility and firm performance: A theory of dual responsibility. *Management Decision*. Advance online publication.
- Al-Tuwajri, S. A., Christensen, T. E., & Hughes, K. (2004). The relations among environmental disclosure, environmental performance, and economic performance: a simultaneous equations approach. *Accounting, Organizations and Society*, 29(5-6), 447-471.
- Arminen, H., Tuppara, A., Toppinen, A., & Kozak, R. (2016). Corporate responsibility development paths in the US forest sector. *Forestry: An International Journal of Forest Research*, 89(5), 500-511.
- Arrigoni, A. (2019). Exploring the “relational” link between responsibility and social ontology: Ethical, organisational, institutional dimensions of shared agency, collective responsibility, collective intentionality. *Journal of Global Responsibility*, 10(1), 31-46.
- Banda Ortiz, H., González García, L. M., & Gómez Hernández, D. (2014). Una aproximación de la teoría de portafolio a las SIEFORES en México [An approximation of the portfolio theory to the SIEFORES in Mexico]. *Pensamiento & Gestión*, 36, 28-55.
- Bolibok, P. (2017). The role of accounting variables in valuation of banks. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*, 479, 23-33.
- Bolsa Mexicana de Valores. (2022, Jun 15). *S&P DJI y la Bolsa Mexicana de Valores seleccionan a RobecoSAM como el proveedor oficial de calificaciones para futuros índices S&P BMV ESG*. [S&P DJI and the Mexican Stock Exchange select RobecoSAM as the official ratings provider for future S&P BMV ESG indices.] <https://blog.bmv.com.mx/2019/02/sp-dji-y-la-bmv-seleccionan-a-robecosam-como-proveedor-oficial-de-calificaciones-para-futuros-indices-sp-bmv-esg/>
- Botticelli, S. (2018). *Dos concepciones liberales del Estado: Adam Smith y Friedrich Hayek* [Two liberal conceptions of the State: Adam Smith and Friedrich Hayek]. *Praxis Filosófica*, 46, 61-87.
- Branco, M. C., & Rodrigues, L. L. (2006). Corporate social responsibility and resource-based perspectives. *Journal of Business Ethics*, 69(2), 111-132.
- Brue, S., & Grant, R. (2016). *Historia del pensamiento económico* (8ª ed.) [History of economic thoughts, 8th ed.]. México: Cengage Learning.
- Brunninge, O., Plate, M., & Ramirez-Pasillas, M. (2020). Family business social responsibility: Is CSR different in family firms? In C. E. J. Härtel, W. J. Zerbe, & N. M. Ashkanasy (Eds.), *Emotions and service in the digital age* (pp. 217-244). Emerald Publishing Limited.
- Bugandwa, T. C., Kanyurhi, E. B., Akonkwa, D. B. M., & Mushigo, B. H. (2021). Linking corporate social responsibility to trust in the banking sector: Exploring disaggregated relations. *International Journal of Bank Marketing*, 39(4), 592-617.
- Cachanosky, J. C. (1994). Historia de las teorías del valor y del precio [History of value and price theories]. *Revista Libertas*, 20, 2.
- Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business Horizons*, 34(4), 39-48.
- Chartered Financial Analyst. (2018). *Corporate finance and portfolio management*. Pearson.

- Chakroun, S., & Amar, A. B. (2021). Earnings management, financial performance and the moderating effect of corporate social responsibility: Evidence from France. *Management Research Review*, 45(3), 331-362.
- Creswell, J. W. (2003). *Research design : Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Sage publications.
- Dai, Y. (2021). Can ESG investing beat the market and improve portfolio diversification? Evidence from China. *The Chinese Economy*, 54(4), 272-285.
- Domergue, F. (2012). La RSE dans le secteur bancaire, un outil de la reconquête de la confiance en période de crise? [CSR in the banking sector, a tool for regaining confidence in times of crisis?] *Management and Sciences Sociales*, 12, 86-100.
- El Ouadghiri, I., Guesmi, K., Peillex, J., & Ziegler, A. (2021). Public attention to environmental issues and stock market returns. *Ecological Economics*, 18(C), 106836.
- Felber, C. (2015). *La economía del bien común* [The economy of the common good]. Ediciones Deusto.
- Ferrando, P. J., & Anguiano-Carrasco, C. (2010). El análisis factorial como técnica de investigación en psicología [Factor analysis as a research technique in psychology]. *Papeles del Psicólogo*, 31(1), 18-33.
- Foss, N. J., & Klein, P. G. (2018). Stakeholders and corporate social responsibility: An ownership perspective. In *Sustainability, stakeholder governance, and corporate social responsibility*. Emerald Publishing Limited.
- Franco-Arbeláez, L. C., Avendaño-Rúa, C. T., & Barbutín-Díaz, H. (2011). Modelo de markowitz y modelo de Black-Litterman en la optimización de portafolios de inversión [Markowitz model and Black-Litterman model in the optimization of investment portfolios]. *Tecnológicas*, 26, 71-88.
- Ghaderi, Z., Mirzapour, M., Henderson, J. C., & Richardson, S. (2019). Corporate social responsibility and hotel performance: A view from Tehran, Iran. *Tourism Management Perspectives*, 29, 41-47.
- Global Reporting Initiative. (2016). *Glosario de los estándares GRI* [GRI standards glossary]. <https://www.globalreporting.org/how-to-use-the-gri-standards/gri-standards-spanish-translations/>
- Hang, M., Geyer-Klingeberg, J., & Rathgeber, A. W. (2019). It is merely a matter of time: A meta-analysis of the causality between environmental performance and financial performance. *Business Strategy and the Environment*, 28(2), 257-273.
- Hanson, W. E., Creswell, J. W., Clark, V. L. P., Petska, K. S., & Creswell, J. D. (2005). Mixed methods research designs in counseling psychology. *Journal of Counseling Psychology*, 52(2), 224.
- Hernández-Sampieri, R., Fernández Collado, C., & Baptista Lucio, P. (2018). *Metodología de la investigación* [Investigation methodology]. McGraw-Hill Interamericana.
- Hornungová, J. (2014). Factor analysis: An instrument for selection of social performance factors. *Revista de Metodos Cuantitativos para la Economía y la Empresa*, 17, 121-136.
- Issarawornrawanich, P., & Wuttichindanon, S. (2018). Corporate social responsibility practices and disclosures in Thailand. *Social Responsibility Journal*, 15(3), 318-332.
- Iyer, G., & Jarvis, L. (2019). CSR adoption in the multinational hospitality context. *International Journal of Contemporary Hospitality Management*, 31(6), 2376-2393.
- Jaén, M. H., & Márquez, P. (2006). Diseño de un portafolio de responsabilidad social [Design of a social responsibility portfolio]. *Magazine for Managers*, 28-29.

- Jiang, W., & Wong, J. K. (2016). Key activity areas of corporate social responsibility (CSR) in the construction industry: A study of China. *Journal of Cleaner Production*, 113, 850-860.
- Kiesel, F., & Lücke, F. (2019). ESG in credit ratings and the impact on financial markets. *Financial Markets, Institutions and Instruments*, 28(3), 263-290.
- Krueger, R. & Casey, M. (2000). *Focus groups. A practical guide for applied research* (3rd ed.). Sage Publications.
- Lind, D. A., Marchal, W. G., Wathen, S. A., Obón León, M. D. P., & León Cárdenas, J. (2012). *Estadística aplicada a los negocios y la economía* [Statistics applied to business and economy]. McGraw-Hill/Interamericana Editores.
- Markowitz, H. (1952). Portfolio selection. *The Journal of Finance*, 7(1), 77-91.
- Mohammed, A., & Al-Swidi, A. (2019). The influence of CSR on perceived value, social media and loyalty in the hotel industry. *Spanish Journal of Marketing – ESIC*, 23(3), 373-396.
- Morales, J. (2014). Evaluación del riesgo de negocio de las empresas que cotizan en el índice sustentable de la Bolsa Mexicana de Valores [Evaluation of the business risk of companies listed in the sustainable index of the Mexican Stock Exchange]. *Enfoque UTE*, 5(4), 17-33.
- Morales, J., & Abreu, M. (2014a). Análisis del capital de trabajo de las empresas sustentables que cotizan en el ipc de la bolsa mexicana de valores [Analysis of the working capital of sustainable companies listed on the ipc of the mexican stock exchange]. *Revista Silogismo*, 6(13), 52-67.
- Morales, J., & Abreu, M. (2014b). La gestión financiera de las empresas sustentables del sector de productos de consumo frecuente que cotizan en la bolsa mexicana de valores [The financial management of sustainable companies in the sector of frequent consumption products that are listed on the Mexican stock exchange]. *Proceedings of the XIX Congreso Internacional de Contaduría, Administración e Informática*.
- Morales, J., & Abreu, M. (2015). La administración financiera de las empresas sustentables del sector materiales que cotizan en la Bolsa Mexicana de Valores [The financial administration of sustainable companies in the materials sector that are listed on the Mexican Stock Exchange]. *Proceedings of the XX Congreso Internacional de Contaduría, Administración e Informática*.
- Morse, J. M. (1991). Approaches to qualitative-quantitative methodological triangulation. *Nursing Research*, 40(2), 120-123.
- Neu, D., & Ocampo, E. (2007). Social responsibility “accounts”: Understanding World Bank lending practices. In C. R. Lehman (Ed.), *Envisioning a new accountability* (Advances in Public Interest Accounting, vol. 13, pp. 81-113). Emerald Group Publishing Limited.
- Pinney, C., Lawrence, S., & Lau, S. (2019). Sustainability and capital markets - Are we there yet? *Journal of Applied Corporate Finance*, 31(2), 86-91.
- Porter, M. E., & Kramer, M. R. (2006). *Estrategia y sociedad* [Strategy and society]. Harvard Business Review.
- Puaschunder, J. M. (2017). Socio-psychological motives of socially responsible investors. In *Global Corporate Governance* (Advances in Financial Economics, vol. 19, pp. 209-247). Emerald Publishing Limited.
- Ramírez Carmona, N., & García Salgado, O. (2016). State of the art in portfolio theory: The individual analysis of actions to the multiobjective optimization. *Economía Coyuntural*, 1(4), 101-144.
- Roll, E. (1994). *Historia de las doctrinas económicas* [History of economic doctrines]. Fondo de cultura económica.

- Rzymowski, W., & Surowiec, A. (2015). Practical aspects of Markowitz theory application for portfolio analysis. *Актуальні проблеми економіки*, 8, 409-426.
- Saavedra García, M. L. (2011). La responsabilidad social empresarial y las finanzas [Corporate social responsibility and finance]. *Cuadernos de Administración*, 27(46), 39-54.
- Sciarelli, M., Tani, M., Landi, G., & Papaluca, O. (2019). The impact of social responsibility disclosure on corporate financial health: Evidences from some Italian public companies. *International Business Research*, 12(3), 109-122.
- Silva, R., Rodrigues, M., Franco, M., Oliveira, C., & Sousa, N. (2021). How do social responsibility and social entrepreneurship generate value creation in pandemics? *Journal of Enterprising Communities: People and Places in the Global Economy*. Advance online publication.
- Strumickas, M., & Valančienė, L. (2006). Bank valuation research: Experience of the Baltic States. *Engineering Economics*, 49(4), 22-28.
- Terrero-De La Rosa, A., Santiago-Ortega, R., Medina-Rivera, Z., & Berrios-Lugo, J. (2017). Corporate social responsibility practices and programs as a key strategic element in organizational performance. In *Corporate Social Responsibility and Corporate Governance* (Developments in corporate governance and responsibility, vol. 11, pp. 223-247). Emerald Publishing Limited.
- Torre Torres, O. V., & Martínez Torre-Enciso, M. (2015). Revisión de la inversión sustentable en la bolsa mexicana durante periodos de crisis [Review of sustainable investment in the Mexican stock market during periods of crisis]. *Revista Mexicana de Economía y Finanzas*, 10(2), 115-130.
- United Nations Global Compact (2022). *Impact: Transforming business, changing the world*. <https://www.pactmundial.org.mx/ungc/>
- Velte, P. (2017). Does ESG performance have an impact on financial performance? Evidence from Germany. *Journal of Global Responsibility*, 8(2), 169-178.
- Venkatraman, N., & Ramanujam, V. (1987). Measurement of business economic performance: An examination of method convergence. *Journal of Management*, 13(1), 109-122.
- Ventura, E. C. F. (2007). Banks and social responsibility: Incorporating social practice in organizational structures. *Social Responsibility Journal*, 3(1), 74-89.
- Villanueva, C. E., Angeles, A., & Revilla, L. C. (2018). Tying strong ties in informal entrepreneurship: A constraint or an entrepreneurial driver? *Journal of Developmental Entrepreneurship*, 23(1), 1850002.
- Zorrilla, S. (1996). *Cómo aprender economía: Conceptos básicos* [How to Learn Economics: Basic Concepts]. Editorial Limusa.