

Castillo-Villar, Rosalia G.

## Article

# Identifying determinants of CSR implementation on SDG 17 partnerships for the goals

Cogent Business & Management

## Provided in Cooperation with:

Taylor & Francis Group

*Suggested Citation:* Castillo-Villar, Rosalia G. (2020) : Identifying determinants of CSR implementation on SDG 17 partnerships for the goals, Cogent Business & Management, ISSN 2331-1975, Taylor & Francis, Abingdon, Vol. 7, Iss. 1, pp. 1-24,  
<https://doi.org/10.1080/23311975.2020.1847989>

This Version is available at:

<https://hdl.handle.net/10419/245008>

### Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

### Terms of use:

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<https://creativecommons.org/licenses/by/4.0/>

# Identifying determinants of CSR implementation on SDG 17 partnerships for the goals

Rosalia G. Castillo-Villar |

To cite this article: Rosalia G. Castillo-Villar | (2020) Identifying determinants of CSR implementation on SDG 17 partnerships for the goals, Cogent Business & Management, 7:1, 1847989, DOI: [10.1080/23311975.2020.1847989](https://doi.org/10.1080/23311975.2020.1847989)

To link to this article: <https://doi.org/10.1080/23311975.2020.1847989>



© 2020 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.



Published online: 29 Nov 2020.



Submit your article to this journal [↗](#)



Article views: 1321



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 3 View citing articles [↗](#)



Received: 06 August 2020  
Accepted: 05 November 2020

\*Corresponding author: Rosalia G. Castillo-Villar, UDEM Business School, Universidad De Monterrey, Mexico  
E-mail: [rosalia.castillov@udem.edu](mailto:rosalia.castillov@udem.edu)

Reviewing editor:  
Len Tiu Wright, De Montfort University Faculty of Business and Law, UK

Additional information is available at the end of the article

## MANAGEMENT | RESEARCH ARTICLE

# Identifying determinants of CSR implementation on SDG 17 partnerships for the goals

Rosalia G. Castillo-Villar<sup>1\*</sup>

**Abstract:** The launch of the United Nations' Sustainable Development Goals (SDGs) has established a new paradigm in sustainable development, where cross-sector partnerships (CSP) take a central role with SDG 17 on partnerships for the goals. At the same time, the SDGs have recognized the essential role of the main social actors such as businesses, government, civil society, and universities working together to reach a sustainable development. However, the literature related to Industry-University collaboration remains underdeveloped. Moreover, Industry-University CSP in developing countries exhibits unique complexities. This paper proposes a quantitative methodology to identify the key dynamic determinants of the implementation of CSP between industry and university in the context of a developing country. The methodology involves non-parametric association and inferential statistical analysis to obtain the main determinants that lead to the implementation of these programs. A case study in a developing country was created and surveys of companies were collected and analyzed. The proposed methodology is transferable to different types of partnerships and other geographical contexts.

**Subjects:** Sustainable Development; Business, Management and Accounting; Strategic Management; Corporate Social Responsibility & Business Ethics; Corporate Social Responsibility; Business Ethics

**Keywords:** Corporate social responsibility; sustainable development goals; cross-sector partnerships; UN 2030 agenda; quantitative



Rosalia G. Castillo-Villar

### ABOUT THE AUTHOR

Rosalia G. Castillo-Villar (D.Phil. and B.Sc., Tecnológico de Monterrey (Mexico)) is a Postdoctoral researcher at Universidad de Monterrey. Prior to joining UDEM Business School, she was a Visiting Doctoral Scholar at the Centre for Social Innovation Management at the University of Surrey, and an Associate Lecturer at Tecnológico de Monterrey and Universidad de Monterrey.

Rosalia's research and teaching interests include the social impact of businesses, corporate social responsibility, social innovation, and cross-sector partnerships, where she has collaborated with a range of natural and social scientists, focusing her work in the context of Latin America.

### PUBLIC INTEREST STATEMENT

The United Nations proposed the Sustainable Development Goals in 2015 as a way to integrate and lead the international and multi-sector efforts towards a more sustainable future. A fundamental part of these efforts is the businesses participation, in partnership with other social actors such as government, civil society, and universities. This research proposes a framework to identify what determines the successful participation of businesses in partnerships. For this purpose, the framework is applied to industry-university partnerships in a developing country context. The proposed methodology is transferable to different types of cross-sector partnerships and different contexts.

## 1. Introduction

The recent implementation of the sustainable development goals (SDGs) in 2015 (United Nations, 2015) has propelled the recognition of cross-sector partnerships (CSP) as a fundamental part of the industry contribution to sustainable development through the inclusion of SDG 17 on Global partnerships, which focuses on the capacity of businesses to contribute to a sustainable society through the creation of partnerships where they can add their expertise, knowledge, and resources (Buhmann et al., 2019; MacDonald et al., 2018; UN, 2015; Van Hille et al., 2020).

The SDGs establish a new paradigm in sustainable development due to the recognition of the businesses as an essential social actor, next to governments and civil society (Buhmann et al., 2019; Fukuda-Parr & McNeill, 2015). This involvement of businesses as a pillar to achieve a sustainable development also adds as an institutional pressure from the regulatory system, which can be seen as extra motivation for businesses to partner (Lin & Darnall, 2015).

Cross-sector partnerships (CSP) have gained relevance in the field of management research and practice, particularly as part of the corporate social responsibility (CSR) (Clarke & Crane, 2018; Seitanidi & Crane, 2009, 2014), due to several reasons, but mainly due to social challenges that exceed the solving capacity of single social actors, which lead to the need to collaborate with the objective of extending their scope and capabilities (Bryson et al., 2015; Provan & Kenis, 2008; Siegel, 2010; Vestergaard et al., 2020). Among the areas where companies get more involved (through the label of CSR in most cases) are education, culture and arts, health and wellbeing, urban development, and volunteering, donations and CSP with government, universities and academia, and civil society (Carroll & Buchholtz, 2015; Ordonez-Ponce & Clarke, 2020).

It is relevant to further pursue the study of CSP in the accomplishment of the SDG as the successful design, implementation and evaluation of partnerships is fundamental to integrate the resources of different social actors with the common goal of sustainable development (UN, 2015). To this end, the objective of this study is to present a quantitative framework to identify the determinants of the implementation of CSP using empirically grounded knowledge.

To address this objective, the case of industry-university partnerships was selected, particularly in the context of a developing country (Mexico). The methodology followed included a literature review, followed by a brief set of interviews with the purpose of obtaining the first-hand perspective of decision-makers in both organizations. From the analysis of these steps, nine determinants were chosen to create the survey that was sent to three databases, obtaining the determinants of the involvement of industry in partnerships with universities in the context of a developing country.

The main contributions of this research are the presentation of five determinants with sufficient statistical evidence of having a positive relationship with the involvement of industry in partnerships, the proposal of a quantitative framework that could be replicated to study a different type of partnerships in different contexts, and new knowledge over the possible differences for the implementation of partnerships according to the context of the country.

This paper is structured as followed; first, we situate our work with respect to the state-of-the-art and discuss previous works that are closely related and addressing the singularities of developing countries. The section in materials and methods describes the quantitative framework step-by-step. The results section shows the results of five determinants with statistical evidence of being relevant for the implementation of partnerships and the relevance of the research for the SDG. These determinants are intended to allow more productive planning and implementation of Industry-University partnerships. Finally, the discussion and conclusions are presented.

## 2. Literature review

While CSP has been an increasing research area in recent years (Kolk et al., 2008) the work on this area has been focused on the internal characteristics of the partnerships and the possible benefits.

The research area of CSP has also been characterized by multi-disciplinary and dispersed theoretical approaches (Van Tulder et al., 2016), while relatively little is known about the involvement and contribution of business partnerships to the UN initiatives such as the millennium development goals (MDG) or SDGs (Utting & Zammit, 2009; Van Tulder et al., 2016).

Although there is a general consensus among researchers and practitioners concerning the potential of partnerships for the achievement of the SDGs, this potential is also considered to be largely unrealized or ineffective (Blowfield & Dolan, 2014; Jamali, 2009; Kolk et al., 2008; Martens, 2007; Reed & Reed, 2009; Vestergaard et al., 2020). Because of this, an important question is how to generate the types of partnerships needed for transformation. The current literature presents different metrics and methods to assess effectiveness such as progress updates, output evaluations, transparency, or the number of partners collaborating (Clough et al., 2019; Horan, 2019; Martens, 2007; Pattberg & Widerberg, 2016; UN Department of Economic and Social Affairs, 2018).

Some of the most comprehensive reviews on CSP focus on systemic change (Clarke & Crane, 2018), on research and development (R&D) activities between industry and universities (Cunningham & Link, 2015), on CSP outcomes and impacts (Clarke & MacDonald, 2019; Van Tulder et al., 2016), and their impact on the SDGs (Franco et al., 2020).

However, the 2030 Agenda refers mainly to two types of partnerships for the SDGs, which are the Global Partnership for Sustainable Development which is guided by governments creating partnerships with the civil society, industry, the UN, and other actors with the objective of improving international cooperation for implementation of the 2030 Agenda (UN, 2015). The second type of partnerships for the SDG is the multi-stakeholder partnerships, which can be regional, national, or global either in terms of participation or focus of implementation. These partnerships complement the Global Partnership and aim to mobilize and share resources such as knowledge, expertise, or technology (UN, 2015).

On multi-stakeholder partnerships, the configurations can include public-private agents, private-NGO, government-NGO, and tripartite partnerships, among others (Selsky & Parker, 2005). Less is known about the partnerships relating to more ambiguous social actors, such as universities (Cunningham & Link, 2015). Research shows that the success conditions for partnerships depend on several factors such as adaptability to local conditions, effective leadership, the level of disposition of partners to invest resources, process management, and level of institutionalization (Beisheim & Simon, 2016; Liese & Beisheim, 2011; Pattberg & Widerberg, 2016; Vestergaard et al., 2020).

### **2.1. Industry—University partnerships**

The partnerships between industry and higher education institutions have become one of the main strategies for development since the beginning of the 1980s (Kitagawa & Lightowler, 2013; Vick & Robertson, 2018), which is reflected also on the SDG 4 on quality of education and SDG 9 on industry innovation and infrastructure.

In turn, collaborations between industry and universities at different countries have increased significantly in recent years, for example, in the United States, Japan, United Kingdom, Indonesia, and the European Union (Ankrah & Al-Tabbaq, 2015; Comunian et al., 2014; Hemmert et al., 2014; Januarti et al., 2019; Lehrer et al., 2009; Rahm et al., 2013; Vick & Robertson, 2018).

Industry—university partnerships are commonly seen from the private sector perspective from the standpoint of corporate social responsibility and venture philanthropy, while in education they have been frequently used to address issues related to school entrepreneurship, marketization and financing (Eyal & Yarm, 2018; Wohlstetter et al., 2004).

Even though the partnerships between industry and higher education institutions are symbiotic, and the complementarity of these sectors is almost natural (M. E. Porter, 1980; M. Porter, 1979), this linkage is commonly triggered by the involvement of further social actors. The progress of

these collaborations in developed countries has not been random or simply due to market movements, in most cases, there has been a deliberate involvement of the state, mostly through public policy (Yusuf & Nabeshima, 2006), with the objective of promoting a partnership that benefits both parties (Moreno-Brid & Ruiz-Nápoles, 2009).

Part of the relevance of these partnerships arises from the introduction of the SDGs, which provides an international framework to guide strategic CSR action as a mean to create functional linkages between performance outcomes and the achievement of sustainability (ElAlfy et al., 2020; Williams et al., 2019).

Although the overall acceptance of CSP as necessary and strategic, the implementation of CSP have often led to conflicting relationships and are frequently susceptible to failure (Ashraf et al., 2017; Prashant & Harbir, 2009; Selsky & Parker, 2005). This is attributed to factors such as the frequency in communication, the level of commitment towards the partnership and its goal, and the reciprocity in the relational bond (Le Ber & Branzei, 2010; Berger et al., 2004). Also, due to the different outlook of the institutions on the same issue, and the differences in perspectives, goals, and approaches (Selsky & Parker, 2005).

Although research related to CSP has increased significantly (Clarke & Crane, 2018), the literature related to University-Industry collaboration remains relatively fragmented (Ankrah & Al-Tabbaa, 2015). To fill this gap in the literature this paper contributes to the CSP literature by proposing a quantitative method to identify the key dynamic determinants of Industry-University partnerships, particularly in the context of a developing country.

## **2.2. Developing country: The Mexican context**

In previous studies related to CSP, researchers have highlighted the western-centric nature of the publications on the topic (Vestergaard et al., 2020). The consensus is that theorizing on the area occurs mostly without a reference to the context of developing countries, added to a tendency to view partnerships from a restricted perspective such as a focus on processes, success factors, and benefits for the firms, from a CSR standpoint (Jamali, 2009; Prieto-Carrón et al., 2006; Utting & Zammit, 2009; Vestergaard et al., 2020).

This research aims to cover some of the limitations mentioned by Cárdenas Denham et al. (2012) on their work on CSP between industry and universities. They recognize the structural weakness of CSP in the context of a developing country like Mexico, and the lack of studies that analyze this phenomenon and the nature of the interaction. The author stated as limitation of their own study the dynamic aspects of the negotiations that are necessary to develop the collaboration between industry and higher education institutions.

Layton (2010) y Rey-Garcia et al. (2020) conducts a study on corporate philanthropy activities in Mexico where corporate social responsibility is included of which the main areas of social investment are: education, children, health, natural disasters and the environment. It is also mentioned how this trend is consistent with the rest of Latin America.

Although higher education is perceived as a significant factor for economic and societal development, in the case of Mexico, it still faces different problems that lead in part to social deficiencies. Two of main issues of higher education in Mexico are (1) the lack of correspondence between the knowledge and abilities obtained by students opposed to those required by the companies that might employ them (Centro de Investigación para el Desarrollo, 2014), and (2) the limited access to higher education for people at the base of the pyramid, which leads to barriers for social mobility and an increased inequality (Salas-Durazo & Murillo-Garcia, 2013; Secretaría de Hacienda y Crédito Público, SHCP, 2015). As such, the creation of CSP may allow more effective and efficient use of resources to tackle current social problems (Doh et al., 2010).



It is relevant to systematically detect and measure the determinants that lead to the implementation of CSP between industry and universities (usually managed through CSR departments) since (1) the participation of companies (as one of the main actors in today's society) represents a possible solution to social problems that directly impact the quality of life of the population and the achievement of SDG 4 and 17, and (2) regional development depends largely on the productivity of the human, financial, and technological resources to achieve a high and growing standard of living for its inhabitants, impacting SDG 9, 8 and 11 (United Nations, 2015).

This reinforces the need to generate a strategy that allows developing successful CSP between higher education institutions and the productive sector (Asociación Nacional de Universidades e Instituciones de Educación Superior [ANUIES], 2018). The design of strategies requires planning based on the deep understanding of the phenomenon, from the planning and implementation to its effects, that is why it is considered that the quantitative frameworks proposed on this work with the purpose of studying the determinants are useful, when considering qualitative and quantitative aspects, for the implementation of programs, and public policy related to the phenomenon. The proposed framework will allow seizing the opportunity to align business models and strategies, and public policy with the international commitments lead by the SDG.

### 2.3. Determinants of CSR programs implementation

During the review to obtain the possible determinants for the implementation of CSR programs related to SDG17 partnerships, the variables with the greatest presence in the reviewed studies are listed below. It is worth mentioning that most of the literature on determinants for CSR focuses around CSR disclosure (i.e., Ali et al., 2017; Gamerschlag et al., 2011) and the determinants between CSR for corporate financial performance (i.e. Derila et al., 2020; Fauzi & Idris, 2010), for this reason, the studies considered as the reference for the survey included those who study determinants of CSR programs in general or in a specific industry.

The determinants obtained from the literature used as reference for the survey were (Table 1): (1) Size of the company, (2) Contagion or mimicry, (3) Profitability, (4) Sector, and (5) Reputation or advertising.

Regarding the size of the company, it was chosen as a potential variable for this study by reflecting on previous studies such as Bansal (2005), Castelo and Lima (2008), Chih et al. (2010), Chivite et al. (2014), Gao et al. (2005), Pozniak and Ferauge (2011), and Reverte (2009), who obtain evidence of a significant relationship between the size of the company, where the larger the company the greater the probability that it will implement CSR programs in general social issues.

**Table 1. Determinants obtained from the literature**

Determinant	References
<i>Size of the company</i>	Bansal, 2005; Castelo & Lima, 2008; Chih et al., 2010; Chivite et al., 2014; Gao et al., 2005; Pozniak & Ferauge, 2011; Reverte, 2009, Hanel & St-Pierre, 2006; Santoro & Chakrabarti, 2002
<i>Contagion (mimicry)</i>	Bansal, 2005; Castelo & Lima, 2008; Reverte, 2009; Bansal & Clelland, 2004; Bansal & Roth, 2000; and Henriques & Sadorsky, 1996.
<i>Profitability</i>	Bansal, 2005; Castelo & Lima, 2008; Chih et al., 2010; Chivite et al., 2014; Pozniak & Ferauge, 2011; and Reverte, 2009.
<i>Sector</i>	Chivite et al., 2014; Ranängen & Zobel, 2014; Hanel & St-Pierre, 2006
<i>Reputation/advertising</i>	Fiedler & Deegan, 2007; Rondinelli & London, 2003; and Selsky & Parker, 2005; Laursen et al., 2011.

The determinant related to the contagion effect (also called “mimicry” (Bansal, 2005) or “echo influence” (Castelo & Lima, 2008; Reverte, 2009) considers whether the implementation of CSR programs legitimizes the activities of the company and therefore becomes a competitive advantage, that is if companies participate on CSR related activities because other companies do so too. Reverte (2009) refers to the influence of the media in promoting and increasing the communication of CSR actions and refers to the works of Bansal and Clelland (2004), Bansal and Roth (2000), and Henriques and Sadosky (1996), where it mentions that positive results were obtained, that is, companies tend to implement socially responsible behaviours when other companies do.

Thirdly, the variable profitability was taken as a possible relevant variable based on the works of Bansal (2005), Castelo and Lima (2008), Chih et al. (2010), Chivite et al. (2014), Pozniak and Ferauge (2011), and Reverte (2009), who consider it in their studies but do not find it significant. It is also argued that even without being statistically significant, having more economic resources can encourage CSR.

The fourth determinant considered for the survey through the literature was the sector of activity. This variable seeks to consider whether the implementation of CSR programs is significantly determined by the sector to which the company belongs, either by measures, regulations, or sectors with special interests. Chivite et al. (2014) and Ranängen and Zobel (2014) find positive results, especially for companies in the energy and technology sectors.

Lastly, the search to improve the reputation as a motivation to carry out CSR activities was included. In these studies, reputation is equated with the use of CSR as advertising. These variables are significant in the studies by Fiedler and Deegan (2007), Rondinelli and London (2003), Laursen et al. (2011) and in the case of the collaboration of companies with non-governmental organizations, it is also significant in Selsky and Parker (2005).

Other determinants observed in the literature but that wasn't considered to have enough evidence to consider them as possible significant determinants of the implementation of CSR programs on SDG17 were the debt level leverage (Castelo & Lima, 2008; Chivite et al., 2014; Reverte, 2009); the stock price (Chivite et al., 2014; Hamid, 2004); the “age” of the firm (Cochran & Wood, 1984), and need, dependence on resources, efficiency, innovation opportunities, improve relationships with stakeholders, reputation, and employee involvement (McDonald & Young, 2012).

These determinants previously located and explained in previous studies were taken as the basis for the determinants to be considered in this study so that a comparison can be made between the determinants that lead companies to implement CSR programs in general and those that carry them to implement CSR programs focused on SDG17 Partnerships for the goals.

### 3. Materials and methods

In order to identify the determinants of the implementation of partnerships between companies and universities in the context of a developing country, the first step was to perform a review of the literature of the area as to obtain the potential determinants by collecting variables identified in the literature.

The main criteria for this initial literature review was performed through the Scopus database, Web of Science and EBSCO Business, which allowed for the consideration of works published in a broader range of journals, limiting the risk for bias. The keywords used were determinants of cross-sector partnerships, multi sector partnerships, cross-sector social partnerships, private-public partnerships, corporate social responsibility, the term collaboration and alliance was also used, and sustainable development goals, millennium goals, and the abbreviation SDG. Is important to mention the inclusion of results for the context of developing countries with emphasis in Latin American and the corresponding keywords in Spanish.



From the information gathered during this review, five determinants were identified as possibly relevant, these are: 1) the size of the company, 2) contagion effect among companies (also called mimicry), 3) the profitability of the company, 4) the sector, and 5) the use of CSR programs in general, including partnerships, for the reputational improvement of the company.

Due to the marginal contextualization of the literature review on developing countries, a brief set of interviews were performed with the purpose of obtaining the first-hand perspective of decision-makers of these partnerships. Personnel from ten companies were interviewed, mostly through CSR or sustainability departments.

The use of interviews as a way to complement the information obtained through the literature, with the purpose of identifying the main possible determinants to include in the survey instrument meant the implementation of a mixed-methods design, where the focus was the quantitative analysis of the survey. The use of mixed methods allows gaining a better understanding of the research problem, as it allows a more robust analysis while taking advantage of the strengths of each method (Creswell, 2005; Ivankova et al., 2006; Tashakkori & Teddlie, 2003).

The rationale for this approach is that the qualitative data and its analysis provides a closer look to the perspective and discursive reality of the decisions makers that are designing, implementing and evaluations these partnerships, while the quantitative analysis provides evidence of the relevance of the hypothesize determinants, which means this research follow deductive reasoning. Following the purpose of the study and its research question, as well as adequate methodological discussions (Creswell et al., 2003; Ivankova et al., 2006; Morgan, 1998; Tashakkori and Teddlie 1998), it was decided to maintain the priority of approach on the quantitative analysis.

Consequently, using the determinants deemed relevant through the literature and the analysis of the interviews a survey instrument was designed, focusing on the relevance of nine determinants, where five were obtained from the literature and four from the interviews (Table 2).

The survey was then tried through a pilot phase, through this process the number of items was reduced, and the redaction of the questions was marginally modified to better fit the industry lingo. Afterwards, a description of the respondent was created, focusing on decision-makers in positions directly related to the design, implementation, and evaluation of partnerships, which corresponded mostly to departments of Sustainability, Corporate Social Responsibility, Philanthropy departments, and less frequently Human Resources, or Business Strategy.

The survey was then sent to the companies listed in the directories of two business organization related to matters of corporate citizenship, CSR, and sustainability: Red SumaRSE and Consejo Nuevo Leon. Red SumaRSE is an alliance of 32 companies that collaborate on social matters with

**Table 2. Determinants considered for the design of the instrument**

Determinants	Source
<i>Size of the company</i>	Literature
<i>Contagion (mimicry)</i>	Literature
<i>Profitability</i>	Literature
<i>Sector</i>	Literature
<i>Reputation/advertising</i>	Literature
<i>Administration (Personal relations of directors)</i>	Interviews
<i>Strategy for the survival of the company</i>	Interviews
<i>Prospective improved employability</i>	Interviews
<i>Continuity of the ideology of the founders</i>	Interviews

the objective of consolidating efforts towards a sustainable development (Red SumaRSE, 2020). Consejo Nuevo Leon is a nonpartisan and consultative body that participates in the strategic planning of the state and its evaluation, business people from the region participate actively on this organism, at the same time that the “sustainable development” commission collaborates with industry and clusters from the region (Consejo Nuevo León, 2020).

The survey registered 71 accesses, from which 37 companies complied with all the filter questions. The data was then analyzed using association and inferential analysis. The tests performed during the association analysis were (1) Mann-Whitney-Wilcoxon, (2) Kruskal-Wallis, and (3) Chi-square tests. Afterwards, inferential analysis techniques were applied, these were (1) Correlation matrix, (2) Kaiser-Meyer-Olkin tests, (3) Factor analysis (with an orthogonal varimax rotation) and (4) Ordinal Logistic Regression.

#### 4. Results

The sample used in this study is non-probabilistic since the methods used were (1) convenience sampling (i.e., obtaining answers from those available and willing to respond), and (2) snowball sampling (i.e., where the people who have responded previously forwards the survey to others who meet the desired characteristics). This type of sampling is considered adequate for exploratory studies and research in which the target population is very specific and of limited availability (Kitchenham & Pflieger, 2002, 2003).

Of the companies surveyed, 76% are considered large enterprises with more than 1000 employees, of which 52% have 1,001 to 10,000 employees. Of the companies in the “less than 1,000 employees” category, it is unknown how many correspond to micro (0 to 10 employees), small (11 to 50 employees) and medium enterprises (51 to 250 in industrial activities, 51 to 100 in activities of commerce or services; INEGI Instituto Nacional de Estadística y Geografía, 2009), but the CSR literature argues that the operationalization of CSR activities in small and medium enterprises tend to be carried out informally and hardly traceable (Baumann-Pauly et al., 2013; Fassin, 2008; Ortiz-Avram et al., 2018; Russo & Tencati, 2009; Wickert, 2016).

Regarding the annual investment (1 USD = 18.8 MXN) in CSR programs in general, 48% of the companies declared to invest less than 270 thousand dollars (k) in these programs annually, 22% between 270 and 800 thousand dollars, 17% between 800 thousand and 2.6 MM, 9% between 2.6 MM and 5.3 MM. and only 4% invest 5.3 MM or more in CSR per year. By reducing the programs to those related to higher education, 67% of companies declared to invest less than 270 thousand dollars and 33% invest between 270 to 800 thousand dollars (Table 3).

Regarding the reliability of the instrument, it obtained a coefficient of 0.9391 on the Cronbach's alpha ( $\alpha$ ) test. According to George and Mallery (2003), a Cronbach alpha coefficient of 0.7 is considered acceptable, 0.8 good and 0.9 excellent. This result indicates that the instrument is consistent and reliable.

**Table 3. Investment on CSR departments and CSP with universities, on thousands (k) and millions of dollars (MM)**

	<270 k	270–800 k	800 k— 2.6 MM	2.6–5.3 MM	5.3 MM >
Investment on CSR	48%	22%	17%	9%	4%
Investment on CSP with universities	67%	33%	0	0	0

#### 4.1. Association analysis

The first set of analyses performed where: (1) Mann-Whitney-Wilcoxon, (2) Kruskal-Wallis, and (3) Chi-square tests. Non-parametric statistical methods were used (Vogt & Johnson, 2011) due to the characteristics of the information collected in the survey (i.e., Likert scale, categorical and binary).

The first test, the Mann-Whitney-Wilcoxon is a non-parametric alternative to the t-student test (De Winter & Dodou, 2010), this analysis was chosen since the nature of the response (investment) uses an ordinal scale (Fay & Proschan, 2010). This test was performed on the binary variables of the survey to form two groups and assess whether the response differs statistically. The null and alternative hypotheses of the Mann-Whitney-Wilcoxon tests are shown below.

$$H_0 : \eta_{.1} - \eta_{.2} = 0$$

$$H_a : \eta_{.1} - \eta_{.2} \neq 0$$

where  $\eta_{.1}$  is the median of the first group and  $\eta_{.2}$  is the median of the second group. The null hypothesis tests whether the difference of medians of the two groups is zero (there is no statistical difference between the groups).

The first hypothesis test consisted in examining whether the medians of the responses of the companies that partner with universities in activities of innovation, research, technological development or consulting projects are the same as those that do not carry out these programs.

Based on the p-value (Table 4), the null hypothesis was rejected, indicating that there is a significant difference between the median investment when companies partner or not in R&D programs. To further the analysis, a second unilateral hypothesis was formulated ( $H_0: \eta_{.1} - \eta_{.2} \geq 0$ ), where a p-value of 0.009 was obtained, rejecting again the null hypothesis.

Based on the data, there is sufficient statistical evidence to conclude that the median investment in CSR of companies that partner in R&D activities differs from the median of companies that do not partner in R&D. The activities of granting scholarships to people outside the organization, participation in the updating of curricula or in the design of classes, investment in continuing education programs and donations to the university did not present a difference of medians in the answers between the groups that carry out these activities and those that do not, regarding the investment in CSR.

In conclusion, through the Mann-Whitney-Wilcoxon test (Table 5), it was quantified if the respondents' responses regarding investment in CSR differ between the companies that partner with universities in activities of innovation, research, technological development or consulting projects to those that do not carry out such activities. Based on the results, it can be concluded that the companies that implement these programs invest more in CSR than those that do not carry out these activities.

Kruskal-Wallis tests were also performed, which is a non-parametric test equivalent to ANOVA (Chan & Walmsley, 1997; Spurrier, 2003). The variables Sector, Size and Profitability were analyzed with the Kruskal-Wallis test since they contain more than two treatments (that is, more than two levels or categories) and do not follow a Likert scale. The hypothesis test for the Kruskal-Wallis test is shown below.

**Table 4. Mann-Whitney-Wilcoxon test for Research and Development activities**

	<b>P-value <math>H_0 : \eta_1 - \eta_2 = 0</math></b>	<b>P-value <math>H_0 : \eta_1 - \eta_2 \geq 0</math></b>
R&D	0.017	0.009

**Table 5. Mann-Whitney-Wilcoxon test's results**

Activities with universities	P-value	Mann-Whitney- Wilcoxon
Innovation, research, technological development, or consulting	0.017	Significant
Scholarships to people external to the company	0.57	Not significant
Participation in curriculum update	0.94	Not significant
Executive education (for employees)	0.99	Not significant
Donations to universities	0.30	Not significant

$$H_0 : \eta_{-1} = \eta_{-2} = \eta_{-3} = \eta_{-4} = L = \eta_{-k} = 0$$

(all medians of treatments are the same)

$$H_a : \text{at least one } \eta_{-k} \neq 0$$

(at least one median is different)

The determinant Size obtained a p-value of 0.058 (Table 6), which indicates that the investment in CSR department does vary according to the size of the company with a confidence level of 5.88%. It should be noted that the variable Size is defined by the number of employees.

Based on the statistical evidence obtained through the Kruskal-Wallis test, it can be concluded that the determinants corresponding to Sector and Profitability do not present statistical evidence that the investment in CSR programs varies significantly between the levels of these variables. The Size of the company does influence the investment in CSR programs.

Lastly, for the first round of statistical tests, chi-square tests (association tests) were performed to determine if there is a relationship between two variables. A significance level ( $\alpha$ ) of 0.1 was used in the chi-square test. In the case of the variable corresponding to the amount invested in CSR programs in general, five possible responses were converted to a nominal scale of three options to strengthen the expected count (University of St. Andrews, 2014a).

Table 7 presents a summary of the chi-square association test. The hypotheses tested for each determinant concerning investment in partnerships with universities and CSR are:

$H_0$ : The determinant and the investment are independent; there is no association between them.

$H_a$ : The determinant and investment are not independent; there is an association between the determinant and the investment (they are dependent).

**Table 6. Kruskal—Wallis test's results**

	P-value
Size	0.058
Sector	0.522
Profitability	0.454

**Table 7. Chi-square test's results by determinant**

	Investment in CSP with universities			Investment in CSR department		
	Pearson	D.F.	P-value	Pearson	D.F.	P-value
Size	3.15	4	0.533	21.54	8	0.005*
Contagion	2.471	1	0.116*	3.984	2	0.136*
Profitability	3.6	6	0.73	20.4	12	0.059*
Sector	0.686	2	0.709	2.659	4	0.616
Reputation	2.25	4	0.689	8	8	0.916
Admin.	10.2	4	0.037*	12.15	8	0.144*
Survival	6.825	4	0.145*	11.43	8	0.178
Employability	4.8	4	0.308	7.6	8	0.473
Founders	7.87	4	0.096*	9.83	8	0.276

\* Significant

The determinant Administration (personal networks of decision makers) has a statistically significant association (p-value of 0.037) with investment in higher education. While for the investment in CSR departments, the null hypothesis is rejected with a level of confidence of 10%. The p-value is 0.144, which indicates that with a level of confidence of 15% (acceptable for real data and collected through interviews), the null hypothesis would be rejected; therefore, this determinant shows the potential to impact both responses.

The variable corresponding to Founders (continuation of the ideology of the founders) presents a significant statistical association with investment in programs with institutions of higher education; however, it does not present sufficient evidence of dependence on investment in CSR department in general.

The variable Size exhibits sufficient statistical evidence of association with the investment variable in CSR departments, but not with the investment in universities. This corresponds to what was found by Bansal (2005), Castelo and Lima (2008), Chih et al. (2010), Chivite et al. (2014), Gao et al. (2005), Pozniak and Ferauge (2011), Reverte (2009), Hanel and St-Pierre (2006), and Santoro and Chakrabarti (2002), who argue that the size of the company is a determinant of the implementation of CSR programs. Noteworthy, these studies do not specify in which areas these programs are carried out.

The determinant of Profitability presents evidence of dependence on investment in CSR departments in general, but not with investment in programs of partnering universities. This empirical dependence differs from that obtained by Bansal (2005), Castelo and Lima (2008), Chih et al. (2010), Chivite et al. (2014), Pozniak and Ferauge (2011), and Reverte (2009), who considered profitability as not significant for the company's participation in CSR activities in their studies. It should be noted that the previous works considered CSR as a binary variable (yes/no), while this study focused only on companies in which it is previously known that they implemented CSR programs. In addition, the information collected in this study is limited to a regional context (Mexico); so, it adds more granularity to the study of this determinant.

The variable Contagion (or mimicry) has p-values of 0.11 and 0.13, with a confidence level of 14% contagion represents a significant determinant for both investments, it is recommended to further study this variable. Contagion is obtained from the literature review, where Bansal (2005), Castelo and Lima (2008), Reverte (2009), Bansal and Clelland (2004), Bansal and Roth (2000), and Henriques and Sadorsky (1996) consider it as a relevant factor.

The determinant corresponding to Survival (strategies for the survival of the company) obtained an association at 15% level of confidence with investment within higher education but did not present sufficient evidence to conclude an association with investment in CSR programs in general. Finally, the

tests carried out with the determinants “Sector”, “Reputation” and “Employability” do not present enough evidence to conclude that they have an association with the investment in CSR department in general, or with partnerships with universities (mostly under the label CSR, according to the interviews performed).

#### 4.2. Inferential analysis

The propositions for the inferential analysis are:

- P1: The investment in CSR and CSP with universities is dependent on the size of the company.
- P2: The investment in CSR and CSP with universities is dependent on the contagion effect.
- P3: The investment in CSR and CSP with universities is dependent on the profitability of the company.
- P4: The investment in CSR and CSP with universities is dependent on the sector to which the company belongs.
- P5: The investment in CSR and CSP with universities is dependent on the interest in improving the company’s reputation through these programs.
- P6: The investment in CSR and CSP with universities is dependent on the personal relationships of the administration and/or council.
- P7: The investment in CSR and CSP with universities is dependent on survival strategies.
- P8: The investment in CSR and CSP with universities is dependent on future employability activities.
- P9: The investment in CSR and CSP with universities is dependent on the continuation of the founders’ ideology.

The correlation matrix is presented as the first test of the inferential analysis (Table 8), which describes the degree to which one variable is linearly related to another and measures the degree of association between two variables (Levin & Rubin, 2004). Coefficients below 0.5 are considered to indicate a low correlation, 0.5 to 0.7 a moderate correlation, 0.7 to 0.9 high and 0.9 to 1 very high (Landau & Everitt, 2004).

The hypothesis corresponding to this test is:

$$H_0 : \rho = 0$$

$$H_a : \rho \neq 0$$

Where the null hypothesis argues that there is no correlation between two variables and the alternative hypothesis argues that there is a correlation.

In the correlation matrix the relations Profitability—Size, Employability—Administration, Employability—Survival, Founders—Administration and, Founders—Employability have a high correlation; while survival—administration and founders—survival has a very high correlation. These results are considered in the regression analysis shown at the end of the section. With respect to the correlation of the determinants and the dependent variable, there is evidence of a correlation among Size, Profitability, Reputation, Survival and Founders with the investment in higher education.



**Table 8. Correlation matrix between determinants and dependent variable**

	Size	Contagion	Profit	Sector	Rep.	Admin.	Survival	Employability	Founders	Invest. CSR dept
Size	1									
Contagion	0.063	1								
Profitability	0.716	0.129	1							
Sector	0.059	0.054	0.082	1						
Reputation	0.152	0.428	0.211	0.101	1					
Admin.	0.248	0.567	0.367	0.064	0.632	1				
Survival	0.166	0.554	0.31	0.120	0.691	0.929	1			
Employability	0.074	0.474	0.262	0.175	0.583	0.752	0.835	1		
Founders	0.059	0.479	0.187	0.086	0.646	0.890	0.931	0.897	1	
Investment CSR dept.	0.435	0.168	0.271	0.172	0.168	0.134	0.214	0.173	0.259	1

The next test performed was factor analysis, which is a multivariate statistical method that is used to reveal patterns of relationships between variables, detect clusters of redundant variables, and to reduce the number of variables across factors (Agresti & Finlay, 2009).

To determine if the factor analysis is appropriate, the Kaiser—Meyer—Olkin (KMO) sample adequacy measurement is carried out (Table 9) to determine if the original variables can be factored efficiently. This test compares the values of the correlations between the variables and their partial correlations (Carmona, 2014). The KMO test of measurement of adequacy of sampling by composite variable presents significant values (that is, greater than 0.50), while the complete model obtains a KMO of 0.754, which indicates that the model is reliable; thus, we can proceed with the factor analysis.

Factor analysis allows patterns to be recognized in a data set. We proceed to analyze the internal structure of the model considering the nine determinants, using varimax orthogonal rotation to better interpret the data (Table 10).

Factor analysis calculates the charges for each determinant in the analysis. Loads indicate how much an actor explains each determinant. Large values of the charges (whether positive or negative) indicate that the factor influences the determinant. In contrast, small charges (positive or negative) indicate that the factor has a weak influence on the variable.

Factor 1 includes the determinants of Survival, Founders, Administration, Employability, Reputation, and Contagion have significant positive charges (above 0.6), so that these determinants can be combined into a new factor that represents the company's Ethos. The determinants of Size and Profitability have high loads with factor 2, so factor 2 describes the Magnitude of the company (in the number of employees and annual sales). Finally, the determinant Sector has a very high load in factor 3, so one factor represents only the Sector.

Lastly, the final test was an Ordinal Logistic Regression (OLR), this method was chosen as the Multiple Linear Regression is not adequate for the case of ordinal data (Harrell, 2015, p.311; University of St. Andrews, 2014b). OLR predicts an ordinal dependent variable (Likert scale response) given one or more independent variables (determinants) (University of St. Andrews, 2014a). The assumptions of the OLR are that the dependent variable can be measured on an ordinal scale and that the independent variable(s) are continuous, categorical or ordinal. These assumptions are met for the analyzed data.

The factor analysis performed previously inform the regressors to be used in the regression, Factor 1 (Ethos) and Factor 2 (Magnitude) are considered. With respect to the third factor (Sector), this determinant is not considered as a regressor, and the reader is urged to consider that the following regression equation is valid for the sectors represented in the sample.

The regression hypothesis is presented below.

Ho: There is a statistically significant association between the response variable and the independent variables.

Ha: There is no statistically significant association between the response variable and the independent variables.

The regression was performed in two steps: (1) determine if the regression is significant, that is, if the association between the response and the determinants is statistically significant and (2) determine the coefficients of the variables in the model.

Table 9. Kaiser—Meyer—Olkin test's results by composed variables						
	Contagion	Reputation	Admin.	Survival	Employability	Founders
KMO	0.604	0.81	0.558	0.689	0.793	0.691

**Table 10. Factor analysis of the determinant model with orthogonal varimax rotation**

Variable	Factor 1	Factor 2	Factor 3
Survival	0.955	0.142	0.066
Founders	0.949	0.025	0.098
Admin.	0.911	0.23	0.117
Employability	0.892	0.05	0.201
Reputation	0.752	0.109	0.421
Contagion	0.66	−0.093	0.551
Size	0.042	0.921	0.148
Profitability	0.213	0.888	0.165
Sector	0.184	−0.243	0.906

First, it is observed that the regression model with all the determinants of Factor 1 and Size is significant at 10%. However, Contagion has a low load in the factor analysis and is not significant in the regression. Based on this, Contagion is removed from the model, which the significance of the model (p-value of 0.05 as shown in Table 11). Therefore, there is a statistically significant association between the response variable and the terms of the model.

To determine whether the association between the response and each of the determinants in the model is significant, the p-value of the coefficient related to each determinant is compared with the level of significance (Table 12).

The regression equation of the reduced model was:

Investment in CSR = 0.581 constant (1) + 1,809 constant (2) + 3,521 constant (3) + 5,994 constant (4) −1,105 reputation −0,516 administration + 1,936 survival−0.820 employability + 1,256 founders −1,103 size

The coefficients are used to examine how the probability of an event changes as a determinant change. The OLR estimates not only the coefficients of the determinants but also the coefficients of the constants for all but one level of the ordinal categories. The coefficients of the constants, in combination with the coefficients of the variables, form a set of regression equations.

## 5. Discussion

This section presents a summary of the results obtained (Table 13). First, the comparison of the results of this survey versus the consensus found in the literature review. Remarkably, the determinants obtained from previous research focused on determinants of the implementation of CSR programs in general, and not exclusively on the partnerships with universities, which by itself presents a relevant difference when making comparisons with the results obtained in this study. However, this comparison is presented as a baseline. It is also relevant to point out that the use of CSR as the area that includes CSP was chosen due to the discourse and operations described by the decision-makers of the companies interviewed.

**Table 11. Test of the regression**

GL	G	P-value
6	12.542	0.051

**Table 12. Ordinal Logistic Regression results for reduced model**

Predictor	Coef.	Standard error
Const(1)	0.581	1.776
Const(2)	1.809	1.806
Const(3)	3.521	1.934
Const(4)	5.994	2.622
Reputation	−1.105**	0.491
Admin.	−0.516	1.082
Survival	1.936*	1.486
Employability	−0.820	0.778
Founders	1.256	1.589
Size	−1.103**	0.502
Observations		23
Somer's D		0.48
Goodman-Kruskal		0.49
Kendall's Tau-a		0.34
Log-Likelihood		−24.490

\*Significant at 10%

\*\* Significant at 5%

\*\*\* Significant at 1%

Regarding the propositions previously presented for the inferential analysis, the condensed results of all tests are presented here:

Meaning that from the determinants in which the literature present sufficient evidence of a positive correlation (Company size, Contagion, Sector and Reputation), only two determinants show enough evidence of affecting investment in higher education, these are the variables Size and Reputation.

The variable Size (Bansal, 2005; Castelo & Lima, 2008; Chih et al., 2010; Chivite et al., 2014; Gao et al., 2005; Hanel & St-Pierre, 2006; Pozniak & Ferauge, 2011; Reverte, 2009; Santoro & Chakrabarti, 2002) obtained positive results in this study through the Kruskal—Wallis test; and chi-square test in terms of investment CSP with universities, but not in relation to investment in higher education. In the factor analysis, Size presented a very high load in the Magnitude factor and is also significant in the OLR.

The variable Contagion, which presents evidence of a positive relationship in previous studies (Bansal, 2005; Castelo & Lima, 2008; Reverte, 2009; Bansal & Clelland, 2004; Bansal & Roth, 2000; Henriques & Sadorsky, 1996), also presents evidence of a relationship with investment in CSR and CSP in higher education through the chi-square test.

The determinant Profitability is not significant in the implementation of CSR programs according to the literature consulted (Bansal, 2005; Castelo & Lima, 2008; Chih et al., 2010; Chivite et al., 2014; Pozniak & Ferauge, 2011; Reverte, 2009), which coincides with the Kruskal-Wallis and chi-square test for investment in CSR in higher education, but has a positive relationship in CSR investment in general. In the factor analysis, it belongs to the Magnitude factor and is not significant in the regression. Future work might consider differences in the context of companies and in the ways in which profitability is measured (e.g., sales, profits or sales to assets ratio) as causes of the variation in results.

**Table 13. Relationship of determinants, consensus in literature, and the results of chi-square tests, Kruskal-Wallis, factor analysis, and ordinal logistic regression**

Determinants	Literature	Chi-square	Kruskal-Wallis	Factors	OLR
Size	Positive relationship	CSP: Not significant	Significant	Magnitude	Significant
		CSR: Significant			
Contagion	Positive relationship	CSP: Significant	*	Ethos	*
		CSR: Significant			
Profitability	Not significant	CSP: Not significant	Not significant	Magnitude	*
		CSR: Significant			
Sector	Positive relationship (Partial)	CSP: Not significant	Not significant	Sector	*
		CSR: Not significant			
Reputation	Positive relationship	CSP: Not significant	*	Ethos	Significant
		CSR: Not significant			
Administration	*	CSP: Significant	*	Ethos	*
		CSR: Significant			
Survival	*	CSP: Significant	*	Ethos	Significant
		CSR: Not significant			
Employability	*	CSP: Not significant	*	Ethos	*
		CSR: Not significant			
Founders	*	CSP: Significant	*	Ethos	*
		CSR: Not significant			

\* Does not apply.

Regarding the variable Sector, the literature (Chivite et al., 2014; Ranängen & Zobel, 2014; Hanel & St-Pierre, 2006) proposes a positive relationship for companies in the energy and technology sectors. In this case, it is impossible to make a direct comparison as for the purpose of this study the variable Sector was considered in terms of primary, secondary, tertiary, quaternary, and philanthropy. Under these divisions, no significant evidence of a relationship with the investment in CSR or CSP with universities was obtained in any of the statistical tests performed.

As the last variable obtained from the literature review, the Reputation (search for an improvement in the reputation of the company) has a positive relationship with the implementation of CSR programs (Fiedler & Deegan, 2007; Rondinelli & London, 2003; Selsky & Parker, 2005; Laursen et al., 2011). This variable obtained evidence of a significant relationship in the ORL.

Regarding the exploratory determinants proposed based on the interviews conducted, Administration (personal networks of managers or advisors) presented sufficient evidence of a positive relationship both in CSR department and in CSP with universities and a high load on the Ethos factor, although it was not significant in the regression. Therefore, Administration is a relevant determinant to consider in the implementation of CSR programs and CSP with universities.



In the case of Survival (partnerships as a strategy for the survival of the company), the variable presents a positive relationship with the investment in higher education programs. In addition, this determinant was a significant variable in the OLR for the prediction of CSP with universities.

The variable Employability (Turban & Greening, 1997) does not present evidence of a significant relationship with respect to investment in CSR or CSP with higher education institutions. Finally, the determinant corresponding to Founders (continuity of the ideology of the founders) presents evidence of a positive relationship with investment in CSP with universities. Both variables are part of the Ethos factor and have no significance in the logistic regression.

## 6. Conclusions

The objective of this paper is to identify the determinants of CSR implementation on topics related to SDG17 Partnerships for the goals. This paper contributes with a quantitative methodology that can be transferred to analyze the determinants of CSR implementation on different types of partnerships in variate contexts.

The methodology proposed uses the data obtained from a survey through non-parametric association and inferential statistical analysis to obtain the significant determinants of the implementation of CSR programs on partnerships. For this purpose, a case study in a developing country was considered, adding to the literature on the area.

In conclusion, according to the information collected through the survey questionnaire applied, and the tests performed, it is considered that the (1) size of the company, (2) the contagion effect, (3) the intention of improving the reputation of the company, (4) CSP with universities as a mechanism to ensure the long-term survival of the company, and (5) the personal relationships of the administration or board of directors are determining factors in the implementation of partnerships with higher education institutions, commonly managed as part of the companies' CSR.

From these determinants, the size of the company, the contagion effect and the use of these programs to improve the reputation of the company were initially based on the literature reviewed, while the use of partnerships as a mechanism to ensure the long-term survival of the company and the personal relationships of the administration or board was based on the information obtained through interviewing decision-makers on the corresponding areas.

These findings contribute to the current literature by comparing and differentiating the determinants previously supported in the literature in different types and contexts and adding new determinants that weren't previously observed. Although the literature reviewed focused on determinants of the implementation of CSR programs in general, and not exclusively on the partnerships with universities, the comparison is presented as a baseline.

Through this exploratory study, it was found that industry-university collaborations are perceived differently by these entities and that there are personal factors that affect decision-making on the implementation of these programs and that there are emerging factors that had not been identified in the reviewed literature.

The survey was an appropriate mechanism (based on the KMO) and allowed us to explore an area of opportunity that had not been studied in the literature, that is, cross-sector partnerships between industry and universities in the context of a developing country (Mexico). The results corroborate the determinants identified as relevant in previous studies and improve our understanding of industry-university relations through determinants such as size, contagion, reputation, and survival, which impact investment in industry-university CSP.

The results obtained from this research show that the industry-university partnerships are a dynamic, multifactorial and multidimensional phenomenon (Cárdenas Denham et al., 2012; Selsky & Parker, 2005; Van Tulder et al., 2016). It also allows exploring the phenomenon of CSP in the context of a developing country, so that a perspective of a social, cultural and economic context different from that existing in the subject literature is provided (Selsky & Parker, 2005).

This contribution is relevant for the contextualization and comparison of the process and understanding of CSR, its implementation and consequences (Jamali, 2012; Jamali et al., 2017), and for providing a proven quantitative framework that can be replicated to further analyze the determinants of different types of CSP, and the differences between geographical and cultural contexts.

In the context of the Agenda 2030 and the SDGs, the identification of these determinants aids on the accomplishment of integrating and leading international and multi-sector efforts, as it can help practitioners to better understand the relevance of the context and area of implementation of the partnerships and how to better motivate or influence businesses to consistently join partnerships for the goals.

The understanding of determinants for the implementation of partnerships would allowed a better focalization of resources to foment the creation of this partnerships, that in turn help to reach the objectives of SDG 4 on quality education, SDG 9 on industry, innovation and infrastructure, and mainly SDG 17 on partnerships for the goals.

#### Funding

"This research received no external funding".

#### Author details

Rosalía G. Castillo-Villar<sup>1</sup>

E-mail: [rosalia.castillov@udem.edu](mailto:rosalia.castillov@udem.edu)

ORCID ID: <http://orcid.org/0000-0001-7813-5886>

<sup>1</sup> UDEM Business School, Universidad de Monterrey, Mexico.

#### Conflicts of Interest

The authors declare no conflict of interest.

#### Citation information

Cite this article as: Identifying determinants of CSR implementation on SDG 17 partnerships for the goals, Rosalía G. Castillo-Villar, *Cogent Business & Management* (2020), 7: 1847989.

#### References

- Agresti, A., & Finlay, B. (2009). *Statistical methods for the social sciences* (4th ed.). Pearson Prentice Hall.
- Ali, W., Frynas, J. G., & Mahmood, Z. (2017). Determinants of corporate social responsibility (CSR) disclosure in developed and developing countries: A literature review. *Corporate Social Responsibility and Environmental Management*, 24(4), 273–294. <https://doi.org/10.1002/csr.1410>
- Ankrah, S., & Al-Tabbaa, O. (2015). Universities–industry collaboration: A systematic review. *Scandinavian Journal of Management*, 31(3), 387–408. <https://doi.org/10.1016/j.scaman.2015.02.003>
- Ashraf, N., Ahmadsimab, A., & Pinkse, J. (2017). From animosity to affinity: The interplay of competing logics and interdependence in cross-sector partnerships: From animosity to affinity. *Journal of Management Studies*, 54(6), 793–822. <https://doi.org/10.1111/joms.12273>
- Asociación Nacional de Universidades e Instituciones de Educación Superior. (2018). *Innovación curricular en instituciones de educación superior: Pautas y procesos para su diseño y gestión*.
- Bansal, P. (2005). Evolving sustainably: A longitudinal study of corporate sustainable development. *Strategic Management Journal*, 26(3), 197–218. <https://doi.org/10.1002/smj.441>
- Bansal, P., & Clelland, I. (2004). Talking trash: Legitimacy, impression management, and unsystematic risk in the context of the natural environment. *Academy of Management Journal*, 47(1), 93–103. <https://doi.org/10.5465/20159562>
- Bansal, P., & Roth, K. (2000). Why companies go green: A model of ecological responsiveness. *Academy of Management Journal*, 43(4), 717–736. <https://doi.org/10.5465/1556363>
- Baumann-Pauly, D., Wickert, C., Spence, L. J., & Scherer, A. G. (2013). Organizing corporate social responsibility in small and large firms: Size matters. *Journal of Business Ethics*, 115(4), 693–705. <https://doi.org/10.1007/s10551-013-1827-7>
- Beisheim, M., & Simon, N. (2016). Multi-stakeholder partnerships for implementing the 2030 agenda: Improving accountability and transparency. *Analytical Paper for the 2016 ECOSOC Partnership Forum*.
- Berger, I. E., Cunningham, P. H., & Drumwright, M. E. (2004). Social alliances: Company/nonprofit collaboration. *California Management Review*, 47(1), 58–90. <https://doi.org/10.2307/41166287>
- Blowfield, M., & Dolan, C. S. (2014). Business as a development agent: Evidence of possibility and improbability. *Third World Quarterly*, 35(1), 22–42. <https://doi.org/10.1080/01436597.2013.868982>
- Bryson, J. M., Crosby, B. C., & Stone, M. M. (2015). Designing and implementing cross-sector collaborations: Needed and challenging. *Public Administration Review*, 75(5), 647–663. <https://doi.org/10.1111/puar.12432>
- Buhmann, K., Jonsson, J., & Fisker, M. (2019). Do no harm and do more good too: Connecting the SDGs with business and human rights and political CSR theory. *Corporate Governance: The International Journal of Business in Society*, 19(3), 389–403. <https://doi.org/10.1108/CG-01-2018-0030>

- Cárdenas Denham, S., Cabrero Mendoza, E., & Arellano Gault, D. (Eds.). (2012). *La difícil vinculación universidad-empresa en México: ¿hacia la construcción de la triple hélice?* (Segunda edición ed.). CIDE.
- Carmona, F. (2014). *Un ejemplo de ACP paso a paso*. Universitat de Barcelona. <http://www.ub.edu/stat/docencia/Mates/ejemploACP>
- Carroll, A. B., & Buchholtz, A. K. (2015). *Business & society: Ethics, sustainability, and stakeholder management* (Ninth ed.). Cengage Learning.
- Castelo, M., & Lima, L. (2008). Factors influencing social responsibility disclosure by Portuguese companies. *Journal of Business Ethics*, 83(4), 685–701. <https://doi.org/10.1007/s10551-007-9658-z>
- Centro de Investigación para el Desarrollo. (2014). *Encuesta de competencias profesionales 2014: ¿Qué buscan y no encuentran las empresas en los profesionistas jóvenes?* (1st ed.). [http://cidac.org/esp/uploads/1/encuesta\\_competencias\\_profesionales\\_270214.pdf](http://cidac.org/esp/uploads/1/encuesta_competencias_profesionales_270214.pdf)
- Chan, Y., & Walmsley, R. P. (1997). Learning and understanding the Kruskal-Wallis one-way analysis-of-variance-by-ranks test for differences among three or more independent groups. *Physical Therapy*, 77(12), 1755–1761. <https://doi.org/10.1093/ptj/77.12.1755>
- Chih, H.-L., Chih, -H.-H., & Chen, T.-Y. (2010). On the determinants of corporate social responsibility: International evidence on the financial industry. *Journal of Business Ethics*, 93(1), 115–135. <https://doi.org/10.1007/s10551-009-0186-x>
- Chivite, M., Enciso, V., García, B., & Tua, J. (2014). Determinantes de la responsabilidad social corporativa: La crisis y el efecto contagio. *CIRIEC-España, Revista de Economía Pública, Social y Cooperativa*, 81, 127–161. Retrieved from <https://libweb.lib.utsa.edu/login?url=https://www-proquest-com.libweb.lib.utsa.edu/docview/1635269234?accountid=7122>
- Clarke, A., & Crane, A. (2018). Cross-sector partnerships for systemic change: Systematized literature review and agenda for further research. *Journal of Business Ethics*, 150(2), 303–313. <https://doi.org/10.1007/s10551-018-3922-2>
- Clarke, A., & MacDonald, A. (2019). Outcomes to partners in multi-stakeholder cross-sector partnerships: A resource-based view. *Business & Society*, 58(2), 298–332. <https://doi.org/10.1177/0007650316660534>
- Clough, E., Long, G., & Rietig, K. (2019). *A study of partnerships and initiatives registered on the UN SDG partnerships platform*. An Independent Report Commission by the United Nations Department for Economic and Social Affairs (UNDESA).
- Cochran, P. L., & Wood, R. A. (1984). Corporate social responsibility and financial performance. *Academy of Management Journal*, 27(1), 42–56. doi:10.5465/255956
- Comunian, R., Taylor, C., & Smith, D. N. (2014). The role of universities in the regional creative economies of the uk: Hidden protagonists and the challenge of knowledge transfer. *European Planning Studies*, 22(12), 2456–2476. <https://doi.org/10.1080/09654313.2013.790589>
- Consejo Nuevo León. (2020). *Quiénes Somos*. [https://www.conl.mx/quienes\\_somos](https://www.conl.mx/quienes_somos)
- Creswell. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative approaches to research* (2nd ed.). Merrill/Pearson Education.
- Creswell, J. W., Plano Clark, V. L., Gutmann, M., & Hanson, W. (2003). Advanced mixed methods research designs. In A. Tashakkori & C. Teddlie (Eds.), *Handbook on mixed methods in the behavioral and social sciences* (pp. 209–240). Sage.
- Cunningham, J. A., & Link, A. N. (2015). Fostering university-industry R&D collaborations in European Union countries. *International Entrepreneurship and Management Journal*, 11(4), 849–860. <https://doi.org/10.1007/s11365-014-0317-4>
- De Winter, J., & Dodou, D. (2010). Five-point Likert items: T test versus Mann-Whitney-Wilcoxon. *Practical Assessment, Research & Evaluation*, 15(11), 1–12. <https://doi.org/https://doi.org/10.7275/bj1p-ts64>
- Derila, C., Evana, E., & Dewi, F. (2020). Effect of environmental performance and environmental costs on financial performance with CSR disclosure as intervening variables. *International Journal for Innovation Education and Research*, 8(1), 37–43. <https://doi.org/10.31686/ijer.Vol8.Iss1.2054>
- Doh, J. P., Howton, S. D., Howton, S. W., & Siegel, D. S. (2010). Does the market respond to an endorsement of social responsibility? The role of institutions, information, and legitimacy. *Journal of Management*, 36(6), 1461–1485. <https://doi.org/10.1177/0149206309337896>
- ElAlfy, A., Palaschuk, N., El-Bassiouny, D., Wilson, J., & Weber, O. (2020). Scoping the evolution of corporate social responsibility (Csr) research in the sustainable development goals (Sdgs) era. *Sustainability*, 12(14), 5544. <https://doi.org/10.3390/su12145544>
- Eyal, O., & Yarm, M. (2018). Schools in cross-sector alliances: What do schools seek in partnerships? *Educational Administration Quarterly*, 54(4), 648–688. <https://doi.org/10.1177/0013161X18765268>
- Fassin, Y. (2008). SMEs and the fallacy of formalising CSR. *Business Ethics: A European Review*, 17(4), 364–378. <https://doi.org/10.1111/j.1467-8608.2008.00540.x>
- Fauzi, H., & Idris, K. (2010). The effect of contextual variables in the relationship between CSR and CFP: Evidence from Indonesian Companies. *Issues in Social and Environmental Accounting*, 4(1), 40. <https://doi.org/10.22164/isea.v4i1.46>
- Fay, M. P., & Proschan, M. A. (2010). Wilcoxon-Mann-Whitney or t-test? On assumptions for hypothesis tests and multiple interpretations of decision rules. *Statistics Surveys*, 4, 1–39. <https://doi.org/10.1214/09-SS051>
- Fiedler, T., & Deegan, C. (2007). Motivations for environmental collaboration within the building and construction industry. *Managerial Auditing Journal*, 22(4), 410–441. <https://doi.org/10.1108/02686900710741946>
- Franco, I. B., Chatterji, T., Derbyshire, E., & Tracey, J. (2020). *Actioning the global goals for local impact: Towards sustainability science, policy, education and practice*. Springer. <https://doi.org/10.1007/978-981-32-9927-6>
- Fukuda-Parr, S., & McNeill, D. (2015). Post 2015: A new era of accountability? *Journal of Global Ethics*, 11(1), 10–17. <https://doi.org/10.1080/17449626.2015.1004738>
- Gamerschlag, R., Möller, K., & Verbeeten, F. (2011). Determinants of voluntary CSR disclosure: Empirical evidence from Germany. *Review of Managerial Science*, 5(2–3), 233–262. <https://doi.org/10.1007/s11846-010-0052-3>
- Gao, S. S., Heravi, S., & Xiao, J. Z. (2005). Determinants of corporate social and environmental reporting in Hong Kong: A research note. *Accounting Forum*, 29(2), 233–242. <https://doi.org/10.1016/j.accfor.2005.01.002>
- George, D., & Mallery, P. (2003). *SPSS for windows step by step: A simple guide and reference; 11.0 update*. Allyn and Bacon.

- Hamid, F. (2004). Corporate social disclosure by banks and finance companies: Malaysian evidence. *Corporate Ownership and Control*, 1(4), 118–130. doi:10.22495/coc
- Hanel, P., & St-Pierre, M. (2006). Industry–university collaboration by Canadian manufacturing firms\*. *The Journal of Technology Transfer*, 31(4), 485–499. <https://doi.org/10.1007/s10961-006-0009-5>
- Harrell, F. E. (2015). *Regression modeling strategies: With applications to linear models, logistic and ordinal regression, and survival analysis* (Second ed.). Springer.
- Hemmert, M., Bstieler, L., & Okamuro, H. (2014). Bridging the cultural divide: Trust formation in university–industry research collaborations in the US, Japan, and South Korea. *Technovation*, 34(10), 605–616. <https://doi.org/10.1016/j.technovation.2014.04.006>
- Henriques, I., & Sadorsky, P. (1996). The determinants of an environmentally responsive firm: An empirical approach. *Journal of Environmental Economics and Management*, 30(3), 381–395. <https://doi.org/10.1006/jeem.1996.0026>
- Horan, D. (2019). A new approach to partnerships for SDG transformations. *Sustainability*, 11(18), 4947. <https://doi.org/10.3390/su11184947>
- INEGI Instituto Nacional de Estadística y Geografía. (2009). *Micro, pequeña, mediana y gran empresa*. [http://www.beta.inegi.org.mx/contenidos/programas/ce/2009/doc/minimonografias/m\\_pymes.pdf](http://www.beta.inegi.org.mx/contenidos/programas/ce/2009/doc/minimonografias/m_pymes.pdf)
- Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *Field Methods*, 18(1), 3–20. <https://doi.org/10.1177/1525822X05282260>
- Jamali, D. (2009). Uneasy alliances: Lessons learned from partnerships between businesses and NGOs in the context of CSR. *Journal of Business Ethics*, 84(2), 277–295. <https://doi.org/10.1007/s10551-008-9708-1>
- Jamali, D. (2012). *CSR in the Middle East fresh perspectives*. Palgrave Macmillan.
- Jamali, D., Lund-Thomsen, P., & Jeppesen, S. (2017). SMEs and CSR in developing countries. *Business & Society*, 56(1), 11–22. <https://doi.org/10.1177/0007650315571258>
- Januati, I., Faisal, F., & Situmorang, R. J. (2019). Investigating the determinants of partnership and community development programs: Indonesia perspectives. *Cogent Business & Management*, 6(1), 1682764. <https://doi.org/10.1080/23311975.2019.1682764>
- Kitagawa, F., & Lightowler, C. (2013). Knowledge exchange: A comparison of policies, strategies, and funding incentives in English and Scottish higher education. *Research Evaluation*, 22(1), 1–14. <https://doi.org/10.1093/reseval/rvs035>
- Kitchenham, B., & Pfleeger, S. L. (2002). Principles of survey research: Part 5: Populations and samples. *ACM SIGSOFT Software Engineering Notes*, 27(5), 17. <https://doi.org/10.1145/571681.571686>
- Kitchenham, B., & Pfleeger, S. L. (2003). Principles of survey research part 6: Data analysis. *ACM SIGSOFT Software Engineering Notes*, 28(2), 24. <https://doi.org/10.1145/638750.638758>
- Kolk, A., Van Tulder, R., & Kostwinder, E. (2008). Business and partnerships for development. *European Management Journal*, 26(4), 262–273. <https://doi.org/10.1016/j.emj.2008.01.007>
- Landau, S., & Everitt, B. (2004). *A handbook of statistical analyses using SPSS*. Chapman & Hall/CRC.
- Laursen, K., Reichstein, T., & Salter, A. (2011). Exploring the effect of geographical proximity and university quality on university–industry collaboration in the United Kingdom. *Regional Studies*, 45(4), 507–523. <https://doi.org/10.1080/00343400903401618>
- Layton, M. D. (2010). International encyclopedia of civil society. In *International Encyclopedia of Civil Society* (pp. 1201–1209). Springer.
- Le Ber, M. J., & Branzei, O. (2010). (Re)Forming strategic cross-sector partnerships: Relational processes of social innovation. *Business & Society*, 49(1), 140–172. <https://doi.org/10.1177/0007650309345457>
- Lehrer, M., Nell, P., & Gärber, L. (2009). A national system view of university entrepreneurialism: Inferences from comparison of the German and US experience. *Research Policy*, 38(2), 268–280. <https://doi.org/10.1016/j.respol.2008.11.007>
- Levin, R. I., & Rubin, D. S. (2004). *Estadística para administración y economía*. Pearson educación.
- Liese, A., & Beisheim, M. (2011). Transnational public-private partnerships and the provision of collective goods in developing countries. In *Governance without a state? policies and politics in areas of limited statehood* (pp. 115–143). Columbia University Press.
- Lin, H., & Darnall, N. (2015). Strategic alliance formation and structural configuration. *Journal of Business Ethics*, 127(3), 549–564. <https://doi.org/10.1007/s10551-014-2053-7>
- MacDonald, A., Clarke, A., Huang, L., Roseland, M., & Seitani, M. M. (2018). Multi-stakeholder partnerships (SDG #17) as a means of achieving sustainable communities and cities (SDG #11). In W. Leal Filho (Ed.), *Handbook of sustainability science and research* (pp. 193–209). Springer International Publishing. [https://doi.org/10.1007/978-3-319-63007-6\\_12](https://doi.org/10.1007/978-3-319-63007-6_12)
- Martens, J. (2007). *Multistakeholder partnerships: Future models of multilateralism?* (Vol. 29). Friedrich-Ebert-Stiftung.
- McDonald, S., & Young, S. (2012). Cross-sector collaboration shaping corporate social responsibility best practice within the mining industry. *Journal of Cleaner Production*, 37, 54–67. doi:10.1016/j.jclepro.2012.06.007
- Moreno-Brid, J. C., & Ruiz-Nápoles, P. (2009). *La educación superior y el desarrollo económico en América Latina*. CEPAL, Coordinación de Investigación.
- Morgan, D. (1998). Practical strategies for combining qualitative and quantitative methods: Applications to health research. *Qualitative Health Research*, 8(3), 362–376. <https://doi.org/10.1177/104973239800800307>
- Ordonez-Ponce, E., & Clarke, A. (2020). Sustainability cross-sector partnerships: The strategic role of organizational structures. *Corporate Social Responsibility and Environmental Management*.
- Ortiz-Avram, D., Domnanovich, J., Kronenberg, C., & Scholz, M. (2018). Exploring the integration of corporate social responsibility into the strategies of small- and medium-sized enterprises: A systematic literature review. *Journal of Cleaner Production*, 201, 254–271. <https://doi.org/10.1016/j.jclepro.2018.08.011>
- Pattberg, P., & Widerberg, O. (2016). Transnational multi-stakeholder partnerships for sustainable development: Conditions for success. *Ambio*, 45(1), 42–51. <https://doi.org/10.1007/s13280-015-0684-2>
- Porter, M. (1979). *How competitive forces shape strategy*. Harvard Business School Press. [https://d1wqtxts1xzle7.cloudfront.net/49313875/Forces\\_That\\_Shape\\_Competition.pdf?1475494398=&response-content-disposition=inline%3B+filename%3DForces\\_That\\_Shape\\_Competition.pdf&Expires=1596337983&Signature=GDxFt0gv1SSFNk7BYNVyptlVWVLe8VdqydbL~UerpnZw~JJlppQm58VpED6wX9Eysc1lXH6Aws2xf2cQ79W7VxXgc-p2KwwNo88imdLUIkEa146hQV2w097TjZw4OdB8OX0q4ZTOKa4H1A35Jts4fWOUcyYArgfXfDB5ea0-AgYlrmkX9HbiEXhHVgpaPOjPMmyz3M3Cr2loqspaYWG3wT6iebRfTG~dbqDL~SAD6Q9mLDiZJcIprBQvghgackcZszZr2ujr2xZmDgOCd0I7ngjznE2g8kzDFetSSk84Msc7v11ZH3](https://d1wqtxts1xzle7.cloudfront.net/49313875/Forces_That_Shape_Competition.pdf?1475494398=&response-content-disposition=inline%3B+filename%3DForces_That_Shape_Competition.pdf&Expires=1596337983&Signature=GDxFt0gv1SSFNk7BYNVyptlVWVLe8VdqydbL~UerpnZw~JJlppQm58VpED6wX9Eysc1lXH6Aws2xf2cQ79W7VxXgc-p2KwwNo88imdLUIkEa146hQV2w097TjZw4OdB8OX0q4ZTOKa4H1A35Jts4fWOUcyYArgfXfDB5ea0-AgYlrmkX9HbiEXhHVgpaPOjPMmyz3M3Cr2loqspaYWG3wT6iebRfTG~dbqDL~SAD6Q9mLDiZJcIprBQvghgackcZszZr2ujr2xZmDgOCd0I7ngjznE2g8kzDFetSSk84Msc7v11ZH3)



- WVOYRXHfDlyLuEnrxsXkwFf3wc1sSYPyaTAg\_\_&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA#page=25
- Porter, M. E. (1980). *Competitive strategy: Techniques for analyzing industries and competitors*. Free Press.
- Pozniak, L., & Ferauge, P. (2011). Determinants of internet corporate social responsibility communication. *Global Journal of Business Research*, 5(4), 1–14. [https://www.theibfr.com/download/gjbr/2015\\_gjbr/v9n2-2015/GJBR-V9N2-2015-5.pdf](https://www.theibfr.com/download/gjbr/2015_gjbr/v9n2-2015/GJBR-V9N2-2015-5.pdf)
- Prashant, K., & Harbir, S. (2009). Managing strategic alliances: What do we know now, and where do we go from here? *Academy of Management Perspectives*, 23(3), 45–62. <https://doi.org/10.5465/amp.2009.43479263>
- Prieto-Carrón, M., Lund-Thomsen, P., Chan, A., Muro, A., & Bhushan, C. (2006). Critical perspectives on CSR and development: What we know, what we don't know, and what we need to know. *International Affairs*, 82(5), 977–987. <https://doi.org/10.1111/j.1468-2346.2006.00581.x>
- Provan, K. G., & Kenis, P. (2008). Modes of network governance: Structure, management, and effectiveness. *Journal of Public Administration Research and Theory*, 18(2), 229–252. <https://doi.org/10.1093/jopart/mum015>
- Rahm, D., Kirkland, J., & Bozeman, B. (2013). *University-industry R&D collaboration in the United States, the United Kingdom, and Japan* (Vol. 1). Springer Netherlands. <https://doi.org/10.1007/978-94-015-9574-2>
- Ranängen, H., & Zobel, T. (2014). Revisiting the 'how' of corporate social responsibility in extractive industries and forestry. *Journal of Cleaner Production*, 84, 299–312. <https://doi.org/10.1016/j.jclepro.2014.02.020>
- Red SumaRSE. (2020). *Nosotros.Red SumaRSE*. <http://www.sumarse.org.mx/>
- Reed, A. M., & Reed, D. (2009). Partnerships for development: Four models of business involvement. *Journal of Business Ethics*, 90(S1), 3–37. <https://doi.org/10.1007/s10551-008-9913-y>
- Reverte, C. (2009). Determinants of corporate social responsibility disclosure ratings by Spanish listed firms. *Journal of Business Ethics*, 88(2), 351–366. <https://doi.org/10.1007/s10551-008-9968-9>
- Rey-García, M., Layton, M. D., & Martin-Cavanna, J. (2020). Corporate foundations in. In L. America, L. Roza, S. Bethmann, L. Meijs, & G. von Schnurbein (Eds.), *Handbook on corporate foundation* (pp. 167–190). Springer International Publishing. [https://doi.org/10.1007/978-3-030-25759-0\\_9](https://doi.org/10.1007/978-3-030-25759-0_9)
- Rondinelli, D. A., & London, T. (2003). How corporations and environmental groups cooperate: Assessing cross-sector alliances and collaborations. *Academy of Management Perspectives*, 17(1), 61–76. <https://doi.org/10.5465/ame.2003.9474812>
- Russo, A., & Tencati, A. (2009). Formal vs. Informal csr strategies: Evidence from Italian micro, small, medium-sized, and large firms. *Journal of Business Ethics*, 85(S2), 339–353. <https://doi.org/10.1007/s10551-008-9736-x>
- Salas-Durazo, I., & Murillo-García, F. (2013). Los profesionistas universitarios y el mercado laboral mexicano: Convergencias y asimetrías. *Revista de la Educación Superior*, 42(165), 63–81. <https://doi.org/10.1016/j.jclepro.2014.02.020>
- Santoro, M. D., & Chakrabarti, A. K. (2002). Firm size and technology centrality in industry–university interactions. *Research Policy*, 31(7), 1163–1180. [https://doi.org/10.1016/S0048-7333\(01\)00190-1](https://doi.org/10.1016/S0048-7333(01)00190-1)
- Secretaría de Hacienda y Crédito Público, SHCP. (2015). *Distribución del pago de impuestos y recepción del gasto público por deciles de hogares y personas*. [http://www.hacienda.gob.mx/INGRESOS/ingresos\\_dis\\_tribucion\\_pago/IG\\_2016\(ENIGH2014\).pdf](http://www.hacienda.gob.mx/INGRESOS/ingresos_dis_tribucion_pago/IG_2016(ENIGH2014).pdf)
- Seitanidi, M. M., & Crane, A. (2009). Implementing csr through partnerships: Understanding the selection, design and institutionalisation of nonprofit-business partnerships. *Journal of Business Ethics*, 85(S2), 413–429. <https://doi.org/10.1007/s10551-008-9743-y>
- Seitanidi, M. M., & Crane, A. (2014). *Social partnerships and responsible business: A research handbook*. Routledge. <http://site.ebrary.com/id/10814846>
- Selsky, J. W., & Parker, B. (2005). Cross-sector partnerships to address social issues: Challenges to theory and practice. *Journal of Management*, 31(6), 849–873. <https://doi.org/10.1177/0149206305279601>
- Siegel, D. J. (2010). *Organizing for social partnership: Higher education in cross-sector collaboration*. Routledge.
- Spurrier, J. D. (2003). On the null distribution of the Kruskal–Wallis statistic. *Journal of Nonparametric Statistics*, 15(6), 685–691. <https://doi.org/10.1080/10485250310001634719>
- Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. Sage. (Vol. 46).
- Tashakkori, A., & Teddlie, C. (eds). (2003). *Handbook on mixed methods in the behavioral and social sciences*. Sage.
- Turban, D. B., & Greening, D. W. (1997). Corporate social performance and organizational attractiveness to prospective employees. *Academy of Management Journal*, 40(3), 658–672. <https://doi.org/10.2307/257057>
- UN Department of Economic and Social Affairs. (2018). *2018 report advancing the global partnership for sustainable development*. [https://sustainabledevelopment.un.org/content/documents/2569Partnership\\_Exchange\\_2018\\_Report.pdf](https://sustainabledevelopment.un.org/content/documents/2569Partnership_Exchange_2018_Report.pdf)
- United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development*. <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>
- University of St. Andrews. (2014a). *Analysing Likert scale/ type data, ordinal logistic regression example in R*. Statistics Support. <https://www.st-andrews.ac.uk/capod/students/studyskillsandadvice/mathsandstatisticsupport/statisticssupport/>
- University of St. Andrews. (2014b). *Decision tree*. Statistics Support. <https://www.st-andrews.ac.uk/capod/students/studyskillsandadvice/mathsandstatisticsupport/statisticssupport/>
- Utting, P., & Zammit, A. (2009). United nations-business partnerships: Good intentions and contradictory agendas. *Journal of Business Ethics*, 90(S1), 39–56. <https://doi.org/10.1007/s10551-008-9917-7>
- Van Hille, I., De Bakker, F. G. A., Ferguson, J. E., & Groenewegen, P. (2020). Cross-sector partnerships for sustainability: How mission-driven conveners drive change in national coffee platforms. *Sustainability*, 12(7), 2846. <https://doi.org/10.3390/su12072846>
- Van Tulder, R., Seitanidi, M. M., Crane, A., & Brammer, S. (2016). Enhancing the impact of cross-sector partnerships: Four impact loops for channeling partnership studies. *Journal of Business Ethics*, 135(1), 1–17. <https://doi.org/10.1007/s10551-015-2756-4>

- Vestergaard, A., Murphy, L., Morsing, M., & Langevang, T. (2020). Cross-sector partnerships as capitalism's new development agents: Reconceiving impact as empowerment. *Business & Society*, 59(7), 1339–1376. <https://doi.org/10.1177/0007650319845327>
- Vick, T. E., & Robertson, M. (2018). A systematic literature review of UK university–industry collaboration for knowledge transfer: A future research agenda. *Science & Public Policy*, 45(4), 579–590. <https://doi.org/10.1093/scipol/scx086>
- Vogt, W. P., & Johnson, B. (2011). *Dictionary of statistics & methodology: A nontechnical guide for the social sciences* (4th ed.). SAGE.
- Wickert, C. (2016). “Political” corporate social responsibility in small- and medium-sized enterprises: A conceptual framework. *Business & Society*, 55(6), 792–824. <https://doi.org/10.1177/0007650314537021>
- Williams, A., Whiteman, G., & Parker, J. N. (2019). Backstage interorganizational collaboration: Corporate endorsement of the sustainable development goals. *Academy of Management Discoveries*, 5(4), 367–395. <https://doi.org/10.5465/amd.2018.0154>
- Wohlstetter, P., Malloy, C. L., Hentschke, G. C., & Smith, J. (2004). Improving service delivery in education through collaboration: An exploratory study of the role of cross-sectoral alliances in the development and support of charter schools. *Social Science Quarterly*, 85(5), 1078–1096. <https://doi.org/10.1111/j.0038-4941.2004.00264.x>
- Yusuf, S., & Nabeshima, K. (2006). *How universities promote economic growth*. The World Bank. <https://doi.org/10.1596/978-0-8213-6751-3>



© 2020 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.



You are free to:

Share — copy and redistribute the material in any medium or format.

Adapt — remix, transform, and build upon the material for any purpose, even commercially.

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made.

You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

No additional restrictions

You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

**Cogent Business & Management (ISSN: 2331-1975) is published by Cogent OA, part of Taylor & Francis Group.**

**Publishing with Cogent OA ensures:**

- Immediate, universal access to your article on publication
- High visibility and discoverability via the Cogent OA website as well as Taylor & Francis Online
- Download and citation statistics for your article
- Rapid online publication
- Input from, and dialog with, expert editors and editorial boards
- Retention of full copyright of your article
- Guaranteed legacy preservation of your article
- Discounts and waivers for authors in developing regions

**Submit your manuscript to a Cogent OA journal at [www.CogentOA.com](http://www.CogentOA.com)**

