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Analyzing the Economy for the Common Good Model

STATISTICAL VALIDATION OF ITS METRICS AND IMPACTS IN THE BUSINESS SPHERE

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Acknowledgment

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1. Introduction.

Capitalism's excesses and market faults have driven to emerge different new approaches and alternative theories. All of them share their will to offer alternatives to the current economic system under a more humanistic and social perspective. In fact, Capitalism has been under criticism since their initial times. Most of these approaches date from the 19th and the 20th Century, however, since the beginning of the last economic downturn in 2008 new critic economic and business models have arisen.

Consequently, in the last twenty years, several studies have shown the contradictions of the Capitalist system, its inability to guarantee free markets, democracy and welfare state preservation (Sen 1999; Rodrik, 2011). Accordingly, Jackson (2011) points to the pernicious effects of economic growth, whereas Taibo (2006) analyzes some unfair behaviors of the New Imperialism developed by the financial capital from western countries. Thus, many of them suggest the need for creating a more sustainable economic model with a human face and more prone to integrate the public goods (Chomsky & Barsamian, 2002; Zamagni, 2007; Krugman, 2012).

Some of these approaches try to mitigate and/or ease off part of the negative external effects caused by Capitalism. This is the case of Social and Solidarity Economy, Third Sector, Sustainable Economy or Corporate Social Responsibility (CSR), among others. Nevertheless, all these alternatives have produced local and partial impact. Therefore, as long as social and economic inequalities rose, one can consider that the contradictions of Capitalism were not solved (Entera-Jiménez & Martínez-Rodríguez, 2013).

In face of such reality, it is necessary to find out a new economic and social model alternative to Capitalism. A new model more human and environmentally friendly than the present one, capable of guarantee democracy and freedom worldwide. The crisis that began in 2008 made emerge new opportunities for the development of new forms of critic economics. Thus, some social movements appeared from civil society proposing what has been called new economies; i.e. collaborative economy, circular economy, and ethical and social banking, among others. Social media and ICTs have helped to implement those critic economic forms.

Under these circumstances, for many people, it was necessary to consolidate worldwide a new social and economic model by putting together all the mentioned new economies. In this sense, Christian Felber (Austrian sociologist and political activist) presented in 2008, a document named " New values for the Economy" (Felber, 2008). In this document, he raises the bases for an alternative system to capitalism and communism. To do so, he had the support of a group of Austrian entrepreneurs. Thus, giving birth to the new economic and social model known as the *Economy for the Common Good* (ECG). Moreover, in 2010[1] he published the book entitled "Economy for the Common Good".

The social movement to promote an Economy for the Common Good started on October 1st, 2010. One year later (on October 5th, 2011), the results of the Common Good Balance Sheet of the 100 pioneer firms were made public.

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[1] The book was originally published in German. It has been translated into other languages. The translation into Spanish dates from 2012, whilst the translation into English dates from 2015.

We must take into consideration that most of the democratic Constitutions, currently in force in the world's democratic countries, recognize the countries' economy as being subordinate to the people's general interest and the common good. Hence, the last purpose of the ECG model is to align the countries' economic operation with their Constitutions.

In the present, the ECG model is being applied in Europe, North America, and Latin America thanks to the international network of associations driven by local civil societies. Important to realize that close to 2,000 firms located in 30 countries worldwide are involved in the movement. Consequently, the ECG model has succeeded in being recognized as an alternative and motivating model by an important part of society in a relatively short period of time.

Although the ECG model does not refuse participation in the market, and the market itself as an economic institution, it criticizes the current market operation, the market behavior and a large part of its present rules. For these reasons, the current market operation is not able to promote and ensure the general well-being as it is prone to focus on individual interest and the accumulation of wealth by the few. Accordingly, the ECG model points to the need for promoting changes in market rules to ensure it fulfills the common good, understood as the achievement of the general interest for the most. To do so, the model advocates for a market operation based on cooperation and democratic participation.

Regardless of the model's relatively fast growing and success, a number of critics have emerged; not only from a neo-liberal approach (Rayo, 2013) but also from other social approaches. Many of these critics refer to a lack of academic and scientific base in the model's postulates. Therefore, the need exists to set up the model's theoretical foundation and, also, its empirical validation. To this end, in the present report authors will employ different theories and approaches commonly accepted by scholarship and practitioners in the field of Business Administration. Such theories and approaches will be adapted to the context of the ECG model to work with its framework.

After seven years of the model in operation, with a growing number of firms having produced their Common Good Balance Sheets, for the movement, it is necessary to test empirically whether the model's implementation at firm level has produced the expected social, environmental and economic impacts.

Hence, the present study main goal is to provide a theoretical and empirical foundation from Business Administration approach that fits, both, scholarship and practitioners point of view. This will reinforce the model's implementation in the organizational context. This goal can be broken into three specific objectives. Firstly, we aim at grounding the ECG model in the framework of the main Business Administration theories (in particular, we refer to Stakeholders theory and Shared value model, among others) to provide the model with scholar foundations. Secondly, our purpose was to perform the statistical validation of the metrics included in the Common Good Matrix (CGM) and the Common Good Balance Sheet (CGBS). Thirdly, our purpose was to test the impact of the ECG model at the organizational level (in particular, we test the firms' ability to create and deliver social, environmental and economic value once they have adopted the ECG model).

To achieve these research objectives, we employed a combination of methodologies. Firstly, we developed a literature review and adaptation of the main trends in the Business Administration field to the ECG framework. Secondly, with the aim of attaining the objectives two and three, we designed and performed an empirical study based on the data we gathered

from a survey distributed among the European firms that had implemented the ECG model in the last seven years (producing and auditing their CGBS).

The questionnaire consisted of 21 items, which included information on the different scores the firms obtained in regards to the metrics included in the CGM and the CGBS and, also, information to measure the different types of impacts produced (social, environmental and economic). Then, we performed the data treatment by means of the statistical software SPSS.

The present report has been structured into five sections as follows. After this introduction, the reader can find section 2 which depicts the theoretical foundations in the field of Business administration that support the ECG model. Then, the third section describes the empirical research, its design and the methodology we followed. The fourth section contains the research main findings organized into three subsections (the Descriptive Statistics, the Exploratory Factor Analysis by means of Principal Component Analysis and, the impacts testing by means of Logistic Regression). Finally, section five depicts the conclusions.

2. Theoretical framework.

The Brundtland Commission defined sustainable development as the one that meets the needs of the present without compromising the ability of the future generations to meet their own needs (United Nations World Commission on Environment and Development, 1987).

Being corporate sustainability (CS) the business approach that deals with sustainable development, in the last twenty years, a number of scholars have provided different definitions of the subject. All of these definitions of CS point to the need to integrate economic, social and environmental aspects in ordinary firms' management (Dyllick & Hockerts, 2002; Schaltegger & Burritt, 2006; Johnson & Schaltegger, 2016). Therefore, business practice should operationalize social and environmental sustainability. To do so, organizations have to implement management instruments, concepts, and systems, i. e. sustainability management tools.

On the other hand, in terms of organizational performance measurement one can realize how there is a growing concern on the creation of value for people, society and the environment. Thus, challenging the traditional financial business reporting model. According to Flower (2015), traditional corporate reporting does not adequately satisfy the information needs of stakeholders for assessing an organization's past and future potential performance. As a consequence, practitioners and scholars have developed new non-financial reporting frameworks from a social and environmental perspective. This way, giving birth to the field of Integrated Reporting (IR). Dumay *et. al.* (2016) provide a structured literature review of the field of IR from its starting point up to date.

Accordingly to the above mentioned, for authors, it could be useful for the organizations to integrate sustainability management and reporting in one tool to facilitate the implementation and control of sustainability management. The Economy for the Common Good (ECG) model and its tools to facilitate sustainability management and reporting: the Common Good (CG) matrix and the Common Good Balance Sheet (CGBS) can provide a framework to do it (Klaus et al., 2013; Frémeaux & Michelson, 2017).

Following the triple bottom line approach (Elkington, 1997), Felber (2012) proposes an alternative model: the ECG model, whose purpose is to achieve full respect for human rights principles within companies worldwide and, thus, a more human run of firms based on cooperation and the prosecution of general interest. Hence, shedding light on the need to

balance economic, social and environmental outcomes. The ECG model has as main goals the business contribution to the common good and cooperation instead of profit spirit and competition. From this point of view, economic growth and money are not goals by themselves, instead, they are considered as a means to achieve human welfare and quality of life for people (Felber, 2012). The ECG model values are, essentially, the universal and basic principles of human rights: human dignity, solidarity and social justice, ecological sustainability, and democratic participation and transparency.

The ECG model employs the CG matrix as the tool to guide and measure the contribution of the business to the common good (Felber, 2015). In short, the CG matrix is the framework that the ECG model proposes to make compatible the creation of economic, social and environmental value and, also, to measure the ability of the businesses to integrate the different types of value in their business model. This way, we argue that the CG matrix can be considered as a tool to lever business models based on corporate sustainability.

Furthermore, the CG matrix is the base to assess businesses in terms of their contribution to the common good as it serves as the base to work out the CGBS. The CGBS is the tool that the ECG model proposes to measure business success in terms of economic, social and environmental impacts by means of scores taking as a reference the stakeholders approach (Freeman, 1984).

Accordingly, the ECG model (Felber, 2015) provides an organizational behavior model that can be translated into a set of interrelated management-control tools. Such model can be adopted by whatever type of organization: from the public or private sector, for profit or not for profit organizations. Thus, in the eyes of the ECG model maximizing profit is not the last purpose of a firm, instead, profit becomes a mean through which firms can create different types of value to contribute to the common good.

The fact of considering profit as a mean to achieve the common good may involve the classification of the ECG as both, social and entrepreneurial innovation process. This way, the ECG allows to solve social needs and, at the same time, create new social relations and reinforce economic value creation (EESC, 2016).

On the other hand, scholarship has deeply analyzed the factors that drive businesses to succeed or fail. To do so, academia has produced several theoretical and empirical works that set up a number of theories and approaches in the field of business administration. However, up to date, there are no studies focused on the firms that operate under the ECG model. Despite of this, some approaches and theories developed in the business administration field to explain how firms can achieve superior economic and financial performance to their rivals can be redefined to analyze the ECG firms' behavior (Frémeaux & Michelson, 2017; Foti et al., 2017; Gómez-Calvo & Gómez-Alvarez, 2014 & 2017).

One of the first changes that one can appreciate when analyzing the ECG model is the one in the goals hierarchy, a consequence of the prevalence of common good over profitability. So, it requires a new approach to measure a business way to success. The CG matrix and the CGBS are the tools that allow to manage, measure and monitor firm's behavior in terms of social and environmental concerns in an integrative way. Thus, they involve feedforward, concurrent and feedback control. Consequently, the CG matrix and the CGBS complement the information provided by the financial Balance-sheet and the income statement of a firm and help to implement sustainable business models. This way they make possible to manage and monitor the firm's behavior in terms of sustainability based on the intersection of the three dimensions: economic, social and environmental. Therefore, we can conclude that by putting the ECG model

into practice allows the co-creation of economic, social and environmental value and, thus, it is aligned with the CSR approach. In the following sub-sections, we show the different approaches from which the ECG model derives and point the main contributions that ECG provides over those approaches. The reader must keep in mind that the ECG model tries to integrate and improve previous approaches by advancing on the pre-existing knowledge.

2.1 Stakeholders theory and ECG model

The Stakeholders theory (Freeman & Red, 1983; Freeman, 1984; Donaldson & Peterson, 1995; Mitchel et al., 1997; Friedman & Miles, 2006) holds that those who can influence or be influenced by the actions of an enterprise (groups or individuals) must be considered as an essential part of business strategy. Such theory has been taken as a base to develop other topics as for example CSR (Adeneye & Ahmed, 2015) or in the framework of corporate politics, that is, the attempts to influence political institutions and/or political actors in favor of the business interests (Lux et al., 2011).

Hence, this theory places stakeholders in the core of business attention but does not refer to how to manage them (Caroll & Buchholtz, 2006; Ackerman & Eden, 2011).

In the ECG model, organizations employ the CG matrix to work out the CGBS. Through this matrix the ECG model measures the degree of relation between the business activities that the organization holds with its different stakeholders (suppliers, owners, equity and financial service providers, employees, customers, and business partners and social environment) in terms of the human and ethical values measured in the model (human dignity, solidarity, and social justice, environmental sustainability and transparency, and co-determination). Therefore, we can affirm that the CG matrix and the CGBS are tools that allow to manage and measure the business relationships with its stakeholders taking as a basis the human and ethical values. Furthermore, the ECG model also incorporates a multi-stakeholders approach (Smith, 2003) which considers that the business creation of value should be spread among the different stakeholders (internal and external to the organization).

However, we hold that the ECG model goes beyond in the stakeholders' management as the business last purpose is its contribution to the common good. Being this contribution measured as its contribution to human dignity, solidarity, and social justice, environmental sustainability and transparency and co-determination in relation to the business stakeholders. By specifically considering the business stakeholders (grouping them into five categories), the CG matrix allows to identify weaknesses in regards of every one of the stakeholders' management and, thus, pointing out the areas that can be improved.

2.2 Shared Value approach and ECG model

Porter & Kramer (2011, p. 6), define shared value (SHV) as "…policies and operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates. Shared value creation focuses on identifying and expanding the connections between societal and economic progress…"

Hence, the underlying idea is that firms can simultaneously create economic, social and environmental value (i.e. customer's welfare, natural resources over-exploitation, key suppliers

sustainability and/or disadvantage situation of local communities in which the company operates). By all what has been pointed before, Porter and Kramer (2011) point to SHV to be a concept that goes beyond Corporate Social Responsibility (CSR). According to them, CSR conceives social value creation as somewhat peripheral and, always subordinate to economic value creation, in firm's strategy. In this sense, for them CSR policies are the consequence of the firm's search for social legitimacy, thus, maximizing short-term profits (Porter & Kramer, 2006).

However, a strategy based on SHV is a beat for the long term as their outcomes can involve longer time period and higher initial investment "…higher return and broader strategic benefits to all the participants…" (Porter & Kramer, 2011, p. 4).

As in the case of the ECG model, such approach confers an important role to market transparency, as well as to cooperation as an essential condition to create SHV (i.e. cooperation between the firm and its supply chain) (Florin & Schmidt, 2011; Beschorner, 2014). However, unlike the ECG model, SHV model does not advocate for replacing competition with cooperation.

Another key difference between both models is the role they give to business' profits. In the case of SHV, the underlying idea consists of the simultaneous co-creation of social (in a broad sense which includes environmental) and economic value. Therefore, considering social and economic value creation as goals at the same level. In this sense, the SHV model provides full legitimacy to business growth as a strategic goal. Otherwise, the ECG model considers business' profits and economic value creation merely as a mean that allows businesses to contribute to the common good. That is, as a mean to generate social and environmental value.

Despite these differences, the underlying logic proposed by Porter & Kramer (2011) about how to create SHV can lever the future development of the ECG model (Michelini & Fiorentino, 2012; Pfitzer et al., 2013). Some of the actions that drive to SHV creation are also a way to integrate the ECG values into business behavior: human dignity, solidarity, and social justice, environmental sustainability, transparency, and co-determination.

However, we must take into consideration that SHV approach does not include business' ethical values, instead, such issues are relegated to a second term. For that reason, according to SHV approach businesses can co-create social and economic value but such approach will not guarantee business' legitimacy because it does not guarantee that businesses assume full responsibility for their actions (Muñoz, 2013; Hartman & Werhane, 2013; Crane et al., 2014).

2.3 Triple Bottom Line and ECG model
The Triple Bottom Line (TBL) has its origins in Carroll's pyramid (1979, 1991 and 1999). Following Elkington (1987, p.3), "the sustainable development is compromised with economic prosperity, environmental quality, and social justice". Thus, it takes into consideration three different lines: society, economy, and environment. Society depends on the economy and this, in turns, depends on the global eco-system whose health is represented as the third line of the TBL. Society should be viewed in terms of its relations with economy and eco-system, giving birth to a set of relationships among the three lines (Savitz, 2013).

The TBL model employs a matrix to measure in a quantitative way the impact generated by the organization from an economic, social and environmental point of view (Gimenez et al., 2012). Such three dimensions are neither static nor stable, on contrary, they are viewed from a dynamic perspective due to the consideration of the organizational environment in the model.

Thus every one of the lines acts as a continental platform which can move independently from the others. So that it can be placed above, below or beside the others; this involves the possible existence of frictions among them (Norman & MacDonald, 2004).

Notwithstanding the above mentioned, the matrix relates the three basic dimensions (economy, society, and environment) with the organization's stakeholders (shareholders, franchisees and /or subsidiaries, employees, customers, competitors, local communities, humanity, future generations, and natural world or eco-system).

The model has succeeded in the last years as it has served to design and implement CSR policies. It is possible to explain its growth by two reasons: (1) the three dimensions of the model are easy to understand and integrate within the organization goals (Panwar et al., 2006); (2) is the approach employed by the Global Reporting Initiative to write the guides that serve as a basis to produce sustainability reports.

The TBL has been applied to both the public and private sector. In for profit and not for profit organizations (Hubbard, 2009). However, as pointed by Elkington (2009), the TBL is not exempt from critics.

The TBL and the ECG model share the triple dimension as a basis to build up their sustainability. For us, the ECG model goes beyond the TBL in the sense that it takes into consideration not only the outcomes for the different stakeholders but also the path followed to get those outcomes. That is, it is not only what you got it is also how you got it what matters.

2.4 Corporate Sustainability, Integrated Reporting, and, ECG model

The concept of CS has its origins in the relationship between CSR and sustainability (Henderson, 2007; Mirchandi & Ikerd, 2008). The Brundtland Commission (United Nations World Commission on Environment and Development) employed the concept for the first time in its report of 1987.

Despite the different points of view arisen around sustainability (Salzmann et al., 2005), all of them share the following traits: economic viability, full respect for the environment and be socially equitable (Dyllick & Hockerts, 2002).

Since 1987, the United Nations has held a number of summits and conferences from which several agreements on sustainability goals have been made. The last one has been the Summit of 2015 which set the seventeen sustainable development goals to be achieved in 2030.

From its part, the Dow Jones Sustainability Index (DJSI) defines CS as a business approach that pursues the long run creation of value for shareholders by means of taking advantage of opportunities and, at the same time, performing an effective management of the inherent risks to economic, environmental and social development. Such definition goes beyond the mere concept of environmental sustainability, providing a strategic focus based on value creation (Van Marrevijk, 2013) which differentiates it from CSR (Montiel, 2008). Despite it, DJSI does not take into consideration the creation of value for the rest of stakeholders (only shareholders). This trait differentiates it from the ECG model.

Furthermore, CS approach, as SHV approach, does not consider business' ethical behavior or let this issue in a second term; which impedes the firm to take full responsibility for its actions and give a response to the legitimate stakeholders' expectations (Muñoz, 2013).

Unlike the CS approach, the ECG model puts ethical behavior in the core of business management, placing it on the first level, which turns such approach into somewhat global and integrative.

In the same way that economic performance can and must be measured, the same consideration is applicable to sustainability (Atkinson, 2000; Perrini & Tencati, 2006). This goal can be achieved through a system of non-financial indicators to measure organizational performance and impact in terms of social and environmental concerns (Schaltegger et al., 2012).

Until recently, firms did not have any legal duty of providing non-financial information. In this sense, in 2014 the European Directive 2014/95/UE included the duty of performing a non-financial statement (NFS) for large firms[2]. Such NFS must include information related to (1) business model description (activities performed and essential information about how these activities are performed); (2) an explanation on policies and procedures (including environmental and social concerns, staff, human rights and corruption prevention); (3) the main risks related to the issues included in point 2 and how they can be associated with the firm's core businesses; (4) Key non-financial indicators (KPI), relevant to the firm's core business. In case these indicators were not provided, indicate the reason/s why they were not applied.

In the present, the most extended non-financial reporting come from *Global Reporting Initiative* (GRI)[3], since 1999 (Aras & Crowther, 2009). Up to July 2018, the version in force is G4 designed in 2013 and launched in 2014. From July 2018, a new version based on four interrelated modules (Universal, Economic, Environmental and Social) has substituted G4.

An important milestone in terms of corporate sustainability reporting happened in 2010 when the International Integrated Reporting Council (IIRC) developed a global integrated report (IR) for the first time. The purpose was to build up a set of corporate reporting rules internationally accepted and to overcome the existing problems of over-information, lack of clarity and reliability (Willis, 2003; Visser & Tolhurst, 2017).

According to IIRC (www.integratedreporting.org), "an IR is a concise communication about how an organization's strategy, governance, performance, and prospects, in the context of its external environment, lead to the creation of value in the short, medium and long-term". In other words, IR contains the essentials about financial, social, environmental and corporate governance information by summarizing it in one report. Thus, such report becomes the firm's main picture facing third parties (Levy et al., 2010; Rejon, 2011). Hence, IR goes beyond sustainability reporting being the natural next step (Ballou et al., 2006; Milne & Gray, 2013). In the present, we can observe an exponential growth in the number of reports included in the GRI database as "integrated" reports. They must include: (1) an overall vision on the organization and its environment (the organization's scope, the legal, political, social and environmental issues that can affect the organization and its value creation); (2) governance (how the organization's governance structure is and how it can lever the organization's value creation in

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[2] Those with an overall Balance Sheet above 20 millions of € or a net revenue above 40 millions of €, of public interest, with their headquarters located at any country of the EU or listed on any of the EU stock market and with more than 500 employees by the end of the fiscal year.

[3] GRI is a non for profit independent international organization based on network structure. In its activities participate thousands of professionals and organizations from a number of industries, communities and world regions (www.globalreporting.org).

the short, medium and long-term); (3) business model (the organization's recipe to create value); (4) Risks and opportunities (specify the main risks and opportunities affecting the organization and how they can support the organization's ability to create value); (5) Strategy and resource allocation (what is the organization's last purpose and how it will do it); (6) Performance and strategic goals within the time frame; (7)Perspectives (specify the organization's main challenges and uncertainties to implement its strategy); (8) Essential assumptions (determination of the relevant aspects to be reported and how they are quantified and evaluated).

It is important to note that GRI guides recommend, despite it is not mandatory, the verification of the IR (which includes non-financial information). Such verification should be in charge of an independent expert who has to produce his/her own conclusions on the reliability and adequacy of the information (compared with standard values). To perform this verification process, IIRC has developed a set of international rules and standards. Therefore, ensuring comparability and credibility to the stakeholders to whom the information is addressed. These standards are commonly known as "International Standards on Assurance Engagement" (ISAE). Among them, we point out: AA1000 APS and ISAE 3000. Sometimes both are combined as they show complementary traits.

Moreover, there are independent agencies capable of assessing any type of organization worldwide in terms of CS and IR. These agencies pick up the relevant information from different sources (public reports, the corporate website, and others), later on, they contrast it by sending questionnaires to third parties (NGOs, consumers associations, environmental associations, unions…). Once the information has been obtained and contrasted, the results are expressed in terms of measurable variables for every one of the analyzed dimensions. These results allow classifying the organizations involved in the assessment and, also, their countries of origin. During the last years a number of sustainability agencies have proliferated at a global level (i. e. *EIRIS, Sustainalytics, Oekom Research AG, MSCI ESG Research and RobecoSam Sustainability Investing*).

From its part, the ECG model (Felber, 2015) takes many of the indicators employed by IR, adds other indicators and, also, offers a global and integrative insight on businesses, but it tries to promote changes not only inside the businesses but also at the social level. In this sense, businesses are considered as a change lever, a force for good. However, the ECG model only considers social and environmental concerns and try to improve the measurement of stakeholders' management in terms of social and environmental concerns. This is because the ECG assumes that economic and financial reporting are currently well developed and grounded, thus the gap exists in the fields of social and environmental outcomes measurement.

The ECG model employs the Common Good (CG) matrix as the tool to manage and measure the contribution of the business to the common good (Felber, 2015; Gómez-Calvo and Gómez-Alvarez, 2016; Foti et al., 2017). In short, the CG matrix is the framework that the ECG model proposes to make compatible the creation of economic, social and environmental value and, also, to measure the ability of the businesses to integrate the different types of value in their business model. This way, we argue that the CG matrix can be considered as a tool to lever business models based on corporate sustainability.

Such matrix relates the firm's behavior in terms of the general principles and values of human rights, grouped into four categories ("human dignity", "solidarity and social justice", "environmental sustainability" and "transparency and co-determination"), to the stakeholders

grouped into five categories ("suppliers", "owners, equity and financial services providers", "employees", "customers and business partners" and "social environment"). Hence, the CG matrix employs as one of its bases the Stakeholders approach (Freeman, 1984) to measure the business contribution to the common good.

Hereafter, we proceed to analyze such aspects for every one of the stakeholders considered in the CG matrix (Association for the promotion of the Economy for the Common Good, 2015).

According to the ECG model, the relationship between the business and its suppliers should be based on the promotion of human dignity in the supply chain. In this sense, businesses have to be conscious of its responsibility for the value network in which they participate. So, the criteria to select suppliers are: properly work conditions (wages and labor rights), environmental aspects (raw materials and sources of power employed), social effects on other groups and regional alternatives. The model proposes the prioritization of regional, green, social suppliers to avoid carbon print, the control of risks (i.e. pollution) related to products/services and the payment of fair prices in origin. From an entrepreneurial point of view, we conclude that the ECG model helps to lever local entrepreneurship due to the proximity criterion to select suppliers, this way it contributes to local economic development. Furthermore, given the prioritization of social criteria, it also creates opportunities for local social enterprises.

The ECG Business behavior in regard to its funding is based on ethical financial management. To do so, businesses prioritize operation with ethical banking and invest their surplus in ethical and environmentally sustainable projects. The matrix also advocates for strengthening self-funding and fostering the funding coming from commercial exchanges between businesses. Hence, we can conclude that The ECG model drives to the implementation of a private financial system based on ethical and social values.

On the other hand, the relationship between The ECG businesses and their employees is also based on the ethical management of human resources (HRM). This way, HRM must drive to ensure human dignity at the workplace through the creation of healthier working conditions based on freedom in the workplace and cooperation. The proposed criteria are workplace quality, equality, fair distribution of work loading, social, ethical and environmentally friendly behavior promotion among employees, fair distribution of the income generated and keeping internal democracy and transparency in the making decisions process.

In relation to the business relationship with its customers and competitors, The ECG model advocates for fair sales management. The goal is to treat customers as business partners by putting into practice long-term relationships based on conscious consumerism and ethical buying practices. The CG matrix proposes as criteria: the use of social marketing practices, employee's training in relation to fair commercial practices, employees' compensation systems in relation to sales targets and customers' participation in the business decisions related to the offer of ethical and green products /services. This way, The ECG model promotes conscious consumerism and business sustainability not only in the business that applies the model but also in its customers' behavior.

Finally, The ECG model also proposes an ethically driven environment management. In this sense, The ECG businesses define themselves as citizen organizations socially responsible with a strong commitment to the social environment in which they operate. To do so, the CG matrix proposes the following criteria: human needs satisfaction assessment, return a part of the profits to the local community, reduction of the effects on the environment at the minimum possible level, minimize dividends distribution and set up transparency and participation systems to ensure social co-determination and transparency.

Previously, there have been four versions of the CG matrix that have evolved into the 5.0 version in force since May 2017 after seven years of experience since the ECG model was launched. The 5.0 CG matrix can be consulted on www.ecogood.org/en/common-good-balance-sheet/common-good-matrix/.

From the application of the CG matrix dimensions and indicators, it is possible to produce the CGBS which is an integrated report that includes social and environmental information. Such report also includes improvement measures and can be verified as in the case of IR.

The verification process in the ECG model can be performed by means of a peer to peer procedure (similar to benchmarking) or by an external audit (approved auditors). There exists a support agency for the common good which is in charge of auditors training, auditors approving, advisors training and advisors approving. Furthermore, this agency has set up a system to recognize the businesses achievements when they perform the whole process: one seed for businesses that have produced their CGBS, two seeds if the businesses also followed an audit peer to peer, and three seeds if the businesses produced their CGBS and also followed an external audit. Such agencies take the form of associations that operate at country and /or regional level[4].

Figure 1 below, summarizes the relationships of the ECG model and its implementation-control tools (the CG matrix and the CGBS) with the pre-existing models to capture non-financials based on sustainability approach.

Figure 1. The ECG model's origins

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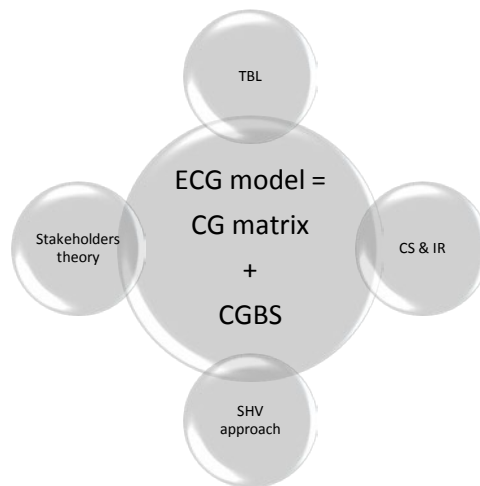
[4] Currently there are Associations for the promotion of the Economy for the Common Good in nine different European countries: Austria, Germany, Switzerland, Italy, Spain, France, Sweden, United Kingdom and The Netherlands. There exists another association in Chile.

3. Methodology.

The research team performed a quantitative empirical study to complete the analysis of the theoretical and academic foundation described above. Therefore, the empirical study took as reference the European firms which had produced their CGBS up to December 31, 2017.

Consequently, our research purposes were to describe the ECG firms' profile, to determine their degree of implication in the spread of the ECG values and the CGBS, to assess the statistical validity of the metrics included in the CGM and employed to produce the CGBS, and, finally, to measure the impacts of the model in the business sphere from a three-dimensional point of view (economic, social and environmental).

The empirical study relies on the data we got from a survey addressed to the European ECG firms (the questionnaire is annexed to the present report). Thus, the research team developed a triple statistical analysis. Firstly, we proceeded to analyze the ECG firms' profile by means of the descriptive analysis of the variables under study. Secondly, we statistically validated the metrics employed in the ECG Matrix by means of exploratory factor analysis (EFA). Finally, we tested the triple impact (economic, social and environmental) caused by the ECG model on firms' operation.

To better understand the procedures followed in the empirical study, in the following sub-sections we provide a detailed description of the data-gathering process, the profile of the overall set of firms with some implication in the ECG movement around Europe, the measures used in the study, and the technical analysis employed.

3.1 Data-gathering and sample profile

The starting point to develop the research was to identify the population under study. Hence, we proceeded to identify the European firms that were implementing at whatever level the ECG model. To do so, we checked the web-page of the European Association[5] for the promotion of the ECG and contacted people involved in different country-level associations and region-level associations. This way, we identified an overall of 657 European firms that were implementing the ECG model at different levels, of which 400 had produced their CGBS. Thereafter, by means of secondary databases, we created a directory which included the main data of the 657 firms. This procedure allowed us to define and identify the population under study. In this sense, we opted for focusing only on the firms that had produced their CGBS up to December 31, 2017. The main reason to do so was that one of our research purposes was to statistically validate the metrics employed in the CGM and the CGBS, consequently, we needed our study to rely mostly on audited CGBS. Thus, our population comprised 400 European firms to which we sent the questionnaire.

Figure 2, below, describes the procedure we developed to get from the directory to the definition of the population and the sample under study.

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[5] https://www.ecogood.org/en/community/ecg-businesses-and-organisations/

Figure 2. Population and sample definition

In the following figure, we show the location of the 657 European ECG firms that served as a basis to create the above-mentioned directory. The 657 ECG firms were spread across 12 European countries, despite that, Germany (45.81%) and Austria (35.46%) together accumulated 4 out of 5 firms that are implementing the model at some level in Europe. This cannot be viewed as something strange as these are the countries were the movement was born. Also remarkable is the number of ECG firms in Spain (11.26%) and Italy (4.26%).

Figure 3. Firms applying the ECG model at different levels by countries
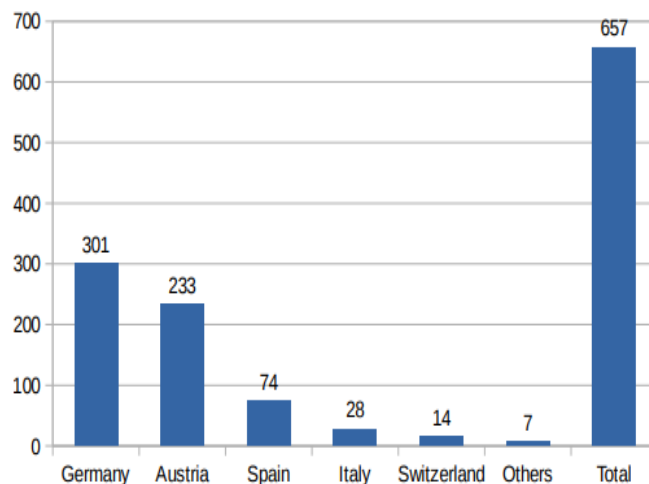
To validate the metrics employed in the CG matrix and the CGBS, as well as the impacts produced by the model, we designed a questionnaire to be distributed among the firms that had produced their CGBS model from 2011 to 2017 in Europe. Such questionnaire asked the firms about the scores they have obtained in the different items included in the CG matrix and reported in the CGBS. It also picked up information on industry, age, country of origin, number of employees and turnover, being these variables treated as control variables for statistical purposes.

Thereafter, we distributed the questionnaire through an e-mail addressed to the firms' managers during the first quarter of 2018. The e-mail contained a link that allowed the firms to fulfill the questionnaire on the online platform "Survey Monkey", they can also upload their CGBS to the platform or send them by e-mail. This facilitated the data-gathering as it enabled the researchers to download the data matrix directly from the online platform, then we only had to type the scores of the firms that had opted for uploading their CGBS or sending them by e-mail.

The population comprised an overall of 400 European firms that had produced their CGBS up to December 31, 2017. We sent the questionnaire to the overall population and got an overall of 206 full and valid responses, that is, the sample comprised 51.50% of the population.

Accordingly, five European countries concentrate most of the ECG firms included in the sample: Germany (39.81%), Austria (30.10%), Spain (19.42%), Italy (7.77%) and Switzerland (2.43%). The rest of the European countries account for 0.49% of the sample. Figure 4 depicts the number of firms included in the sample by countries.

Figure 4. ECG firms in the sample by countries
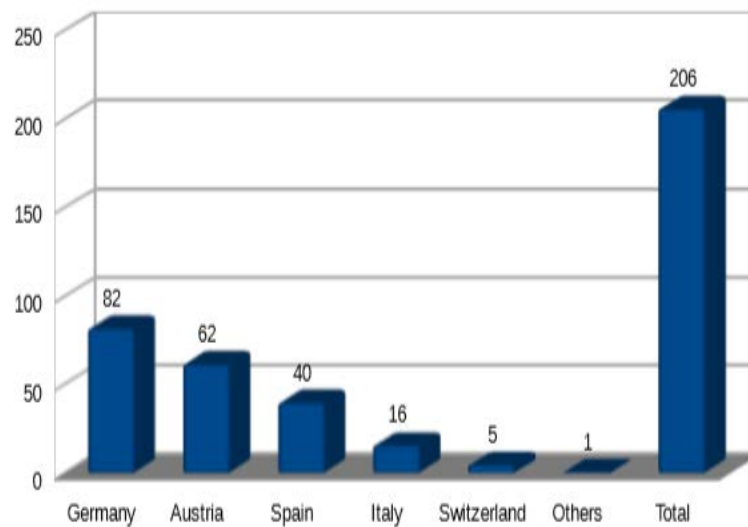
In regards to the CGBS, the firms can obtain a maximum score of 1,000 points by applying the metrics included in the CG matrix. The average score obtained by the firms was 497, the median was 498; which means that, according to the rating employed by the CGBS, most of them fall into the "experienced" level (between 301 and 600 points). Specifically, 67.96% of firms in the sample fall into the "experienced" level, 24.27% of the fall into the "exemplary" level (between 601 and 1,000 points). None of them fall into the "beginner" level (between 1 and 100 points) and 7.77% of them fall into the "advanced" level (between 101 and 300 points).

3.2 Measures

As one of the purposes of the current study is to statistically test and validate the metrics employed in the CG matrix and the CGBS, we took into consideration the dimensions and items included in the 5.0 version of the ECG matrix and the CGBS (the version currently in force).

Furthermore, given that the present study includes the European firms that have implemented the ECG model producing their CG matrix and CGBS from 2011 to 2017, we had to deal with five different versions of the CG matrix and the CGBS. Consequently, the first task to do was to homogenize the measures and transform them into the 5.0 version. To do so, we employed the conversion table elaborated by the ECG advisors that have been in charge of the development of the five versions of the model.

Table 1, below, depicts the dimensions and measures (items) that the CG matrix and the CGBS employ to measure the relationship of the firms with their stakeholders in terms of social and environmental concerns.

Table 1. Dimensions and measurement scales of the CG matrix and CGBS

Dimension	Items	Measurement Scales
Suppliers **A**	**A1**. Human dignity in the supply chain. **A2**. Solidarity and social justice in the supply chain. **A3**. Environmental sustainability in the supply chain. **A4**. Transparency and co-determination in the supply chain.	Absolute values (scores)
Owners, equity and financial service providers **B**	**B1**. Ethical position in relation to financial resources. **B2**. Social position in relation to financial resources. **B3**. Use of funds in relation to the environment. **B4**. Ownership and co-determination.	Absolute values (scores)
Employees **C**	**C1**. Human dignity in the workplace and the working environment. **C2**. Self-determined working arrangements. **C3**. Environmentally friendly behavior of staff. **C4**. Co-determination and transparency within the organization.	Absolute values (scores)
Customers and business partners **D**	**D1**. Ethical customer relations. **D2**. Cooperation and solidarity with other companies. **D3**. Impact on the environment of the use and disposal of products and services. **D4**. Customer participation and product transparency.	Absolute values (scores)
Social environment **E**	**E1**. Purpose of products and services and their effects on society. **E2**. Contribution to the community. **E3**. Reduction of environmental impact. **E4**. Social co-determination and transparency.	Absolute values (scores)

Moreover, the current study aims to identify and test the different impacts generated by the implementation of the ECG model in the businesses. To that end, we performed a literature review and developed a set of metrics by taking as reference the ones employed in previous studies and adding new ones. Thus, we differentiated two broad groups of impacts: social and environmental, and, economic impacts. Table 2, below, depicts the metrics we employed to measure the social and environmental impacts.

Table 2. Social and Environmental Impacts.

Dimension	Items	Measurement scales	Source
Suppliers	**SP1.** Percentage of local suppliers. **SP2.** Percentage of certified sustainable supplies **SP3.** Carbon print caused by the supply chain and logistics **SP4.** Fair prices to suppliers. **SP5.** Monitoring suppliers firms working conditions (ILO standards)	Lickert type scale (1 to 5)	Adapted from Somers, 2005; Pedersen, 2009; Brammer et al., 2012; Carayannis et al., 2014; Campos & Sanchis, 2017.
Funders	**F1.** Fair distribution of income between owners and workforce **F2.** Environmentally sustainable investments **F3.** Socially driven investment **F4.** Monitoring banks and other financial firms' ethical behavior	Lickert type scale (1 to 5)	Adapted from Somers, 2005; Pedersen, 2009; Brammer et al., 2012; Carayannis et al., 2014; Campos & Sanchis, 2017.
People	**P1.** Staff retention **P2.** Motivation/well-being **P3.** Organizational climate **P4.** Staff put into decisions **P5.** Staff-Management relations **P6.** Highest vs lowest paid ratio **P7.** Participative management **P8.** Percentage of women in the top management team **P9.** Percentage of women in the middle management line **P10.** Ergonomics **P11.** Flexibility and teleworking **P12.** Hiring and promoting employees from the local communities **P13.** Minimizing employees' commuting to work **P14.** Percentage of disabled employees	Lickert type scale (1 to 5)	Adapted from Somers, 2005; Pedersen, 2009; Brammer et al., 2012; Carayannis et al., 2014; Campos & Sanchis, 2017.
Customers	**Cu1.** Fair and transparent product information **Cu2.** Fair prices to customers **Cu3.** Minimizing packaging **Cu4.** Customers' trust **Cu5.** Cooperation with customers	Lickert type scale (1 to 5)	Adapted from Somers, 2005; Pedersen, 2009; Brammer et al., 2012; Carayannis et

	Cu6. Minimizing carbon print due to logistics between the organization and its customers		al., 2014; Campos & Sanchis, 2017.
	Cu7. Organization's products/services allow conscious consumerism		
Broad Society	**S1.** Fair taxation **S2.** Respecting and promoting the local language and culture **S3.** Minimizing environmental impacts of production and logistics **S4.** Reputation **S5.** Local sports sponsorship **S6.** Local culture sponsorship **S7.** Cooperation with local social movements	Lickert type scale (1 to 5)	Adapted from Somers, 2005; Pedersen, 2009; Brammer et al., 2012; Carayannis et al., 2014; Campos & Sanchis, 2017.

To ensure the consistency of firms' answers in relation to social and environmental impacts, we asked them about the same items in different ways. Firstly, we asked the firms about their relative position in regards to the items depicted in table 2 in a comparison with the average position of their industry/sector (Being: 1 much lower than the average; 2 lower than the average; 3 on the average; 4 above the average; 5 much better than the average). Secondly, we asked the firms about the impact of the ECG model implementation on the items above mentioned (1 very negative impact, 2 negative impact, 3 no impact, 4 little impact, and 5 major impact).

Thereafter, we developed metrics to capture the economic impacts. Table 3 below depicts the metrics we employed to measure the economic impacts.

Table 3. Economic impacts.

Dimension	Items	Measurement scales	Source
Economic Impacts	**EF1.** Sales Revenue **EF2.** Profit **EF3**. Market share **EF4.** Productivity **EF5.** Customers satisfaction **EF6.** Product/service quality **EF7.** Product/process innovation **EF8.** Brand image **EF9.** Cost reduction **EF10.** Product/service differentiation **EF11.** Improvement in management processes	Lickert type scale (1 to 5)	Adapted from Ling-yee and Ogunmokun (2001) and Manea and Pearce (2006)

In regards to economic impacts, we asked the firms to self-assess their relative position compared with the average of their industry/sector. Being: 1 much lower than the average; 2

lower than the average; 3 on the average; 4 above the average; 5 much better than the average. Later on, we also asked the firms to state at which point they considered the changes they perceived in the items were attributable to the ECG process. Being, 1 very negative impact, 2 negative impact, 3 no impact, 4 little impact, and 5 major impact.

Finally, our research purpose was to determine whether the implementation of the ECG model at the firm level has any social, environmental or economic impact. Therefore, we aimed to test if the ECG process had led the firms to improvements on any of these organizational spheres. Hence, we calculated the median score of every dimension and classified the results we got as follows: 0 if the average score of the dimension took a value equal or below 3 which meant no improvement; 1 if the average score of the dimension took a value above 3 which meant the firm improved its operation in comparison with the average industry position after applying the ECG model.

3.3 Analysis technique

Firstly, we determined the profile of the European firms that were operating following the ECG principles at different levels (657 European businesses included in the directory). To do so we employed descriptive statistics, we proceeded to analyze their distribution by industries, their size by revenue and number of employees, their legal form and, finally, their age attending to the number of years in operation. Then, we proceeded to describe the profile of the ECG firms, those that had already produced their CGBS and answered the questionnaire (206 European businesses included in the sample). To do so, we employed descriptive statistics. In addition, in regards to those firms that responded to the questionnaire, we provide a wider profile. To complete the descriptive statistics analysis, we provide a complete description of the social, environmental and economic impacts occurred after the firms produced their CGBS.

Secondly, to validate the metrics employed in the CG matrix and CGBS, we first assessed whether an underlying structure existed among the measurement instruments by means of exploratory factor analysis (EFA). Following Hair et al., (2010), we found EFA to be an appropriate technique because it provides the tools for analyzing the structure of the interrelationships among a large number of variables by defining sets of variables (factors) that are highly correlated. Being factors assumed to represent dimensions within the data.

Moreover, as the general purpose of EFA is to find a way to summarize the information contained in a number of original variables (items) into a smaller set of new, composite dimensions (factors) with a minimum loss of information, that is, to search for and define the fundamental constructs or dimensions assumed to underlie the original variables (Rummel, 1970; Gorsuch, 1983), therefore EFA is suitable to check whether the structure revealed by the data set fits the structure proposed in the CG matrix and the CGBS. Then, we proceeded to validate the results of EFA to assess their degree of generalizability. This issue is critical for the interdependence methods as EFA. Specifically, in our research, the generalizability of the results would involve the empirical demonstration that the CG matrix and the CGBS are adequate (valid) tools to capture non-financials concerns.

Finally, to assess whether the operation under the CG principles by employing the CGM and producing the CGBS has any type of impact (social, ecological and/or economic) on businesses we employed Logistic regression. Logistic regression is an appropriate technique

when the dependent variable is a categorical one (improvement vs. no-improvement), whilst the independent variables can be metric or non-metric variables. Furthermore, Logistic regression does not require any specific distributional form of the independent variables, neither does it require any linear relationships between the independent variables and the dependent ones (Hair *et. al.*, 2010). Consequently, this technique also allows identifying nonlinear effects and this was the main reason why we decided to employ it to assess the impacts.

4. Findings

4.1 Descriptive Statistics

To begin with our analysis, we proceed to show the profile of the 657 European firms included in the directory that have served as the basis to identify the population under study and the sample. Later on, we provide the profile of the firms included in the sample (those that answered the questionnaire).

Table 4, below, shows the distribution of the businesses included in the directory by economic sector and countries. Whilst in table 5, we provide the same information referred to the 206 businesses that participated in the study.

Table 4. Firms included in the directory by economic sector and country

Sector Countries	Primary		Secondary		Tertiary		Not Available		Total
	N	%	N	%	N	%	N	%	
Germany	15	4.98	23	7.64	227	75.42	36	11.96	**301**
Austria	5	2.15	28	12.02	183	78.54	17	7.30	**233**
Spain	1	1.35	12	16.22	58	78.38	3	4.05	**74**
Italy	2	7.14	5	17.86	21	75.00	0	0.00	**28**
Switzerland	0	0.00	0	0.00	13	92.86	1	7.14	**14**
Others	0	0.00	0	0.00	7	100.00	0	0.00	**7**
Total	**23**	**3.50**	**68**	**10.35**	**509**	**77.47**	**57**	**8.68**	**657**

Table 5. Firms in the sample by economic sector and country

Sector	Primary		Secondary		Tertiary		Construction		Total
Country	N	%	N	%	N	%	N	%	
Germany	2	2.44	6	7.32	73	89.02	1	1.22	82
Austria	2	3.23	8	12.90	49	79.03	3	4.84	62
Spain	1	2.50	6	15.00	33	82.50	0	0.00	40
Italy	0	0.00	3	18.75	12	75.00	1	6.25	16
Switzerland	0	0.00	0	0.00	5	100.00	0	0.00	5
Others	0	0.00	0	0.00	1	100.00	0	0.00	1
Total	5	2.43	23	11.17	173	83.98	5	2.43	206

As we can observe in tables 4 and 5, all the businesses operating under the ECG principles show a clear pattern of tertiarization and the same pattern is followed by the ECG firms included in the sample. It is also interesting to note that this trend is also present in the main countries.

Thereafter, we also conducted a detailed study by economic activities. To do so, we employed the **Statistical classification of economic activities in the European Community** (NACE classification from EUROSTAT). Tables 6 and 7 show the classification of the businesses included in the directory and in the sample by type of NACE economic activity.

Table 6. Firms included in the directory, NACE classification

Country	Germany		Austria		Spain		Italy		Switzer-land		Others		Total	
Activity	No	%	No	%	No	%	No	%	No	%	No	%	N	%
A	14	4.65	5	2.15	1	1.35	2	7.14	0	0.00	0	0.0	22	3.35
B	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.0	0	0.00
C1	20	6.64	10	4.29	4	5.41	3	10.71	0	0.00	0	0.0	37	5.63
C2	8	2.66	3	1.29	1	1.35	3	10.71	1	7.14	0	0.0	16	2.44
C3	10	3.32	11	4.72	2	2.70	2	7.14	0	0.00	0	0.0	25	3.81
D	8	2.66	4	1.72	2	2.70	0	0.00	1	7.14	0	0.0	15	2.28
E	0	0.00	2	0.86	0	0.00	0	0.00	0	0.00	0	0.0	2	0.30
F	1	0.33	1	0.43	2	2.70	0	0.00	0	0.00	0	0.0	4	0.61
G	23	7.64	19	8.15	4	5.41	2	7.14	0	0.00	1	14.2	49	7.46
H	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.0	0	0.00
I	13	4.32	11	4.72	6	8.11	12	42.86	0	0.00	1	14.2	43	6.54
J	15	4.98	11	4.72	3	4.05	0	0.00	1	7.14	0	0.0	30	4.57
K	4	1.33	6	2.58	0	0.00	0	0.00	0	0.00	0	0.0	10	1.52
L	2	0.66	0	0.00	0	0.00	0	0.00	0	0.00	0	0.0	2	0.30
M	83	27.5	80	34.3	29	39.1	1	3.57	5	35.71	3	42.8	201	30.59
N	15	4.98	14	6.01	3	4.05	1	3.57	2	14.29	1	14.2	36	5.48
P	14	4.65	4	1.72	2	2.70	0	0.00	1	7.14	0	0.0	21	3.20
Q	10	3.32	16	6.87	2	2.70	1	3.57	1	7.14	0	0.0	30	4.57
R	11	3.65	10	4.29	7	9.46	1	3.57	0	0.00	1	14.2	30	4.57
S	15	4.98	6	2.58	3	4.05	0	0.00	1	7.14	0	0.0	25	3.81
U	0	0.00	2	0.86	0	0.00	0	0.00	0	0.00	0	0.0	2	0.30
DNR	35	11.6	18	7.73	3	4.05	0	0.00	1	7.14	0	0.0	57	8.68
Total	301		233		74		28		14		7		657	

Table 7. Firms included in the sample, NACE classification

Country	Germany		Austria		Spain		Italy		Switzerland		Others		Total	
Activity	No	%	No	%	No	%	No	%	No	%	No	%	No	%
A	2	2.44	2	3.23	1	2.50	0	0.00	0	0.00	0	0.00	**5**	**2.43**
C1	8	9.76	4	6.45	3	7.50	1	6.25	0	0.00	0	0.00	**16**	**7.77**
C2	5	6.10	1	1.61	1	2.50	3	18.75	1	20.00	0	0.00	**11**	**4.87**
C3	1	1.22	5	7.97	1	2.50	1	6.25	0	0.00	0	0.00	**8**	**3.89**
D	3	3.66	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	**3**	**1.46**
F	1	1.22	2	3.23	0	0.00	0	0.00	0	0.00	0	0.00	**3**	**1.46**
G	4	4.88	4	6.45	2	5.00	1	6.25	0	0.00	0	0.00	**11**	**5.34**
I	1	1.22	1	1.61	5	12.50	9	56.25	0	0.00	0	0.00	**16**	**7.77**
J	5	6.10	5	8.06	3	7.50	0	0.00	1	20.00	0	0.00	**14**	**6.80**
K	2	2.44	3	4.83	0	0.00	0	0.00	0	0.00	0	0.00	**5**	**2.43**
M	30	36.59	24	38.71	14	35.00	0	0.00	3	60.00	1	100	**72**	**34.95**
N	4	4.88	1	1.61	2	5.00	1	6.25	0	0.00	0	0.00	**8**	**3.89**
P	7	8.54	1	1.61	1	2.50	0	0.00	0	0.00	0	0.00	**9**	**4.37**
Q	2	2.44	5	8.06	2	5.00	0	0.00	0	0.00	0	0.00	**9**	**4.37**
R	2	2.44	2	3.22	2	5.00	0	0.00	0	0.00	0	0.00	**6**	**2.92**
S	5	6.10	2	3.22	3	7.50	0	0.00	0	0.00	0	0.00	**10**	**4.86**
Total	**82**		**62**		**40**		**16**		**5**		**1**		**206**	

As we can observe in table 6, in Europe, most of the businesses operating under the ECG framework develop professional, scientific and technical activities (M). In fact, more than 30% of them fall into this NACE classification, this pattern is common to most of the countries except for Italy where 42.86% of the businesses develop accommodation and food service activities (I). Whilst in regards to table 7, 34.95% of the European firms included in the sample are developing professional, scientific and technical activities (M). In this case, at the sample level, the same pattern is followed in the different countries except for Italy where 56.25% of the ECG firms are developing accommodation and food service activities (I).

Now that we have analyzed the economic sector and activities in which the firms included in the directory and in the sample operate, for us, it makes sense to focus on the business size. To do so, we took into consideration the number of employees and the revenue of the firms included in the sample (those that had produced their CGBS and answered the questionnaire). Hence, figure 5 shows the distribution of the ECG firms by number of employees and table 8 depicts the number of employees of the ECG firms included in the sample by countries.

Figure 5. European ECG firms' size by number of employees
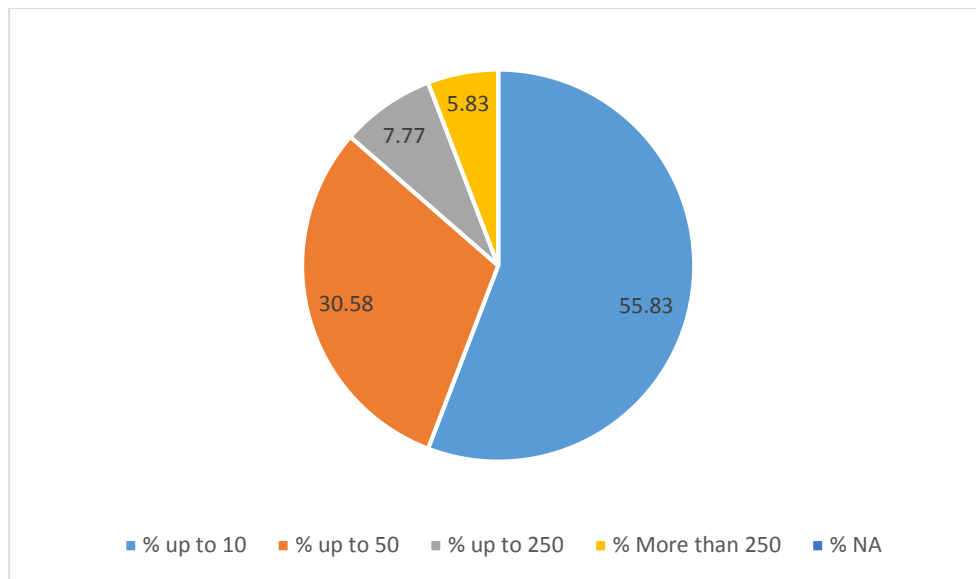
Table 8. Size by number of employees

Number of Employees	Up to 10		Up to 50		Up to 250		More than 250		Total
Country	N	%	N	%	N	%	N	%	
Germany	39	47.56	32	39.02	5	6.10	6	7.32	**82**
Austria	46	74.19	10	16.13	4	6.45	2	3.23	**62**
Spain	20	50.00	11	27.50	5	12.50	4	12.50	**40**
Italy	5	31.25	9	56.25	2	12.50	0	3.57	**16**
Switzerland	4	80.00	1	20.00	0	0.00	0	0.00	**5**
Others	1	100.0	0	0.00	0	0.00	0	0.00	**1**
Europe	**115**	**55.83**	**63**	**30.58**	**16**	**7.77**	**12**	**5.83**	**206**

As figure 5 and table 8 show, in Europe, on average the ECG firms are micro-enterprises with up to 10 employees (55.85%). Being this trend common to most of the countries. This trend is especially strong in Austria and Switzerland where micro-enterprises account for 74.19% and 80% respectively. In contrast, in Italy, the small enterprises with up to 50 employees are the most common accounting for 56.26% of the overall.

Taking revenue as the reference variable to analyze the ECG businesses size, we can affirm that most of European ECG businesses (80.82% of them) are micro-enterprises as they show revenue figures below 2milions of €. Figure 6 depicts the distribution of ECG businesses by revenue.

Figure 6. European ECG firms' size by revenue (%)
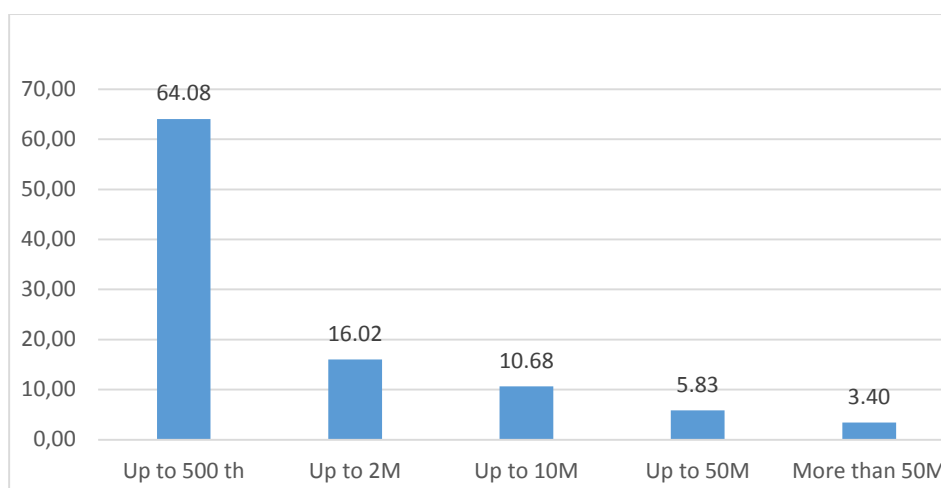
Table 9 shows the ECG businesses size by countries, taking revenue as the reference variable. As it can be appreciated, all the countries share the same pattern of micro-enterprises prevalence which is consistent with the European average profile.

Table 9. Size by revenue

Revenue	Up to 500th		Up to 2M		Up to 10M		Up to 50M		More than 50M		Total
Country	N	%	N	%	N	%	N	%	N	%	
Germany	49	59.76	16	19.51	6	7.32	7	8.54	4	4.88	**82**
Austria	47	75.81	6	9.68	5	8.06	3	4.84	1	1.61	**62**
Spain	26	65.00	5	12.50	6	15.00	1	2.50	2	5.00	**40**
Italy	5	31.25	5	31.25	5	31.25	1	6.25	0	0.00	**16**
Switzerland	4	80.00	1	20.00	0	0.00	0	0.00	0	0.00	**5**
Others	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	**1**
Europe	**132**	**64.08**	**33**	**16.02**	**22**	**10.68**	**12**	**5.83**	**7**	**3.40**	**206**

Following our analysis, we focus on the businesses' age profile. In this sense, figure 7 shows the distribution of the European ECG firms by establishment year. Hence, one can appreciate that most European ECG firms (41.57%) started their operation between 1991 and 2005. Thereafter, table 10 below depicts the distribution of the ECG firms by establishment year and home country. This way we can compare the average European profile with the different countries profiles.

Figure 7. European ECG firms by establishment year (%)

Table 10. ECG firms by establishment year and country

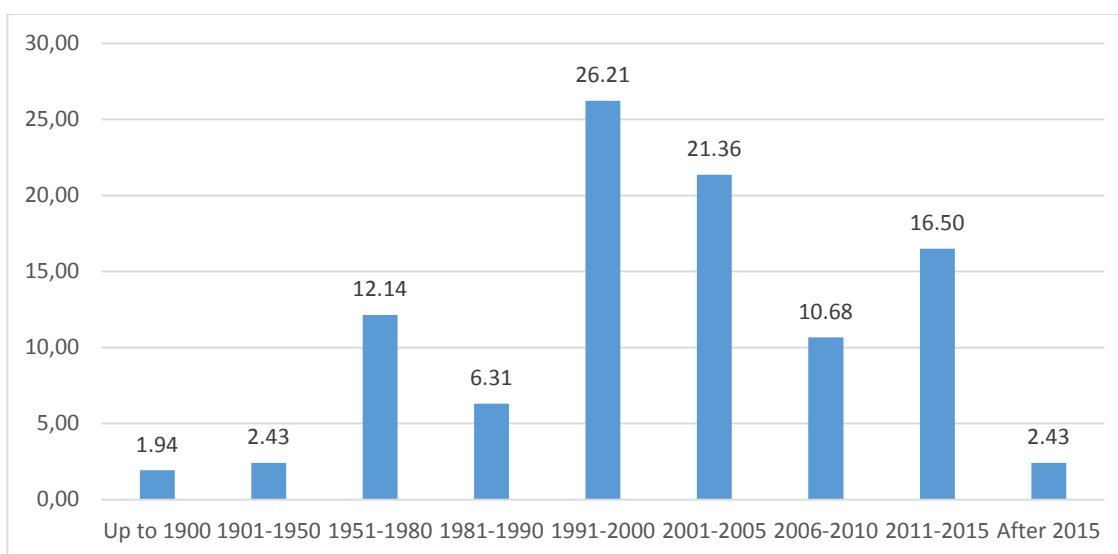| Country	Germany		Austria		Spain		Italy		Switzerland		Others		Total	
Year	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Up to 1900	2	2.44	0	1.72	0	0.00	2	12.50	0	0.00	0	0.00	4	1.94
1901-1950	1	1.22	3	4.84	1	2.50	0	0.00	0	0.00	0	0.00	5	2.43
1951-1980	7	8.54	3	4.84	4	10.00	11	68.75	0	0.00	0	0.00	25	12.14
1981-1990	6	7.32	5	8.06	1	2.50	0	0.00	1	20.00	0	0.00	13	6.31
1991-2000	15	18.29	32	51.61	6	15.00	0	0.00	1	20.00	0	0.00	54	26.21
2001-2005	25	30.49	5	8.06	12	30.00	0	0.00	1	20.00	1	100.0	44	21.36
2006-2010	7	8.54	8	12.90	3	7.50	2	12.50	2	40.00	0	0.00	22	10.68
2011-2015	17	20.73	5	8.06	11	27.50	1	6.25	0	0.00	0	0.00	34	16.50
After 2015	2	2.44	1	1.61	2	5.00	0	0.00	0	0.00	0	0.00	5	2.43
Total	82		62		40		16		5		1		206	

In table 10, we can observe as the ECG firms age profile is similar in Germany and Spain with most of the firms (more than 50% in both cases) being established between 2001-2005 and 2011-2015. Whilst in Austria 51.61% of the ECG firms started their operations between 1991 and 2000. By its part, in Italy, 68.75% started their operations between 1951 and 1980. Finally, in Switzerland, 40% of the firms operating under the ECG model were established between 2006 and 2010.

Up to this point, we have analyzed the ECG businesses' profile in terms of the economic sector in which they operate, their size (according to their number of employees and their revenue) and their age. Henceforth, we will proceed to report the results revealed by the survey in terms of how the ECG model has been implemented in the European firms, how many of them have produced their CGBS, the method they followed to audit their CGBS, the profile revealed

by their scores and, finally, the impacts produced (social, environmental, economic and financial) after the full implementation of the ECG model.

Table 11, below, depicts the year in which the firms produced their last CGBS. The home country of the ECG firms is also provided.

Table 11. CGBS by year of production

Country	Germany		Austria		Spain		Italy		Switzerland		Others		Total	
Year	N	%	N	%	N	%	N	%	N	%	N	%	N	%
2011	1	1.22	5	8.06	0	0.00	0	0.00	0	0.00	0	0.00	6	2.91
2012	6	7.32	10	16.13	4	10.00	4	25.00	0	0.00	0	0.00	24	11.65
2013	12	14.63	8	12.90	8	20.00	2	12.50	2	40.00	0	0.00	32	15.53
2014	12	14.63	12	19.35	2	5.00	5	31.25	1	20.00	0	0.00	32	15.53
2015	29	35.37	17	27.42	9	22.50	5	31.25	0	0.00	0	0.00	60	29.13
2016	11	13.41	9	14.52	9	22.50	0	0.00	2	40.00	1	100.0	32	15.53
2017	10	12.20	1	1.61	8	20.00	0	0.00	0	0.00	0	0.00	19	9.22
2018	1	1.22	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.49
Total	82		62		40		16		5		1		206	

As we can see on table 11, on average, most of the ECG European firms produced their last CGBS in 2015 (29.13%). By countries, Germany follows the European trend as 35.37% of the German EGG produced their CGBS in 2015, the same happens in Austria with 27.42% of firms producing their CGBS in the same year. In the case of Spain, during the years 2015, 2016 and 2017, the Spanish firms produced 65% of the CGBS that have been produced in Spain up to date. In Italy, the years 2014 and 2015 concentrate 62.50% of the CGBS. Whilst in Switzerland most of the CGBS (80%) were produced in the years 2013 and 2016.

Figure 8, below, shows the type of verification process followed by the ECG firms included in this study.

Figure 8. Verification process followed by the ECG firms

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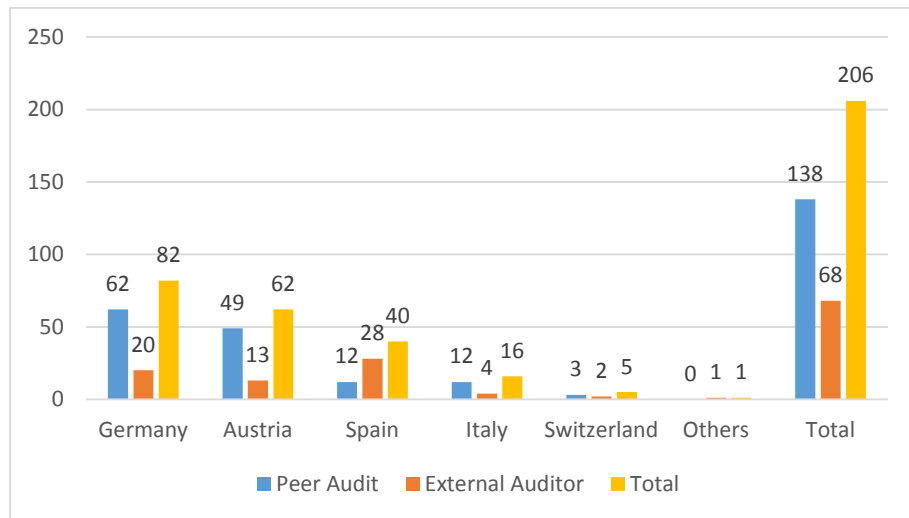
As we can see in figure 8, the overall of European ECG firms that answered to the questionnaire produced a CGBS and audited it. In regards to the type of audit they went through, 138 of them chose a peer audit whereas 68 of them opted for an external ECG auditor. The same trend can be observed in the German, Austrian and Italian ECG firms. In contrast, the Spanish ones preferred to verify their CGBS by means of an external ECG auditor, 28 out of 40. In the case of the Swiss ECG firms, 3 of them went into a peer audit whilst the other 2 chose an external ECG auditor.

The next step is to determine which proportion of the current ECG firms are willing to remain operating under the ECG principles. To do so, we first asked the firms whether they were willing to produce a new CGBS in the future. Figure 9, below, shows their answers.

Figure 9. Percentage of ECG firms willing to produce a new CGBS
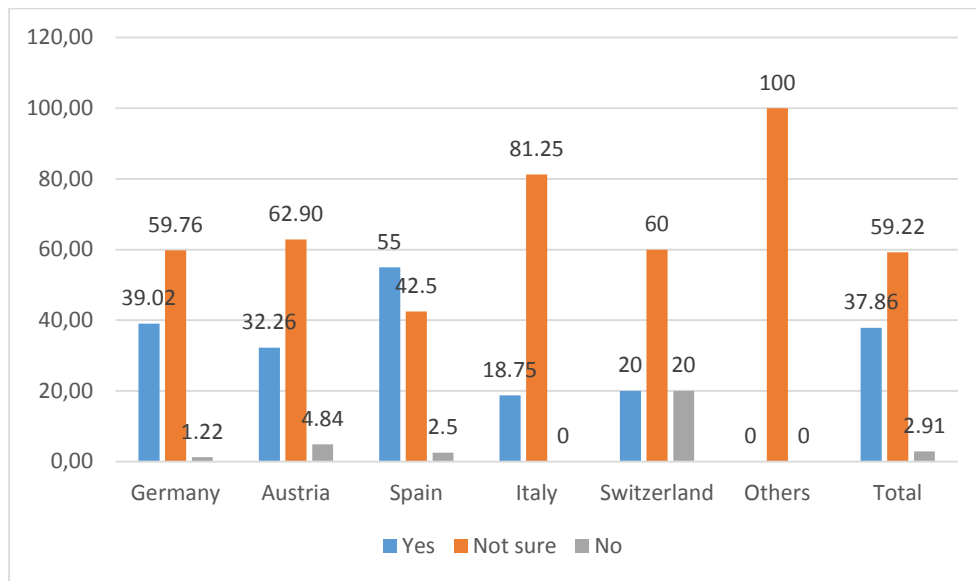
According to the percentages shown in figure 9, most of the European ECG firms are not sure about willing to produce a new CGBS (59.22%). By countries, all of them seem to follow the same pattern except Spain, where 55% of the ECG firms declare to be willing to produce a new CGBS. This took our attention as Spain was the only country in which most of the verifications of the CGBS were developed by means of an external ECG auditor. So, maybe, the ECG auditors are serving as effective disseminators of the benefits of the model by means of their follow up.

Then, figures 10 and 11 show the percentage of European ECG firms that perceive any type of benefit after the implementation of the CGBS and the percentage of them that are still working under the ECG principles. Inasmuch, more than three-quarters of the European ECG firms declared to perceive any type of benefit after having produced their CGBS and almost nine out of ten of them declared being still working under the ECG principles.
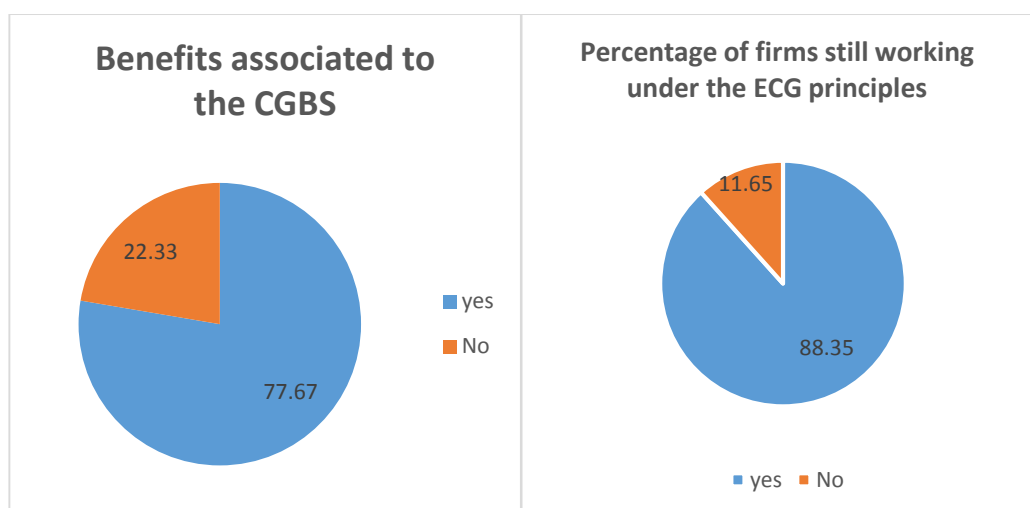
Figures 10 and 11

Table 12, below, depicts the percentage of ECG firms that state to perceive any kind of benefits associated with the CGBS sorted by countries.

Table 12. Benefits associated with the CGBS by countries

Benefits associated with the CGBS	Germany	Austria	Spain	Italy	Switzer - land	Others	Total
Yes	67	46	31	15	1	0	160
%	81.71	74.19	77.50	93.75	20.00	0.00	77.67
No	15	16	9	1	4	1	46
%	18.29	25.81	22.50	6.25	80.00	100,00	22.33
Total	82	62	40	16	5	1	206

As we can observe in table 12, in most of the European countries the firms perceive that they get some benefits after implementing the CGBS (with percentages over 70%), whereas in Switzerland 80% of the ECG firms declare not having perceived any benefit.

Moreover, the questionnaire asked the ECG firms to point out the changes favored by the CGBS within the organization. 93.68% of the firms included in the sample (193) answered this question. The main changes they pointed out were: to be more conscious in regards to sustainability (11.92%), better business reputation and brand image (7.77%), and improvement in cooperation strategies among businesses (6.75%), improve co-participation (4.15%), improve transparency (3.63%), conscious purchase policies (3.63%), working with ethical banking (3.63%), commitment with the ECG movement (2.59%), reduction in carbon footprint (2.59%), improving measurement and assessment (2.07%), internal procedures optimization (2.07%), better relations with suppliers (2.07%), better communication with employees and leadership (2.07%), improvement in employees' commitment (2.07%) and better levels of employees' motivation and satisfaction (2.07%).

In addition, we asked the ECG firms about their degree of communication of the ECG principles to their key stakeholders. Table 13, below, show their answers on overall and sorted by countries.

Table 13. Communication of the ECG principles implementation to the key stakeholders

Stakeholders	Germany	Austria	Spain	Italy	Switzerland	Others	Total
Yes	67	50	32	15	1	0	165
%	81.71	80.65	80.00	93.75	20.00	0.00	80.10
No	15	12	8	1	4	1	41
%	18.29	19.35	20.00	6.25	80.00	100.00	19.90
Total	82	62	40	16	5	1	206
Suppliers							
Yes	60	42	26	15	0	0	143
%	73.17	67.74	65.00	93.75	0.00	0.00	69.42
No	22	20	14	1	5	1	63
%	26.83	32.26	35.00	6.25	100.00	100.00	30.58
Total	82	62	40	16	5	1	206
Funding providers							
Yes	56	41	20	14	1	0	132
%	68.29	66.13	50.00	87.50	20.00	0.00	64.08
No	26	21	20	2	4	1	74
%	31.71	33.87	50.00	12.50	80.00	100.00	35.92
Total	82	62	40	16	5	1	206
Employees							
Yes	64	46	32	15	0	0	157
%	78.05	74.19	80.00	93.75	0.00	0.00	76.21
No	18	16	8	1	5	1	49
%	21.95	25.81	20.00	6.25	100.00	100.00	23.79
Total	82	62	40	16	5	1	206
Customers							
Yes	66	46	27	15	1	0	155
%	80.49	74.19	67.50	93.75	20.00	0.00	75.24
No	16	16	13	1	4	1	51
%	19.51	25.81	32.50	6.25	80.00	100.00	24.76
Total	82	62	40	16	5	1	206
Social environment							
Yes	65	43	28	15	1	0	152
%	79,27	69,35	70,00	93.75	20.00	0.00	73.79
No	17	19	12	1	4	1	54
%	20,73	30,65	30,00	6.25	80.00	100.00	26.21
Total	82	62	40	16	5	1	206

As we can state in table 13, on average 80.10% of the European ECG firms communicated being applying the ECG principles to any type of stakeholder. This pattern is shared by all the European countries except Switzerland, in the Swiss case, 80% of the ECG firms declared not having communicated their operation under the ECG principles to any type of stakeholders. Maybe this is the reason why, according to table 12, 80% of the Swiss ECG firms did not perceive any benefit after having produced their CGBS.

If we analyze table 13 by types of stakeholders, the results are replicated case after case. Consequently, we conclude that the communication of the operation under the ECG principles to the key stakeholders seemed to be essential to get any type of benefit from the CGBS. This is consistent with the Philosophy of the ECG model which relies on the idea of creating and delivering different types of social and environmental value to the different organizational stakeholders.

Henceforth, we will proceed to analyze the profile of the CGBS according to the scores provided by the firms in the sample. Figure 12 shows the percentage of European ECG firms that fall into every one of the levels according to the CG rating.

Figure 12. European ECG firms' rating
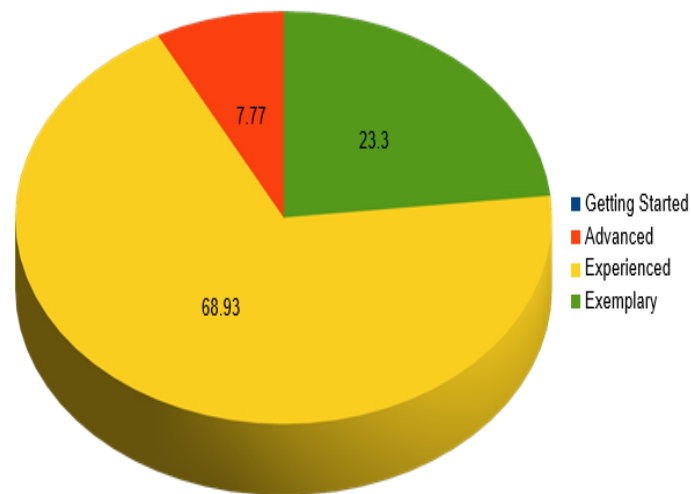
As figure 12 shows, most of the European ECG firms fall into the experienced level according to the CG rating. In table 14, below, we can find the profile by countries.

Table 14. European ECG firms' rating by countries

Overall Score	Germany	Austria	Spain	Italy	Switzerland	Others	Total
Getting Started	0	0	0	0	0	0	**0**
%	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
Advanced	8	3	2	2	1	0	**16**
%	9.76	4.84	5.00	12.50	20.00	0.00	**7.77**
Experienced	53	48	24	13	3	1	**142**
%	64.63	77.42	60.00	81.25	60.00	100.00	**68.93**
Exemplary	21	11	14	1	1	0	**48**
%	25.61	17.74	35.00	6.25	20.00	0.00	**23.30**
Total	82	62	40	16	5	1	**206**
A. Suppliers							
Getting Started	7	2	0	0	0	1	**10**
%	8.54	3.23	0.00	0.00	0.00	100.00	**4.85**
Advanced	13	22	6	4	1	0	**46**
%	15.85	35.48	15.00	25.00	20.00	0.00	**22.33**
Experienced	45	26	23	9	3	0	**106**
%	54.88	41.94	57.50	56.25	60.00	0.00	**51.46**
Exemplary	17	12	11	3	1	0	**44**
%	20.73	19.35	27.50	18.75	20.00	0.00	**21.36**
Total	82	62	40	16	5	1	**206**
B. Funding providers							
Getting Started	8	13	6	4	0	0	**31**
%	9.76	20.97	15.00	25.00	0.00	0.00	**15.05**
Advanced	17	35	8	8	4	1	**73**
%	20.73	56.45	20.00	50.00	80.00	100.00	**35.44**
Experienced	34	10	17	4	0	0	**65**
%	41.46	16.13	42.50	25.00	0.00	0.00	**31.55**
Exemplary	23	4	9	0	1	0	**37**
%	28.05	6.45	22.50	0.00	20.00	0.00	**17.96**
Total	82	62	40	16	5	1	**206**
C. Employees							
Getting Started	0	0	1	0	0	0	**1**
%	0.00	0.00	2.50	0.00	0.00	0.00	**0.49**
Advanced	18	6	2	3	0	0	**29**
%	21.95	9.68	5.00	18.75	0.00	0.00	**14.08**
Experienced	47	38	13	11	4	1	**114**
%	57.32	61.29	32.50	68.75	80.00	100.00	**55.34**
Exemplary	17	18	24	2	1	0	**62**
%	20.73	29.03	60.00	12.50	20.00	0.00	**30.10**
Total	82	62	40	16	5	1	**206**
D. Customers							
Getting Started	0	0	0	0	0	0	**0**
%	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
Advanced	4	5	1	1	1	0	**12**
%	4.88	8.06	2.50	6.25	20.00	0.00	**5.83**
Experienced	59	45	24	14	2	1	**145**
%	71.95	72.58	60.00	87.50	40.00	100.00	**70.39**

Exemplary	19	12	15	1	2	0	**49**
%	23.17	19.35	37.50	6.25	40.00	0.00	**23.79**
Total	82	62	40	16	5	1	**206**
E. Community							
Getting Started	0	0	0	0	0	0	0
%	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
Advanced	11	4	4	0	2	0	**21**
%	13.41	6.45	10.00	0.00	40.00	0.00	**10.19**
Experienced	54	42	25	14	2	1	**138**
%	65.85	67.74	62.50	87.50	40.00	100.00	**66.99**
Exemplary	17	16	11	2	1	0	**47**
%	20.73	25.81	27.50	12.50	20.00	0.00	**22.82**
Total	82	62	40	16	5	1	**206**

According to table 14, in terms of the overall score the firms got from theirs CGBS, 68.93% of them fall into the experienced level of the CG rating. This pattern is similar in the different countries. Having a look at the different sub-sections of the CGBS, in regards to the suppliers' management, 51.46% of the European firms also fall into the experienced level. Being this pattern common to the different countries.

In terms of funding providers' management, the results are not as clear as they were in the previous cases. Instead, 35.44% of the European firms can be classified into the advanced level whilst 31.55% of them are in the experienced levels. By countries, most of the German and Spanish businesses were at the experienced level whilst those from Austria, Italy and Switzerland were in the advanced one.

In regards to Employees' management, most of the European ECG firms (55.34%) fall into the experienced level according to the CG rating. This pattern was shared by most of the European countries, except for Spain where 60% of the ECG businesses were classified into the exemplary level.

Focusing on the Customers' management, 70.39% of the European ECG firms achieved the exemplary level, being this pattern shared by all the European countries except Switzerland where 40% of the firms were also at the experienced level but there was another 40% of the firms that were at the exemplary level. Thus, in the case of the Swiss ECG firms, it was not possible to identify any clear pattern.

As to Community management, 66.99% of the European ECG firms fall into the experienced level according to the CG rating. This pattern is common in most of the European countries. The only exception we found was Switzerland, where it was not possible to identify a clear pattern as 40% of the Swiss ECG businesses achieved the advanced level whilst another 40% of them fall into the experienced level.

Up to this point, we have analyzed the European ECG businesses' profile in terms of contingency variables (economic sector, size, and age), we have also depicted their operation under the ECG model by analyzing their CG rating and theirs CGBS scores (in overall, by sub-sections and by countries. At this point, we find necessary to focus on the external impact that the businesses have generated after having applied the ECG model and produced their CGBS. To do so, we will take into consideration two main groups of impacts: firstly, the social and environmental impacts and, secondly, the economic ones. Furthermore, to avoid possible biases

we have asked the firms on these impacts in two different ways: firstly, we asked about the perceivable operational changes occurred since the production of the CGBS in comparison with the average position of the industry in which the firms operate and, secondly, we asked the firms to what extent they feel these changes were attributable to the ECG process that took place within the organizations. With the aim of closing sub-section 4.1, henceforward we proceed to depict the impacts' count of frequencies.

Table 15 below, depicts the perceived social and environmental impacts after having produced the CGBS. Whilst, table 16 shows the social and environmental impacts that the businesses attribute to the ECG process.

Table 15. Perceivable social and environmental impacts after having produced the CGBS (%)

Suppliers:	1	2	3	4	5
SP1. Percentage of local suppliers.	2.91	1.94	17.48	70.87	6.80
SP2. Percentage of certified sustainable supplies.	0.00	3.40	76.21	14.56	5.83
SP3. Carbon print caused by the supply chain and logistics.	1.46	1.94	77.18	14.56	4.85
SP4. Fair prices to suppliers.	0.97	0.49	26.21	66.02	6.31
SP5. Monitoring supplier firms working conditions (International Labour Organization Standards).	0.97	2.43	74.76	16.99	4.85
Suppliers average	**1.26**	**2.04**	**54.37**	**36.60**	**5.73**
Funders:	1	2	3	4	5
F1. Fair distribution of income between owners and workforce.	0.97	0.97	24.76	62.62	10.68
F2. Prioritizing environmentally sustainable investments.	0.49	0.49	14.56	76.21	8.25
F3. Prioritizing socially driven investment.	0.49	0.49	17.48	72.33	9.22
F4. Monitoring the ethical behavior of the banks and other financial firms you work with. Avoiding those showing unethical conducts and abuses.	0.49	1.94	14.56	72.82	10.19
Funders average	**0.61**	**0.97**	**17.84**	**71.00**	**9.59**
People:	1	2	3	4	5
P1. Staff retention.	0.00	0.49	16.99	72.82	9.71
P2. Motivation / well-being.	0.00	0.49	11.65	75.73	12.14
P3. Organizational climate.	0.00	0.49	13.11	73.79	12.62
P4. Staff input into decisions.	0.00	0.97	14.08	73.30	11.65
P5. Relations between staff & management.	0.49	0.00	13.11	73.30	13.11
P6. The ratio between the highest and lowest paid.	1.45	1.46	16.02	68.93	12.14
P7. Participative management implementation.	0.49	0.49	16.02	71.84	11.17
P8. Percentage of women in the top management team.	1.94	3.88	77.18	8.74	8.25
P9. Percentage of women in the middle management line.	1.46	3.40	79.13	8.74	7.28

	1	2	3	4	5
P10. Ergonomics.	0.97	0.49	69.90	19.90	8.74
P11. Flexibility and teleworking.	1.46	0.97	12.62	73.79	11.17
P12. Hiring and promoting employees from the local community.	0.97	0.97	77.18	13.11	7.77
P13. Minimizing employees' commuting to work.	0.97	1.94	76.21	13.59	7.28
P14. Percentage of disabled employees.	4.85	6.31	83.01	3.40	2.43
People average	**1.07**	**1.60**	**41.16**	**46.50**	**9.67**
Customers:	1	2	3	4	5
C1. Product/ service information to customer is fair and transparent.	0.00	0.00	34.47	54.37	11.17
C2. Fair prices to customers.	0.00	0.49	33.50	50.97	15.05
C3. Minimizing packaging.	0.49	0.49	80.10	12.62	6.31
C4. Customers trust us because they find we meet their needs in the fairest way.	0.00	0.00	33.50	56.80	9.71
C5. Cooperation with customers.	0.49	0.00	13.59	75.24	10.68
C6. Minimizing carbon print caused by logistics between the organization and its customers.	0.49	1.94	76.70	12.62	8.25
C7. The organization's products/services allow its customers to responsibly consume from a social and/or environmental point of view.	0.00	0.00	40.29	51.94	7.77
Customers average	**0.21**	**0.42**	**44.59**	**44.94**	**9.85**
Society:	1	2	3	4	5
S1. Fair taxation.	0.97	0.97	83.98	6.80	77.28
S2. Respecting and promoting the local language and culture in the markets in which the organization operates.	0.49	0.49	81.50	8.74	8.74
S3. Minimizing environmental impacts of production and logistics.	0.00	0.97	16.50	76.21	6.31
S4. Reputation.	0.00	0.49	12.62	77.18	9.71
S5. Local sports sponsorship.	1.94	7.77	83.98	3.88	2.43
S6. Local culture sponsorship.	1.94	4.37	82.52	7.77	3.40
S7. Cooperation with local social movements.	0.97	0.49	15.53	72.33	10.68
Society average	**0.90**	**2.22**	**53.81**	**36.13**	**6.93**
OVERALL AVERAGE	**0.85**	**1.48**	**43.47**	**45.55**	**8.65**

Note: self-assessment in comparison with the industry's average position. (Being: 1 much lower than the average; 2 lower than the average; 3 on the average; 4 above the average; 5 much better than the average).

As we can observe in Table 15 above, in overall the European ECG firms, when compared to their industry/sector average position, 54.2% of them state they have noticed some type of social and/or environmental benefits in their operations after having produced their CGBS. Therefore, maybe the implementation of the ECG model has helped them to strengthen their position in their industry context. By type of benefits, in comparison with the industry's average

position, the clearer ones are tied to funders (80.59%), people (56.17%), and customers (54.79%).

Table 16. Social and Environmental impacts attributable to the CGBS production (%)

Suppliers:	1	2	3	4	5
SP1. Percentage of local suppliers.	0.49	0.49	18.93	73.30	6.80
SP2. Percentage of certified sustainable supplies.	0.49	0.97	15.53	78.16	4.85
SP3. Carbon print caused by the supply chain and logistics.	1.46	0.00	18.93	75.73	3.88
SP4. Fair prices to suppliers.	0.49	0.00	82.04	14.08	3.40
SP5. Monitoring supplier firms working conditions (International Labour Organization Standards).	0.49	0.00	86.41	9.22	3.88
Suppliers average	**0.68**	**0.29**	**44.37**	**50.10**	**4.56**
Funders:	1	2	3	4	5
F1. Fair distribution of income between owners and workforce.	0.49	0.00	82.04	11.65	5.83
F2. Prioritizing environmentally sustainable investments.	0.49	0.49	19.42	73.30	6.31
F3. Prioritizing socially driven investment.	0.97	0.49	78.16	15.05	5.34
F4. Monitoring the ethical behavior of the banks and other financial firms you work with. Avoiding those showing unethical conducts and abuses.	0.49	0.97	18.93	72.33	7.28
Funders average	**0.61**	**0.49**	**49.64**	**43.08**	**6.19**
People:	1	2	3	4	5
P1. Staff retention.	0.97	0.00	20.39	72.33	6.31
P2. Motivation / well-being.	0.49	0.00	17.07	73.17	9.27
P3. Organizational climate.	0.49	0.49	19.42	71.84	7.77
P4. Staff input into decisions.	0.49	0.49	19.42	72.33	7.28
P5. Relations between staff & management.	0.49	0.49	18.45	74.76	5.83
P6. The ratio between the highest and lowest paid.	0.49	0.00	84.47	10.19	4.85
P7. Participative management implementation.	0.49	0.00	20.87	72.33	6.31
P8. Percentage of women in the top management team.	1.46	0.49	87.86	8.74	1.46
P9. Percentage of women in the middle management line.	1.46	0.49	87.38	8.74	1.94
P10. Ergonomics.	0.97	0.49	86.41	9.71	2.43
P11. Flexibility and teleworking.	0.49	0.49	83.50	10.68	4.85
P12. Hiring and promoting employees from the local community.	0.97	0.49	87.38	8.74	2.43
P13. Minimizing employees' commuting to work.	0.49	0.97	83.01	12.14	3.40
P14. Percentage of disabled employees.	2.43	1.46	91.26	2.91	1.94
People average	**0.87**	**0.45**	**57.65**	**36.32**	**4.72**
Customers:	1	2	3	4	5

|	1	2	3	4	5
C1. Product/ service information to customer is fair and transparent.	0.49	0.49	19.90	72.33	6.80
C2. Fair prices to customers.	0.49	0.49	80.10	13.11	5.83
C3. Minimizing packaging.	0.49	0.00	82.52	12.14	4.85
C4. Customers trust us because they find we meet their needs in the fairest way.	0.49	0.00	21.36	72.33	5.83
C5. Cooperation with customers.	0.49	0.00	20.39	73.30	5.83
C6. Minimizing carbon print caused by logistics between the organization and its customers.	0.49	1.46	77.18	16.02	4.85
C7. The organization's products/services allow its customers to responsibly consume from a social and/or environmental point of view.	0.49	0.00	78.64	16.99	3.88
Customers average	0.49	0.35	54.30	39.46	5.41
Society:	1	2	3	4	5
S1. Fair taxation.	0.49	0.49	88.83	6.31	3.88
S2. Respecting and promoting the local language and culture in the markets in which the organization operates.	0.97	0.00	83.98	11.65	3.40
S3. Minimizing environmental impacts of production and logistics.	0.49	0.00	20.87	72.82	5.83
S4. Reputation.	0.49	0.49	13.11	78.64	7.28
S5. Local sports sponsorship.	1.94	2.91	88.35	3.88	2.91
S6. Local culture sponsorship.	1.94	2.91	86.41	4.85	3.88
S7. Cooperation with local social movements.	0.97	0.49	17.48	71.84	9.22
Society average	1.04	1.04	57.00	35.71	5.20
OVERALL AVERAGE	0.77	0.52	54.23	39.39	5.08

Note: self-assessment. (Being: 1 Very negative impact, 2 Negative impact, 3 No impact, 4 Little impact and 5 Major impact).

However, when we asked the ECG firms about the social and environmental benefits they attribute to the ECG model implementation, their answer is not as clear as before. In fact, in overall only 44.47% of them attribute the improvements in their social and environmental impacts to the ECG process. By type of benefits, the European ECG firms attributed improvements to the ECG process in the area of suppliers (54.66%). In the rest of areas most of the firms did not attribute the improvements they stated to the ECG model implementation. One possible explanation to these results can come from the role played by the external audits in the CGBS verification process. That is, maybe, the fact of following an external audit makes the impacts more visible for the firms and, helps to tie those impacts to the ECG process implementation.

To try to perform a finer analysis of the data we decided to calculate the weighted averages and draw the impacts' profiles. Figure 13 shows the perceived social and environmental impacts, taking as a reference the weighted average for every one of the items, and in comparison with the average position of the industry. As we can observe in figure 13 below, all the European ECG firms stated improvements in all the items after producing their CGBS. As far as they expressed being over the average industry's position. The only exceptions they pointed were in terms of the percentage of disabled employees, local sports sponsorship, and local culture sponsorship.

Figure 13. Perceived social and environmental impacts, after having produced the CGBS (weighted averages)
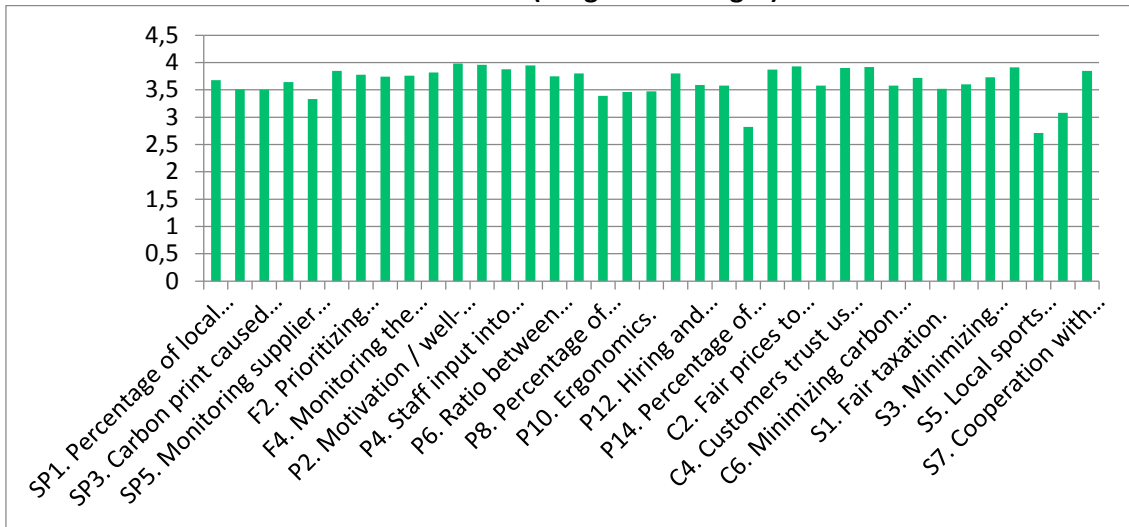
Note: in comparison with the industry/sector average position (being 3 on the average)

Figure 14. Social and Environmental impacts attributable to the CGBS production, (Weighted averages)
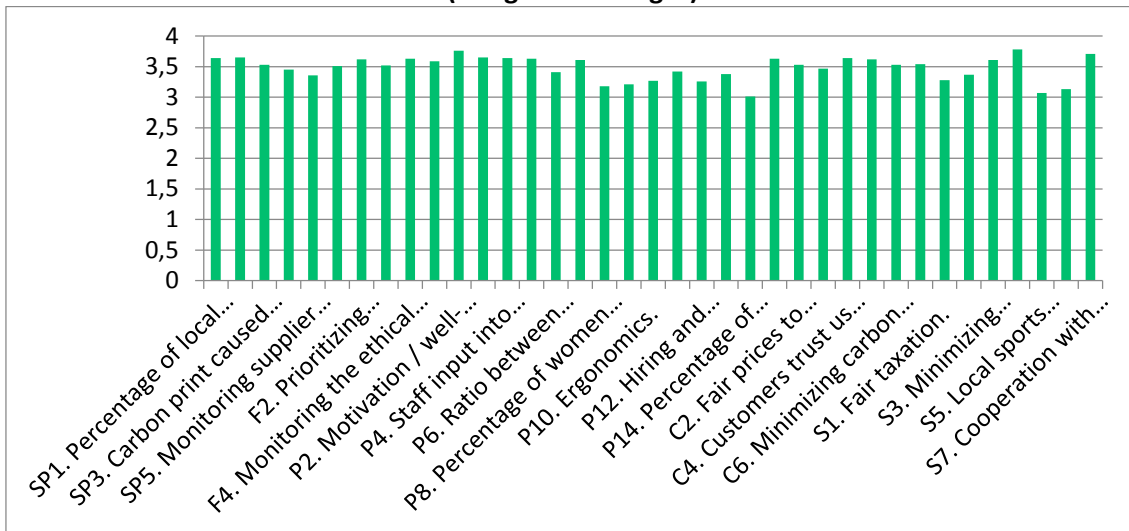
Note: being 1 very negative impact, 2 negative impact, 3 no impact, 4 little impact, and 5 major impact

Figure 14 above, depicts the social and environmental impact that the European ECG firms attributed to the implementation of the ECG model. In this case, taking the weighted averages as a reference, we can state as the firms did not relate the social and environmental impacts to the production of theirs CGBS. Which confirms the results we got by taking arithmetic averages as a reference.

To end with sub-section 4.1, we focus on the economic impacts occurred after the firms produced their CGBS. With that purpose, we asked the business about what has happened to some of their economic indicators (linked to their position in the marketplace), in comparison with the industry's average position, since they produced their CGBS. Thereafter, we asked the firms about how much of the previous impacts did they attribute to the ECG process.

Table 17. Perceived Economic impacts after producing the CGBS

Economic and financial impacts	1	2	3	4	5
EV1. Sales revenue	2.27%	4.55%	62.50%	25.00%	5.68%
EV2. Profit	3.41%	17.05%	53.41%	25.00%	1.14%
EV3. Market Share	4.55%	5.68%	71.59%	15.91%	2.27%
EV4. Productivity	2.27%	7.95%	62.50%	25.00%	2.27%
EV5. Customers Satisfaction	1.14%	2.27%	43.18%	38.64%	14.77%
EV6. Product/service Quality	1.14%	1.14%	39.77%	40.91%	17.05%
EV7. Product and/or Process Innovation.	1.14%	1.14%	39.77%	40.91%	17.05%
EV8. Brand image	1.14%	1.14%	35.23%	50.00%	12.50%
EV9. Cost reduction	2.27%	14.77%	70.45%	10.23%	2.27%
EV10. Product/service differentiation	0.00%	3.41%	54.55%	31.82%	10.23%
EV11. Improvement in management processes	0.00%	5.68%	42.05%	44.32%	7.95%

Note: self-assessment in comparison with the industry's average position. (Being: 1 much lower than the average; 2 lower than the average; 3 on the average; 4 above the average; 5 much better than the average).

From the results summarized in table 17 above, we can affirm that most of the European ECG firms did not suffer any negative consequence in terms of economic concerns after having followed the ECG process. Instead, some of the economic items related to keeping a differentiated position in the market placed improved after the ECG process. Accordingly, 57.96% of the firms stated improvement in their product/service quality, the same percentage declared to have perceived improvements in their product/process innovation, 62.50% expressed the have noticed some kind of strength in their brand image and, finally, 52.27% stated improvements in their management processes.

Table 18 below, depicts the economic impacts that the European ECG firms attributed to the production of theirs CGBS.

**Table 18. Economic impacts attributable to the CGBS**

	1	2	3	4	5
EV1. Sales revenue	1.14%	3.41%	69.32%	20.45%	5.68%
EV2. Profit	1.14%	11.36%	68.18%	12.50%	6.82%
EV3. Market Share	1.14%	3.41%	72.73%	17.05%	5.68%
EV4. Productivity	1.14%	3.41%	73.86%	17.05%	4.55%
EV5. Customers Satisfaction	0.00%	2.27%	50.00%	35.23%	12.50%
EV6. Product/service Quality	0.00%	2.27%	51.14%	37.50%	9.09%
EV7. Product and/or Process Innovation.	0.00%	3.41%	51.14%	30.68%	14.77%
EV8. Brand image	0.00%	2.27%	51.14%	32.95%	13.64%
EV9. Cost reduction	0.00%	9.09%	57.95%	25.00%	7.95%
EV10. Product/service differentiation	1.14%	1.14%	61.36%	18.18%	18.18%
EV11. Improvement in management processes	0.00%	3.41%	50.00%	34.09%	12.50%

Note: being 1 very negative impact, 2 negative impact, 3 no impact, 4 little impact, and 5 major impact

As table 18 shows, most of the European ECG firms did not attribute any economic impact on the implementation of the ECG process. Despite this, they stated some positive economic impacts after having produced theirs CGBS (table 17). However, they did not tie the perceived impacts to the ECG process.

To perform a finer analysis of the data we decided to calculate the weighted averages and draw the impacts' profiles. Figure 15 below, shows the perceived economic impacts, taking as a reference the weighted average for every one of the items, and in comparison with the average position of the industry.

**Figure 15. Perceived economic impacts (weighted average)**
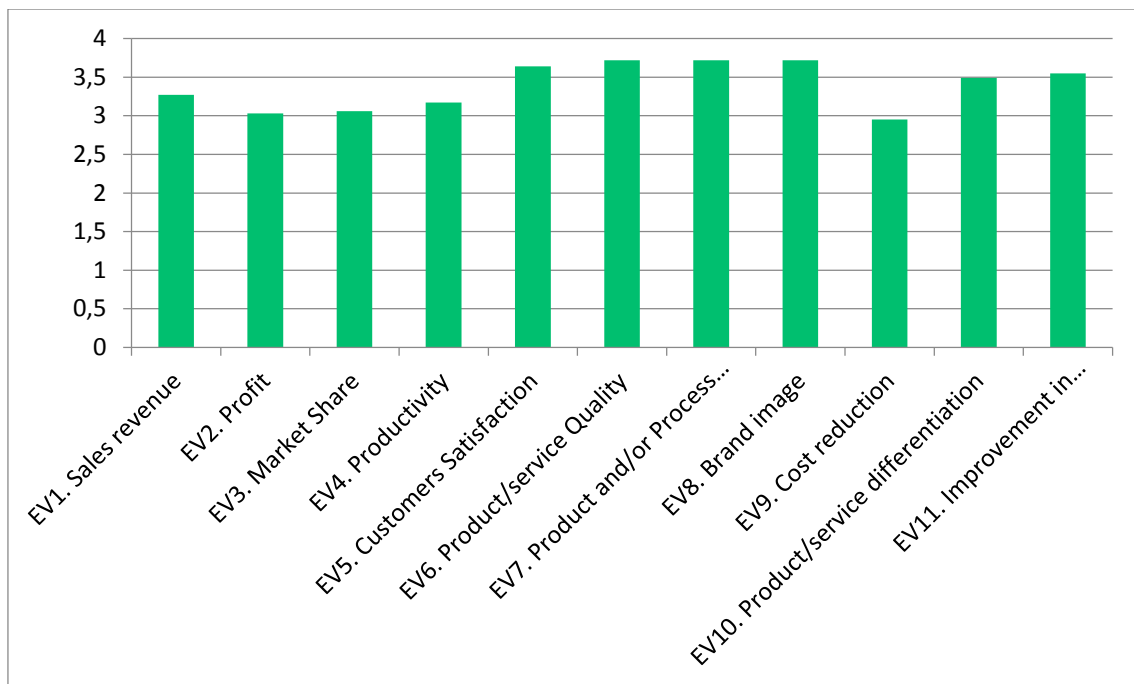
Note: self-assessment in comparison with the industry's average position. (Being: 1 much lower than the average; 2 lower than the average; 3 on the average; 4 above the average; 5 much better than the average).

As we can observe in figure 15, after the firms produced theirs CGBS they stated a stronger position in comparison with the industry's average in the following items: sales revenue, productivity, customers' satisfaction, product/service quality, brand image, product/service differentiation and improvement in management processes. All of these items share their ability to help the firms to keep a position in the market based on differentiation strategies. Thus, after having followed the ECG process the firms showed better levels in comparison with the industry's average in all those features that support differentiation strategies in the marketplace.

Finally, figure 16 below depicts the economic impacts that firms attributed to the ECG process taking weighted averages as a reference.

Figure 16. Economic impacts attributable to the CGBS (weighted average)
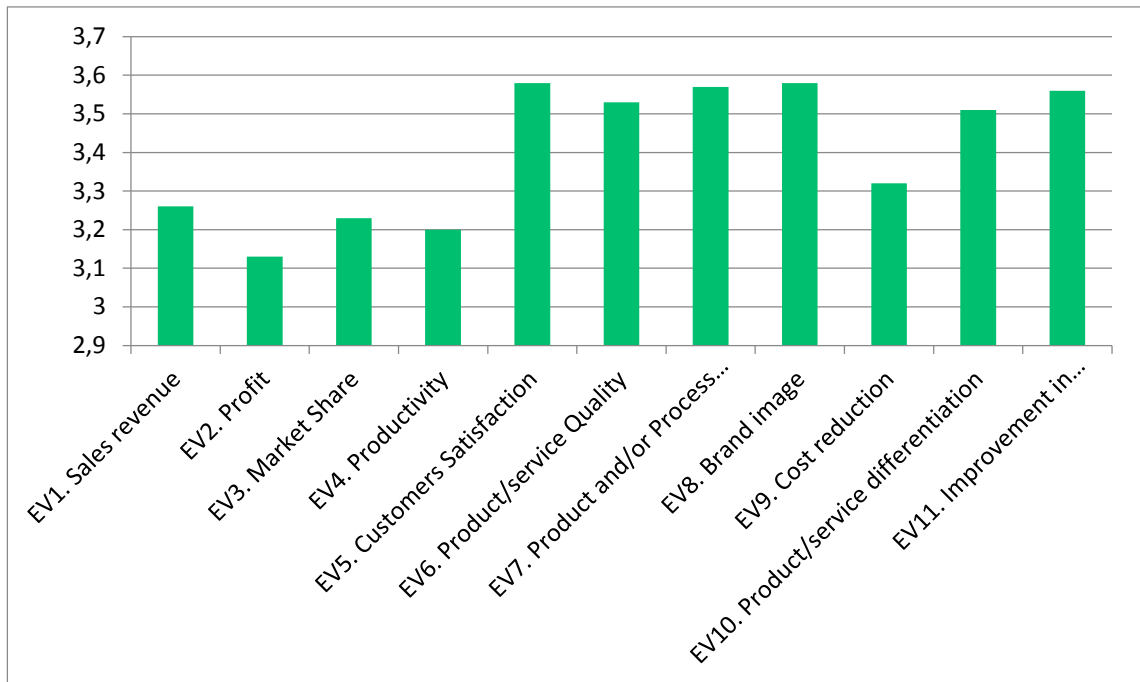
Note: being 1 very negative impact, 2 negative impact, 3 no impact, 4 little impact, and 5 major impact

As figure 16 shows, taking weighted as a reference, the firms only attributed little economic impact of the ECG process on some of the items. Namely, Customers' satisfaction, product/service quality, product/process innovation, brand image, product/service differentiation and improvement in management processes. Thus, confirming the fact that the main improvements in the economic sphere are those that support differentiation strategies in the marketplace.

4.2 Metrics validation. Exploratory Factor Analysis.

In the present sub-section, we report the results we got from applying Exploratory Factor Analysis to the observed scores of the firms' CGBS. By doing so, we tested whether the five dimensions defined in the CG matrix and their associated indicators were valid and reliable metrics according to widely accepted statistical criteria.

The starting point to apply any multivariate technique (this includes EFA) on a data set is to check whether the data set follows a normal distribution (Hair et al., 2010). In our case, as pointed out in subsection 3.1, the average score the firms got by applying the CGBS was 497 whilst the median of such score was 498. Thus, suggesting a normal distribution of the data. Furthermore, we also checked the skewness and Kurtosis of the metrics (items) employed in the CG matrix and the CGBS. Table 19 below depicts the items' skewness and kurtosis.

Table 19. Skewness and Kurtosis, full set of 20 items

	Skewness	Kurtosis
A1	0.180	-0.584
A2	0.041	-0.748
A3	0.320	0.111
A4	0.347	0.425
B1	0.911	0.763
B2	0.874	0.499
B3	0.643	0.043
B4	0.740	-0.065
C1	0.022	-0.571
C2	-0.213	-0.292
C3	2.204	9.113
C4	0.643	-0.577
D1	0.213	1.590
D2	0.493	0.521
D3	0.252	-0.987
D4	1.935	1.841
E1	-0.127	-0.320
E2	-0.253	-0.699
E3	0.634	0.068
E4	1.427	2.013

As we can observe in table 19, the skewness and kurtosis values are closer to or under the conventional value of ± 2.00 (Muthen & Kapplan, 1985), thus confirming the normality of the data distribution. Therefore, EFA as a multivariate analysis technique will produce reliable results.

Thereafter, we ensured that the correlation matrix fulfills the assumptions to apply factor analysis. That is, that the data matrix had sufficient significant correlations to justify the application of factor analysis (the commonly accepted threshold is .30). Table 20 below shows the correlation matrix with the significant correlations at .01 level in bold and followed by a * sign. As we can see, most of the correlations among items were greater than .30 and significant at .01 level.

In the bottom of table 20, we can also find an overall measure of sample adequacy (Kaiser-Meyer-Olin, KMO) and the Barlett test of Sphericity. In regards to KMO, it ranges from 0 to 1. According to Kaiser (1970, 1974), when KMO takes a value greater than .80 we are facing a meritorious level of sampling adequacy. KMO reached .846 in our case. Barlett test of Sphericity is also displayed at the bottom of table 20, in our case we can conclude that the correlation matrix had significant correlations among, at least, some of the items at .01 level. Therefore, we concluded that the data were suitable to apply factor analysis.

Table 20. Partial correlations and Measures of Sample Adequacy

	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3	D4	E1	E2	E3	E4
A1	1.000	.993*	.964*	.969*	.390*	.397*	.421*	.403*	.265*	.180	.442*	.203*	.287*	.195	.518*	.359*	.328*	.067	.527*	.295*
A2		1.000	.964*	.967*	.372*	.387*	.405*	.388*	.264*	.184	.439*	.209*	.266*	.190	.523*	.351*	.337*	.063	.529*	.286*
A3			1.000	.972*	.394*	.393*	.385*	.383*	.281*	.197	.449*	.189	.315*	.220*	.495*	.337*	.318*	.065	.500*	.283*
A4				1.000	.383*	.379*	.392*	.384*	.274*	.188	.447*	.192	.297*	.208*	.472*	.368*	.292*	.073	.485*	.273*
B1					1.000	.949*	.826*	.895*	.272*	.128	.543*	.211*	.371*	.302*	.114	.244*	.206*	.154	.240*	.366*
B2						1.000	.859*	.947*	.286*	.127	.510*	.212*	.357*	.293*	.133	.226*	.229*	.136	.265*	.364*
B3							1.000	.912*	.241*	.075	.407*	.204	.275*	.280*	.156	.207*	.241*	.079	.273*	.288*
B4								1.000	.276*	.078	.440*	.175	.327*	.281*	.131	.227*	.237*	.109	.247*	.299*
C1									1.000	.296*	.253*	.212*	.424*	.376*	.147	.108*	.189	.074	.185	.178
C2										1.000	.114	.591*	.204	.406*	.184	.246	.119	.616*	.110	.330*
C3											1.000	.005	.293	.147	.212	.316*	.064	-.010	.355	.345*
C4												1.000	.118	.258*	.191	.122	.169	.473*	.089	.321*
D1													1.000	.426*	.260*	.210*	.261*	.077	.164	.266*
D2														1.000	.256*	.434*	.321*	.271*	.097	.313*
D3															1.000	.213*	.613*	.131	.570	.209*
D4																1.000	.200	.232*	.151	.192
E1																	1.000	.102	.406*	.132
E2																		1.000	.136	.329
E3																			1.000	.374*
E4																				1.000

*Correlations significant at the .01 level.
Overall Measure of Sample Adequacy (KMO): 0.846
Bartlett Test of Sphericity: 4396.46 (Significance: .000)

Then, we proceeded to apply component analysis. We did so because data reduction was our primary concern as our goal was to determine whether there are any latent variables among the CGBS items and, also, because as this is the first intend to validate the metrics of the CGBS we thought that the most appropriate choice was to consider the total variance as starting point. However, although considerable debate remains over which factor model is the most appropriate, empirical research demonstrated similar results in many instances. Both factor models arrive at similar results when the communalities exceed .60 for most items (Borgatta et al., 1986; Snook and Gorsuch, 1989 Gorsuch, 1990; Mulaik, 1990; Velicer and Jackson, 1990), as in our case.

Table 21 shows the results for the extraction of component factors for the full set of metrics employed in the CGBS. We decided to employ the VARIMAX method because it seems to give a clearer separation of the factors (Hair *et al.*, 2010).

Table 21. Results for the Extraction of Component Factor: Full set of items

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of variance	Cumulative %
1	7.451	37.255	37.255	7.451	37.255	37.255
2	2.548	12.741	49.996	2.548	12.741	49.996
3	2.315	11.574	61.569	2,.15	11.574	61.569
4	1.315	6.573	68.142	1.315	6.573	68.142
5	1.186	5.931	74.073	1.186	5.931	74.073

Note: Extraction method Common Factor

To determine the number of factors to extract, we combined the eigenvalues and the percentage of variance criteria. Thus, only factors having eigenvalues greater than 1 and accounting for at least 60% of the total variance extracted were retained. As we can observe in table 21, according to the results we got a five-factor solution which is consistent with the number of dimensions considered in the CGBS.

Thereafter, we examined the rotated component matrix to achieve simpler and theoretically more meaningful solutions. Table 22, below, depicts the VARIMAX-rotated component analysis containing the full set of 20 items that are the metrics employed in the CGBS.

Table 22. VARIMAX-Rotated Component Analysis Matrix: Full set of 20 items

	Factor					Communality
	1	**2**	**3**	**4**	**5**	
A1	.923					.965
A2	.925					.965
A3	.916					.945
A4	.929					.953
B1		.916				.921
B2		.937				.952
B3		.889				.854
B4		.934				.932
C1				.668		.498
C2			.817			.773
C3	.463	.461				.484
C4			.774			.627
D1				.724		.615
D2				.732		.682
D3					.787	.789
D4				.430		.353
E1					.843	.785
E2			.839			.712
E3	.441				.609	.613
E4			.481			.396

Factor loadings less than .40 have not been printed

As we can observe, in table 22 factor loadings below .40 have not been displayed as those loadings were found no significant at .05 level given the sample size of 206 observations and a power level of 80% (computations made with GPower 3.1). Table 22 also shows a well-defined structure of factors 1 and 2 with loadings over .70 for the items A1, A2, A3 and A4 in relation to factor 1 and for the items B1, B2, B3 and B4 in relation to factor 2. The rest of the structure was not clear.

Moreover, in factor analysis items must be unidimensional. That is, they must represent a single concept. Consequently, each factor should consist of a set of items loading highly on a single factor, meaning that each dimension should be reflected by a separate factor (Anderson, et al., 1987; Hattie, 1985; McDonald, 1981; Nunnally, 1979). According to the results displayed in table 22, the items C3 and E3 were not unidimensional so items are candidates to be removed to ensure the items' unidimensionality. Then, to assess the consistency to the entire scale we proceeded to check the reliability statistics for the full set of 20 items which are depicted in table 6 below.

Table 23. Reliability Statistics. Full set of items (20).

	Squared Multiple Correlation	Cronbach's Alpha if item deleted
A1	.989	.788
A2	.989	.791
A3	.959	.799
A4	.963	.799
B1	.919	.800
B2	.955	.799
B3	.851	.801
B4	.940	.800
C1	.330	.792
C2	.588	.782
C3	.519	.796
C4	.463	.789
D1	.381	.792
D2	.486	.782
D3	.591	.784
D4	.367	.791
E1	.474	.789
E2	.489	.795
E3	.512	.788
E4	.379	.790
Cronbach's Alpha (full set of items): 0.801		

As we can see in table 23, the Cronbach's Alpha of the full model reached .801 above the recommended threshold of .70 (Hair et al., 2010). Whilst the Cronbach's Alpha if the items C3 or D3 were deleted stayed above such threshold. Therefore, we decided to remove both items (C3 and D3) and ran the factor analysis again with 18 items.

Table 24 depicts the VARIMAX-rotated component analysis matrix for the reduced set of 18 items. As we can observe, it also produced a five-factor solution capturing 77.280% of the Variance extracted by the factors. Factors 1 and 2 showed a well-defined structure coincident with the dimensions A (Suppliers Management) and B (Owners, Equity and Financial Service Providers Management) of the CG matrix and the CGBS.

Table 24. VARIMAX-Rotated Component Analysis Matrix:
Reduced Set of 18 items

	Factor					
	1	**2**	**3**	**4**	**5**	**Communality**
A1	.945					.984
A2	.948					.982
A3	.937					.964
A4	.947					.971
B1		.914				.915
B2		.938				.953
B3		.900				.872
B4		.942				.949
C1				.761		.638
C2			.831			.776
C4			.765			.614
D1				.745		.644
D2				.657		.654
D3	.417				.770	.790
D4						.270
E1					.879	.838
E2			.841			.716
E4			.489			.383
						Total
Eigenvalue	6.830	2.435	2.269	1.308	1.050	13.892
% of Variance	37.946	13.629	12.608	7.266	5.831	77.280

Factor loadings less than .40 have not been printed

However, in this case, we found D3 to show multi-dimensionality problems, as it cross-loaded on factors 1 and 5, and D4 not loading on any factor. Furthermore, some items showed communalities under the recommended threshold of .50. So that, we decided to remove D3 and re-estimate the factor model with a reduced set of 17 items to test for comparability.

Table 25 shows the results of the VARIMAX-rotated component analysis matrix for the reduced set of 17 items. In this case, factor analysis revealed a structure of five factors even though the fifth-factor eigenvalue was slightly below 1. We decided to keep the five factors structure because the fifth one contributed to increasing the total variance extracted by 5.669. Thus, the five factors captured 78.701% of the variance of the overall 17 items.

Thereafter we proceeded to analyze the factor structure revealed by means of analyzing the results of the factor analysis. Factor 1 is built upon the items A1, A2, A3 and A4, all of them with loadings over .90. Thus, revealing a well-defined structure in coincidence with the dimension A (Suppliers Management) of the CG matrix and the CGBS. So we labeled factor 1 as Suppliers Management (SPM). From its part, factor 2 is built upon the items B1, B2, B3 and B4, all of them with loadings over .90. Thus, revealing a well-defined structure in coincidence with

the dimension B (Owners, Equity and Financial providers Management) of the CG matrix and the CGBS. So we labeled factor 2 as Owners, Equity and Financial providers Management (OEFPM). On their part, factors 3, 4 and 5 show overlaps between the dimensions C (Employees), D (Customers and Business Partners) and E (Social Environment). Another important issue revealed by factor analysis in regards to stakeholders' management in terms of environmental sustainability is that items C3, D3, and E3 had to be deleted to ensure the unidimensionality of the items. This finding involves that only SPM and OEFPM dimensions include measures of environmental sustainability in the final model.

Table 25. VARIMAX-Rotated Component Analysis Factor Matrix: Reduced Set of 17 items

	Factor					
	1	2	3	4	5	Communality
A1	.951					.984
A2	.956					.984
A3	.941					.966
A4	.946					.970
B1		.915				.914
B2		.939				.954
B3		.898				.870
B4		.942				.948
C1				.817		.737
C2			.839			.777
C4			.792			.672
D1				.713		.641
D2					.642	.736
D4					.821	.775
E1					.440	.544
E2			.814			.721
E4			.494			.585
						Total
Eigenvalue	6.595	2.328	2.231	1.261	0.964	13.379
% of Variance	38.793	13.695	13.126	7.418	5.669	78.701

Chronbach's Alpha (17 items): 0.767
ANOVA test (17 items): 560.241 (df.: 16; Significance: .000)

Factor loadings less than .40 have not been printed

In terms of communalities, in the final solution, all the items showed communalities above the threshold of .50. Demonstrating their appropriateness.

To assess the degree of consistency of the entire scale (CGBS) we check the Chronbach's Alpha of the 17 items model, which reached .767. Thus, confirming the overall model reliability.

Finally, we checked if the 17 items were statistically different from one another by means of ANOVA test. It tests for differences in means between the groups, as the significance

level was lower than .01 we concluded that the means of the 17 items were different and, consequently, they were measuring different concepts and we did not face any redundancy among items.

Figure 17, below, shows the results of EFA on the CG matrix 5.0.

Figure 17. EFA results on CG matrix 5.0

Source: https://www.ecogood.org

Being:

- Factor 1-> Suppliers Management (SPM) -> dimension A (A1, A2, A3, A4).
- Factor 2-> Owners, Equity and Financial services Providers Management (OEFPM) -> dimension B (B1, B2, B3, B4).
- Factor 3-> Solidarity and Social Justice, Transparency and Co-determination management for Employees and Social Environment (SSJTCDESE) -> dimensions C and E (C2, C4, E2, E4).
- Factor 4-> Human Dignity management for Employees and, Customers and Business Partners (HDECBP) -> dimensions C and D (C1, D1).
- Factor 5-> Solidarity, human dignity, Transparency and Co-determination management for employees, Customers and Business Partners (STCBP) -> (D2, D4, E1).

4.3 Testing the impacts. Logistic Regression.

In the present sub-section, we report the results we got from applying Logistic regression to test whether the ECG process (producing the CGBS) has any social, environmental or economic impact.

Assessing Social and Environmental impact on Suppliers

- **Hypothesis 1, definition:**

The European businesses that have completed the ECG process by producing their CGBS, generate positive S&E impacts on suppliers above their industry average. Thus, this hypothesis can be translated to the mathematical language as follows:

Equation 1.

$$\text{Logit}_i = (\text{Probability of improvement in S\&E impact on SP/Probability of Non-improvement in S\&E impact on SP}) =$$

$$= e^{\,b0+b1*SPM + b2*OEFPM + b3* SSJTCDESE + b4*HDECBP + b5*STCBP + b6*Revenue + b7*Industry + b8*Country + b9*Number\ of\ employees}$$

- **Assessing the overall model fit:**

According to Hair et. al. (2010), to assess the overall model fit of a Logistic regression model we can draw on statistical measures of overall model fit (Hosmer and Lemeshow test), pseudo R^2 measures and hit ratio. Table 26, below, shows the measures for the overall model fit represented by means of Equation 1:

Table 26. Overall model fit, Equation 1.

	Value	Sig.
Cox and Snell R^2	.257	
Nagelkerke R^2	.192	
Hosmer and Lemeshow X^2	16.233	.39
Hit ratio	81.6%	

As we can observe in table 26, Nagelkerke R^2 and Cox and Snell R^2 reached .192 and .257, respectively. Meaning that the proposed logistic model accounts for between 19.2% and 25.7% of the variation in the dependent variable. By what we can conclude that the ECG process is able to explain between 19.2% and 25.7% of the improvement in the S&E impacts on suppliers.

By its part, Hosmer and Lemeshow X^2 test resulted not significant at .05 level. Thus, revealing the non-existence of significant differences between the classification observed and the one predicted by the logistic regression. This finding is consistent with the hit ration which reached 81.6%, that is, the logistic regression model classifies correctly 81.6% of the observed cases. Therefore, we can affirm that the model described in Equation 1 shows an acceptable level of goodness of fit.

- **Interpreting the logistic coefficients and their statistical significance:**

Table 27, below, depicts the logistic coefficients estimation as well as their statistical significance.

Table 27. Variables in the Equation 1.

Independent variable	Exp(B)	Wald	df	Sig
SPM	1.628*	5.092	1	.024
OEFPM	1.005	.001	1	.976
SSJ and TCD on Employees and Social Environment	1.354	2.444	1	.118
HDECBP	1.407	2.298	1	.130
STCBP	.818	1.116	1	.291
Revenue	.988	.002	4	.966
Industry	.715	.042	3	.838
Country	1.145	.723	5	.395
Number of employees	.925	.050	4	.823
Constant (b_0)	5.945	1.781	1	.182

As we can see in table 27, the only independent variable that had any significant effect on S&E impacts on suppliers was SPM (suppliers management), which according to the EFA developed in sub-section 4.2 corresponded to the dimension A of the CG matrix. The dimension A measures the supplier's management that the businesses put into practice in terms of human dignity, solidarity and social justice, environmental sustainability and, transparency and co-determination. This finding was relevant to the current research as it allowed to affirm that by managing their relations with suppliers according to the dimension A of the CG matrix, the businesses made positive S&E impact on their suppliers.

How much S&E impact did the European ECG firms generated on their suppliers? To provide an answer, we looked at the exponentiated coefficients (Exp(B)). In the case of SPM, it reached 1.628, meaning that for every extra point that the firms got in the dimension A (A1, A2, A3, A4) the probability of generating positive vs. non-generating S&E impacts on suppliers increased by 62.8%.

Finally, it is important to note that we did not find any differences by businesses' size, industry or home country as the variables revenue, number of employees, industry, and country resulted non-significant.

▪ **Hypothesis 2, definition:**

The European businesses that have completed the ECG process by producing their CGBS, generate positive S&E impacts on funders above their industry average. Thus, this hypothesis can be translated to the mathematical language as follows:

Equation 2.

> **Logit$_i$ = (Probability of improvement in S&E impact on funders/Probability of Non-improvement in S&E impact on funders) =**
>
> **= e $^{b0+b1*SPM + b2*OEFPM + b3* SSJTCDESE + b4*HDECBP + b5*STCBP + b6*Revenue + b7*Industry + b8*Country + b9*Number of employees}$**

▪ **Assessing the overall model fit:**

According to Hair et. al. (2010), to assess the overall model fit of a Logistic regression model we can draw on statistical measures of overall model fit (Hosmer and Lemeshow test), pseudo R^2 measures and hit ratio. Table 28, below, shows the measures for the overall model fit represented by means of Equation 2:

Table 28. Overall model fit, Equation 2.

	Value	Sig.
Cox and Snell R^2	.194	
Nagelkerke R^2	.245	
Hosmer and Lemeshow X^2	7.028	.534
Hit ratio	80.1%	

As we can observe in table 28, Cox and Snell R^2 and Nagelkerke R^2 reached .194 and .245, respectively. Meaning that the proposed logistic model accounts for between 19.4% and 24.5% of the variation in the dependent variable. By what we can conclude that the ECG process is able to explain between 19.4% and 25.5% of the improvement in the S&E impacts on funders.

By its part, Hosmer and Lemeshow X^2 test resulted not significant at .05 level. Thus, revealing the non-existence of significant differences between the classification observed and the one predicted by the logistic regression. This finding is consistent with the hit ration which reached 80.1%, that is, the logistic regression model classifies correctly 80.1% of the observed cases. Therefore, we can affirm that the model described in Equation 2 shows an acceptable level of goodness of fit.

Table 29, below, depicts the logistic coefficients estimation as well as their statistical significance.

Table 29. Variables in the Equation 2.

Independent variable	Exp(B)	Wald	df	Sig
SPM	.815	1.133	1	.287
OEFPM	1.266*	1.659	1	.018
SSJ and TCD on Employees and Social Environment	.961	.048	1	.826
HDECBP	.921	.194	1	.659
STCBP	1.119	.384	1	.535
Revenue	.604	3.291	4	.070
Industry	1.977	.021	3	.978
Country	1.106	.403	5	.526
Number of employees	3.562*	9.267	4	.002
Constant (b_0)	59.200	.000	1	.999

As we can see in table 29, one of the independent variables that had any significant effect on S&E impacts on funders was OEFPM (owners, equity and financial service providers management), which according to the EFA developed in sub-section 4.2 corresponded to the dimension B of the CG matrix. The dimension B measures the owners, equity and financial service providers management that the businesses put into practice in terms of human dignity, solidarity and social justice, environmental sustainability and, transparency and co-determination. This finding was relevant to the current research as it allowed to affirm that by managing their relations with owners and financial service providers according to the dimension B of the CG matrix, the businesses made positive S&E impact on their owners and financial service providers.

How much S&E impact did the European ECG firms generated on their suppliers? To provide an answer, we looked at the exponentiated coefficients (Exp(B)). In the case of OEFPM, it reached 1.266, meaning that for every extra point that the firms get in the dimension B (B1, B2, B3, B4) the probability of generating positive vs. non-generating S&E impacts on owners and financial service providers increased by 26.6%.

Finally, it is important to note that we did not find any significant differences by industry or home country as the variables revenue, number of employees, industry, and country resulted non-significant. As in the case of the businesses' size, the revenue resulted not-significant whilst the number of employees showed a significant positive relationship with the probability of producing vs. non-producing S&E impacts on funders. In this sense, the Exp (B) was 3.562 which meant that as the business' size increases the probability of generating positive vs. non-generating impacts on funders increases by 256.2% every time that the firms scale a size level in the classification (micro -> small -> medium -> large).

▪ **Hypothesis 3, definition:**

The European businesses that have completed the ECG process by producing their CGBS, generate positive S&E impacts on people above their industry average. Thus, this hypothesis can be translated to the mathematical language as follows:

Equation 3.

Logit$_i$ = (Probability of improvement in S&E impact on people/Probability of Non-improvement in S&E impact on people) =

$$= e^{\; b0+b1*SPM + b2*OEFPM + b3*\; SSJTCDESE + b4*HDECBP + b5*STCBP + b6*Revenue + b7*Industry +}$$
$$^{b8*Country + b9*Number\; of\; employees}$$

▪ **Assessing the overall model fit:**

According to Hair et. al. (2010), to assess the overall model fit of a Logistic regression model we can draw on statistical measures of overall model fit (Hosmer and Lemeshow test), pseudo R^2 measures and hit ratio. Table 30, below, shows the measures of the overall model fit represented by means of Equation 3:

Table 30. Overall model fit, Equation 3.

	Value	Sig.
Cox and Snell R^2	.084	
Nagelkerke R^2	.135	
Hosmer and Lemeshow X^2	7.259	.509
Hit ratio	80.1%	

As we can observe in table 30, Cox and Snell R^2 and Nagelkerke R^2 reached .084 and .135, respectively. Meaning that the proposed logistic model accounts for between 8.4% and 13.5% of the variation in the dependent variable. By what we can conclude that the ECG process is able to explain between 8.4% and 13.5% of the improvement in the S&E impacts on people. Therefore, showing poor levels of goodness of fit.

However, Hosmer and Lemeshow X^2 test resulted not significant at .05 level. Thus, revealing the non-existence of significant differences between the classification observed and the one predicted by the logistic regression. This finding is consistent with the hit ration which reached 80.1%, that is, the logistic regression model classifies correctly 80.1% of the observed cases. Therefore, we cannot affirm that the model described in Equation 3 shows an acceptable level of goodness of fit.

Table 31, below, depicts the logistic coefficients estimation as well as their statistical significance.

Table 31. Variables in the Equation 3.

Independent variable	Exp(B)	Wald	df	Sig
SPM	.790	1.394	1	.238
OEFPM	.924	.180	1	.671
SSJ and TCD on Employees and Social Environment	1.575	5.236	1	.022
HDECBP	1.138	.408	1	.523
STCBP	.928	.158	1	.691
Revenue	.614	3.185	4	.074
Industry	1.852	3.289	3	.349
Country	.954	.078	5	.780
Number of employees	1.408	.878	4	.349
Constant (b_0)	22.214	.000	1	.999

As we can see in table 31, the only variable that showed a positive relationship with the S&E impact on people was SSJ and TCD on Employees and Social Environment, which according to the EFA developed in sub-section 4.2, included indicators from dimensions C and D (C2, C4, E2, and E4). However, as the model goodness of fit was poor we cannot confirm this impact as being statistically significant.

The fact that, according to the data, it was not possible to identify any statistically significant relationship between any of the independent variables and the S&E impacts on people may be due to the problems in the definitions of the dimensions C, D, and D of the CG matrix revealed by EFA.

Assessing Social and Environmental impact on Customers

▪ **Hypothesis 4, definition:**
The European businesses that have completed the ECG process by producing their CGBS, generate positive S&E impacts on customers above their industry average. Thus, this hypothesis can be translated to the mathematical language as follows:

Equation 4.

> **Logit$_i$ = (Probability of improvement in S&E impact on customers/Probability of Non-improvement in S&E impact on customers) =**
>
> = e $^{b0+b1*SPM + b2*OEFPM + b3* SSJTCDESE + b4*HDECBP + b5*STCBP + b6*Revenue + b7*Industry + b8*Country + b9*Number of employees}$

- **Assessing the overall model fit:**

According to Hair et. al. (2010), to assess the overall model fit of a Logistic regression model we can draw on statistical measures of overall model fit (Hosmer and Lemeshow test), pseudo R^2 measures and hit ratio. Table 32, below, shows the measures for the overall model fit represented by means of Equation 4:

Table 32. Overall model fit, Equation 4.

	Value	Sig.
Cox and Snell R^2	.110	
Nagelkerke R^2	.183	
Hosmer and Lemeshow X^2	6.096	.636
Hit ratio	83.5	

As we can observe in table 32, Cox and Snell R^2 and Nagelkerke R^2 reached .110 and .183, respectively. Meaning that the proposed logistic model accounts for between 11% and 18.3% of the variation in the dependent variable. By what we can conclude that the ECG process is able to explain between 11% and 18.3% of the improvement in the S&E impacts on customers. Therefore, showing poor levels of goodness of fit.

However, Hosmer and Lemeshow X^2 test resulted not significant at .05 level. Thus, revealing the non-existence of significant differences between the classification observed and the one predicted by the logistic regression. This finding is consistent with the hit ration which reached 83.5%, that is, the logistic regression model classifies correctly 83.5% of the observed cases. Therefore, we cannot affirm that the model described in Equation 4 shows an acceptable level of goodness of fit.

- **Interpreting the logistic coefficients and their statistical significance:**

Table 33, below, depicts the logistic coefficients estimation as well as their statistical significance.

Table 33. Variables in the Equation 4.

Independent variable	Exp(B)	Wald	df	Sig
SPM	.687	3.017	1	.082
OEFPM	1.144	.448	1	.503
SSJ and TCD on Employees and Social Environment	1.504	3.758	1	.053
HDECBP	1.211	.762	1	.383
STCBP	.884	.383	1	.536
Revenue	.443*	7.706	4	.006
Industry	.801	2.229	3	.526
Country	1.057	.099	5	.753
Number of employees	2.451*	4.675	4	.031
Constant (b_0)	2,814.600	.000	1	.999

As we can see in table 33, none of the independent variables built upon the indicators employed in the CG matrix and the CGBS showed any statistically significant relationship with the S&E impacts on customers. However, we expected some of the indicators associated with dimension D to be relevant to the generation of impacts on customers. According to the EFA depicted in the previous sub-section, factor 4 named as HDECBP (Human Dignity in Employees and Business Partners management) included the indicators C1 and D1. Whilst factor 5 named as STCBP (Solidarity and Transparency in Customers and Business Partners management), included the indicators D2, D4 and E1.

On the other hand, according to the results of table 33, business size seemed to be statistically significant. Notwithstanding, the results were divergent as the revenue showed a negative impact whilst the number of employees had a positive one. This divergence along with the poor goodness of fit made us discard the existence of any statistically significant relationship in this case.

Assessing Social and Environmental impact on Society

▪ **Hypothesis 5, definition:**

The European businesses that have completed the ECG process by producing their CGBS, generate positive S&E impacts on society above their industry average. Thus, this hypothesis can be translated to the mathematical language as follows:

Equation 5.

$$\text{Logit}_i = \text{(Probability of improvement in S\&E impact on society/Probability of Non-improvement in S\&E impact on society)} =$$

$$= e^{\,b_0 + b_1 * SPM + b_2 * OEFPM + b_3 * SSJTCDESE + b_4 * HDECBP + b_5 * STCBP + b_6 * Revenue + b_7 * Industry + b_8 * Country + b_9 * Number\ of\ employees}$$

▪ **Assessing the overall model fit:**

According to Hair et. al. (2010), to assess the overall model fit of a Logistic regression model we can draw on statistical measures of overall model fit (Hosmer and Lemeshow test), pseudo R^2 measures and hit ratio. Table 34, below, shows the measures for the overall model fit represented by means of Equation 5:

Table 34. Overall model fit, Equation 5.

	Value	Sig.
Cox and Snell R^2	0.051	
Nagelkerke R^2	0.077	
Hosmer and Lemeshow X^2	5.238	.732
Hit ratio	77.7%	

As we can observe in table 34, Cox and Snell R^2 and Nagelkerke R^2 reached .051 and .077, respectively. Meaning that the proposed logistic model accounts for between 5.1% and 7.7% of the variation in the dependent variable. By what we can conclude that the ECG process is able

to explain between 5.1% and 7.7% of the improvement in the S&E impacts on society. Therefore, showing poor levels of goodness of fit.

However, Hosmer and Lemeshow X^2 test resulted not significant at .05 level. Thus, revealing the non-existence of significant differences between the classification observed and the one predicted by the logistic regression. This finding is consistent with the hit ration which reached 77.7%, that is, the logistic regression model classifies correctly 77.7% of the observed cases. Therefore, we cannot affirm that the model described in Equation 5 shows an acceptable level of goodness of fit.

- **Interpreting the logistic coefficients and their statistical significance:**

Table 35, below, depicts the logistic coefficients estimation as well as their statistical significance.

Table 35. Variables in the Equation 5.

Independent variable	Exp(B)	Wald	df	Sig
SPM	.875	.555	1	.456
OEFPM	1.014	.006	1	.937
SSJ and TCD on Employees and Social Environment	1.094	.264	1	.608
HDECBP	1.126	.435	1	.510
STCBP	1.073	.165	1	.685
Revenue	.626	3.449	4	.063
Industry	.382	.792	3	.851
Country	.922	.277	5	.598
Number of employees	1.985	3.838	4	.052
Constant (b_0)	240.480	.000	1	.999

As we can see in table 35, none of the independent variables built upon the indicators employed in the CG matrix and the CGBS showed any statistically significant relationship with the S&E impacts on customers. Nor any of the variables related to the business profile (revenue, industry, country, and number of employees) resulted statistically significant. This fact along with the poor level of goodness of fit brought us to conclude that any of the indicators included in the CG matrix had any statistically significant relationship with the S&E impacts on society.

▪ **Hypothesis 6, definition:**

The European businesses that have completed the ECG process by producing their CGBS, generate positive economic impacts above their industry average. Thus, this hypothesis can be translated to the mathematical language as follows:

Equation 6.

Logit$_i$ = (Probability of improvement in Economic impact / Probability of Non-improvement in Economic impact) =

= e $^{b0+b1*SPM + b2*OEFPM + b3* SSJTCDESE + b4*HDECBP + b5*STCBP + b6*Revenue + b7*Industry + b8*Country + b9*Number of employees}$

▪ **Assessing the overall model fit:**

According to Hair et. al. (2010), to assess the overall model fit of a Logistic regression model we can draw on statistical measures of overall model fit (Hosmer and Lemeshow test), pseudo R^2 measures and hit ratio. Table 36, below, shows the measures for the overall model fit represented by means of Equation 6:

Table 36. Overall model fit, Equation 6.

	Value	Sig.
Cox and Snell R^2	.381	
Nagelkerke R^2	.423	
Hosmer and Lemeshow X^2	13.329	.201
Hit ratio	78.2%	

As we can observe in table 36, Cox and Snell R^2 and Nagelkerke R^2 reached .381 and .423, respectively. Meaning that the proposed logistic model accounts for between 38.1% and 42.3% of the variation in the dependent variable. By what we can conclude that the ECG process is able to explain between 38.1% and 42.3% of the improvement in the economic impacts.

By its part, Hosmer and Lemeshow X^2 test resulted not significant at .05 level. Thus, revealing the non-existence of significant differences between the classification observed and the one predicted by the logistic regression. This finding is consistent with the hit ration which reached 78.2%, that is, the logistic regression model classifies correctly 78.2% of the observed cases. Therefore, we can affirm that the model described in Equation 6 shows an acceptable level of goodness of fit.

- **Interpreting the logistic coefficients and their statistical significance:**

Table 37, below, depicts the logistic coefficients estimation as well as their statistical significance.

Table 37. Variables in the Equation 6.

Independent variable	Exp(B)	Wald	df	Sig
SPM	1.565*	9.130	1	.003
OEFPM	1.907*	.339	1	.015
SSJ and TCD on Employees and Social Environment	1.013	.005	1	.943
HDECBP	.986	.006	1	.940
STCBP	.760	2.320	1	.128
Revenue	.967	.017	4	.895
Industry	.668	.107	3	.744
Country	.880	.683	5	.409
Number of employees	1.122	.121	4	.728
Constant (b_0)	7.120	2.094	1	.148

As we can see in table 37, the independent variables SPM (dimension A of the CG matrix) and OEFPM (dimension B of the CG matrix) showed a significant positive relationship with the improvement of the firms' economic impacts. Meaning that the management of suppliers and owners and financial service providers according to the ECG principles and values are antecedents of the generation of positive economic impacts for the firms.

In the case of the suppliers' management according to the ECG processes, it increased the probability of producing positive vs. non-producing economic impacts for the firms by 56.5%. Whilst in regards to the management of owners, equity and financial services providers, it increased the probability of producing positive vs. non-producing economic impacts for the firms by 90.7%.

5. Conclusions.

One of the aims of the present report was to provide an introduction to the theoretical foundations that can support the ECG model from the business administration field. In this sense, in section 2 entitled "Theoretical framework," we pointed out the four approaches that help to ground the ECG model within the field of business administration: the Stakeholders theory, Shared value approach, Triple bottom line and, corporate sustainability approach.

The Stakeholders approach is clearly one of the bases of the ECG model as it helps to operationalize the value creation. In fact, every time one is thinking about creating value, one is thinking to whom is he / she willing to create such value. In addition, the ECG model also hares with the Shared value approach the underlying idea that the co-creation of social and economic value is possible and reinforces the businesses. By its part, the ECG model takes the idea of measuring the different types of value created by the businesses from the triple bottom line approach. Finally, from the corporate sustainability approach, the ECG model takes the need to balance the creation of the three types of value (economic, social and environmental). However, the ECG model goes beyond all the previously described business approaches as it prioritizes the creation of social and environmental value over the economic one. But it does not mean turning businesses into unprofitable, it only involves an important shift in the way businesses operate and set up their priorities.

Later on, we analyzed the European ECG businesses profile by means of descriptive statistics. The profile can be summarized as follows: the businesses mostly operate in the tertiary sector, according to the NACE classification they develop professional, scientific and technical activities (M) (except in Italy where they focus on accommodation and food service activities (I)), they are mostly SMEs, established since 1991 and onwards (except in Italy where most of them established between 1951 and 1980).

Regarding the CGBS production, most of the firms produced it between 2013 and 2016. Being this trend common in all the countries except in Switzerland, where most of the businesses produced their CGBS in 2013 or 2016. In overall, most of the European businesses followed a peer verification process except the Spanish ones that did it by means of an external audit.

Moreover, most of the businesses declared having perceived benefits associated with the production of the CGBS and still working under the ECG principles. As for the businesses ECG rating, most of them fall into the experienced level with no significant differences by home country. However, most of them were not sure about willing to produce another CGBS. This was not the case of the Spanish ones that mostly declared to be willing to produce another CGBS. Maybe the fact that in Spain most of the businesses went through an external audit can explain the differences in the firms' willing.

Regarding the impacts, most of the European ECG businesses declared having perceived some type of positive impact (social, environmental or economic) in comparison with their industry average position. Notwithstanding the above mentioned, most of the firms did not attribute any of the impacts on the ECG process. To test whether such impacts were or not attributable to the production of the CGBS, after checking the statistical reliability and validity of the metrics employed in the CG matrix and the CGBS, we proceeded to estimate the logistic regressions that related the impacts and the scores the business got from theirs CGBS.

Being one of the purposes of the present study to check whether the measures employed by the CG matrix and the CGBS were valid and reliable metrics. To do so, we applied

EFA on a sample of 206 (out of 400) European firms that had produced and audited a CGBS since 2011. The results of EFA revealed a five factors solution. Hence, we concluded that the dataset showed an underlining structure similar to the one depicted in the CGBS. However, in regards to the dimensions, only two of the five factors revealed by EFA coincided with the ones included in the CGBS (SPM -> A and OEFPM -> B).

On the other hand, the other three factors were built upon the overlap of different dimensions according to the design of the CGBS. For that reason, we would recommend merging some of the dimensions. Specifically, factor 3 included 4 items related to the management of employees and social environment in terms of solidarity and social justice and transparency and co-determination; factor 4 included 2 items measuring the management of employees and customers and business partners in terms of human dignity and, finally, factor 5 included 2 items related to the management of customers and business partners in terms of solidarity and social justice and transparency and co-determination in addition to one item related to the management of social environment in terms of human dignity. This indicated that the boundaries between the different stakeholder's dimensions considered in the model are blur whilst the distinction between solidarity and transparency and co-determination are not clear. So these dimensions could be considered as suitable to merge in a broader dimension.

According to the results of EFA, 3 out of 5 items aimed at the measurement of the dimensions C, D, and E in terms of environmental sustainability had to be removed from the model. As a consequence, it would be suitable to develop new measures of the management of some stakeholders (C, D, and E) in terms of environmental sustainability to be included in a new version of the CGBS. Therefore, the dimensions C, D, and E must be re-defined and re-structured taking into account the results provided by means of EFA.

As for the logistic regression results, we can conclude that all the dimensions of the CG matrix that showed full reliable and valid statistically definition according to EFA (dimension A -> SPM and dimension B-> OEFPM), demonstrated to have a positive relationship with the improvement of the S&E impacts they were supposed to have. That is, dimension A (SPM) showed a positive effect on the social and environmental impacts on suppliers and dimension B (OEFPM) showed a positive effect on the social and environmental impacts on owners, and equity and financial service providers. In addition, the same two dimensions demonstrated to have a positive effect on economic impacts. By what we concluded that following the ECG process did not have any negative economic impact for the firms. On contrary, it demonstrated to reinforce their market position as it helped them to implement the main features of differentiation strategies. Being these differentiation strategies based on corporate sustainability. Therefore, we can affirm that the ECG process levered the firms to go into corporate sustainability management and, thus, we can consider the CG matrix and the CGBS as useful corporate sustainability management tools that need some improvements in their evolution.

In this sense, the fact that we could not identify any positive impact caused by dimensions C, D and E did not mean that dimensions C, D, and D were not producing any type of positive impact. Thus, we think that the fact that the definitions of these three dimensions and their correspondent indicators were blur did not allow to identify any type of impact associated to them. For this reason, we advocate for a redefinition of these three dimensions and their associated indicators with the support of statistical techniques.

Finally, this study is based on EFA and Logistic regression as it is the first one that tries to validate the CGBS as an adequate tool to capture non-financials and to test its impacts. Future research should confirm these results by means of confirmatory factor analysis along with other regression techniques.

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Annexes. Questionnaire.

Purpose of this Survey
Your business (organization) is one of over 400 that have to date produced an Economy for the Common Good Balance Sheet. As we spread the message about ECG into other countries and encourage other businesses/organizations to adopt the ECG Matrix, it is essential that we are able to communicate the benefits to them of doing so.

Your participation in this survey is **very** important to the future of the ECG movement and therefore we would deeply appreciate it if you could complete this survey within the next few days. It should only take you about 30 minutes.

Very important note:
Please note that your answers will be aggregated with others to give an overall profile of ECG organizations and the perceived benefits of being a member of the movement. Your individual answers will be kept entirely confidential and it will not be possible to identify your responses within the final report (of which we can give you a copy). So we encourage you to answer as fully as possible.

If we consider your feedback may be of particular interest to others in the ECG community, we would ask your permission before using it in an attributed or, if you prefer, an unattributed way. You could also, of course, decline for any of your feedback to be used.

About your business or organization

1. In simple terms (one sentence) please describe the principal activities of your organization (e.g. manufacturer of children's clothes; seaside hotel; retailer of jewelry; management consultancy specializing in Sustainability; legal practice etc.).

2. In which year was your organization established?

3. Which is your organization's home country? (Countries sorted by GDP per capita, from lower to upper)
   1. Spain
   2. Italy
   3. UK
   4. Germany
   5. Austria
   6. Switzerland

4. How many people work for your organization (including yourself)?

5. Do you have a website?
   1. Yes
   2. No

If Yes - please give the web domain:

6. Please tell us for the last full trading year, which level of annual sales revenue your organization falls into:

1. Up to € 500,000
2. Up to € 2 million
3. Up to € 10 million
4. Up to € 50 million
5. More than € 50 million

About your work with ECG

7. In which year(s) did you do your ECG Balance Sheet?

8. Was your Balance Sheet audited?

1. YES
2. NO

If YES was the audit done by

1. A peer organization?
2. An ECG auditor?

9. What were your organization's Balance Sheet scores?

9.1 You can upload a copy of your organization's ECG Balance Sheet.

9.2 If you do not want to provide a copy of your organization's ECG Balance Sheet, please provide the scores your business obtained in the following sections and sub-sections:

	Score
A. Suppliers	
A.1. Ethical supply management: A.1.1. Regional, ecological and social aspects / superior alternatives are considered A.1.2. Active examination of the impact of procured P/S and processes to ensure verification and determine the form and extent thereof A.1.3. Basic structural conditions for fair pricing	
B. Investors	
B.1. Ethical finance management: B.1.1. Ethical-sustainable quality of financial services provider B.1.2. Investments oriented to the Common Good B.1.3. Entrepreneurial financing oriented to the Common Good	
C. Employees, including business owners	

C.1. Workplace quality and affirmative action: C.1.1. Employee-oriented organizational culture and structures C.1.2. Fair employment and payment policy C.1.3. Occupational safety and health promotion including work-life balance/flexible working time C.1.4. Affirmative action and diversity	
C.2. Fair distribution of gainful employment: C.2.1. Reduction of normal working hours C.2.2. Increase in the proportion of part-time work models and the use of temporary employment (with adequate pay) C.2.3. The conscious approach towards (life-) working time	
C.3. Ecological behavior of employees: C.3.1. Nutrition at the workplace C.3.2. Home-to-work mobility C.3.3. Organizational culture, awareness raising, and in-house processes	
C.4. Just distribution of income: C.4.1. Income divergence in the company C.4.2. Transparency and institutionalization C.4.3. Minimum income C.4.4. Maximum income	
C.5. Corporate democracy and transparency C.5.1. Degree of transparency C.5.2. Legitimization of executive personnel C.5.3. Co-determination concerning fundamental decisions C.5.4. Employee co-ownership	
D. Customers and business partners	
D.1. Ethical customer relations D.1.1. The total extent of ethical customer relations measures D.1.2. Product transparency[1], fair pricing and ethical selection of customers D.1.3. The extent of customer co-determination/joint product development/market research D.1.4. Service management	
D.2. Cooperation with business in the same field D.2.1. Disclosure of information + passing on of technology D.2.2. Transfer of personnel, passing on of contracts and financial resources; cooperative market participation D.2.3. Cooperative marketing	
D.3. The ecological design of products and services D.3.1. In ecological comparison to P/S of competitors or alternatives, products/services have equal utility D.3.2. Sufficiency (see excursus below): active design for ecological use and sufficient consumption D.3.3. Communication: active communication of ecological aspects vis-a-vis customers	
D.4. Socially oriented design of products and services D.4.1. Facilitation of access to information/products/services for disadvantaged customer groups D.4.2. Structures worthy of promotion** are supported by distribution policies	

D.5. Raising social and ecological sectorial standards D.5.1. Cooperation with competitors and partners of the value network D.5.2. Active contribution to raising legislative standards D.5.3. Range, content-related scope and depth	
E. Social Environment	
E.1. Value and societal impact of products and services E.1.1. Products/services meet a basic need or serve the development of human beings / the community / the earth and generate positive use E.1.2. Ecological and social comparison of products/services to alternatives with the similar final benefit	
E.2. Contribution to the community E.2.1. Performance E.2.2. Effects E.2.3. Intensity	
E.3. Reduction of environmental impact E.3.1. In regard to the absolute impact E.3.2. Concerning relative impact (sectorial comparison) in terms of the state of technology and legal regulations, the company E.3.3. In regard to management and strategy, the company	
E.4. Common-Good oriented use of profits E.4.1. External dividend pay-out E.4.2. Use of profits oriented to the Common Good: dividend pay-out and labor-based	
E.5. Societal transparency and co-determination E.5.1. Scope of Common Good Report E.5.2. GRI Level E.5.3. Type of co-determination + documentation E.5.4. Scope of co-determination + contact groups involved	

10. Are you intending to produce another ECG Balance Sheet?
    1. YES
    2. NO
    3. Not sure
- If YES, when?

- If NO or Not Sure, why not?
  (Please answer in one sentence)

11. Do you consider that you are still working to the principles as outlined in the ECG Balance Sheet?
    1. YES
    2. NO
    3. Not sure

     If NO or Not sure, please explain why here:

Social and Ecological impacts and benefits of completing the ECG Balance Sheet and Report:

12. Do you believe that producing an ECG Balance Sheet/report and adopting ECG principles has had positive benefits to your business or organization?
> 1. Yes
> 2. No

13. Since producing your first ECG Balance Sheet, please describe what has happened to your organization's operations in comparison with the average position of your industry/sector (Being: 1 much lower than the average; 2 lower than the average; 3 on the average; 4 above the average; 5 much better than the average).

> **Note:** This question is about perceivable operational changes in your organization since producing the ECG Balance Sheet. Further down, question (Nr. 16) will ask to what extent these changes are attributable to the ECG process that took place in your organization.

Suppliers:	1	2	3	4	5
SP1. Percentage of local suppliers.					
SP2. Percentage of certified sustainable supplies.					
SP3. Carbon print caused by the supply chain and logistics.					
SP4. Fair prices to suppliers.					
SP5. Monitoring supplier firms working conditions (International Labour Organization Standards).					
Funders:					
F1. Fair distribution of income between owners and workforce.					
F2. Prioritizing environmentally sustainable investments.					
F3. Prioritizing socially driven investment.					
F4. Monitoring the ethical behavior of the banks and other financial firms you work with. Avoiding those showing unethical conducts and abuses.					
People:	1	2	3	4	5
P1. Staff retention.					
P2. Motivation / well-being.					
P3. Organizational climate.					
P4. Staff input into decisions.					
P5. Relations between staff & management.					
P6. The ratio between the highest and lowest paid.					
P7. Participative management implementation.					
P8. Percentage of women in the top management team.					
P9. Percentage of women in the middle management line.					
P10. Ergonomics.					
P11. Flexibility and teleworking.					
P12. Hiring and promoting employees from the local community.					

P13. Minimizing employees' commuting to work.					
P14. Percentage of disabled employees.					
Customers:					
C1. Product/ service information to customer is fair and transparent.					
C2. Fair prices to customers.					
C3. Minimizing packaging.					
C4. Customers trust us because they find we meet their needs in the fairest way.					
C5. Cooperation with customers.					
C6. Minimizing carbon print caused by logistics between the organization and its customers.					
C7. The organization's products/services allow its customers to responsibly consume from a social and/or environmental point of view.					
Society:	1	2	3	4	5
S1. Fair taxation.					
S2. Respecting and promoting the local language and culture in the markets in which the organization operates.					
S3. Minimizing environmental impacts of production and logistics.					
S4. Reputation.					
S5. Local sports sponsorship.					
S6. Local culture sponsorship.					
S7. Cooperation with local social movements.					

14. Has your organization communicated to stakeholders that it is implementing the principles of ECG?

       1.   Yes. *(Please, go to question 15)*
       2.   No. *(Please, go to question 16)*

15. To whom has your organization communicated that it is implementing ECG?

       1.   Suppliers.
       2.   Investors.
       3.   Employees.
       4.   Customers.
       5.   Business partners.
       6.   Social environment.

16. In relation to your answers in 13 above, and thinking about each of them in turn, how much impact do you feel ECG has had on your organization's operations (1 very negative impact, 2 negative impact, 3 no impact, 4 little impact, and 5 major impact):

Suppliers:	1	2	3	4	5
SP1. Percentage of local suppliers.					
SP2. Percentage of certified sustainable supplies.					
SP3. Carbon print caused by the supply chain and logistics.					
SP4. Fair prices to suppliers.					
SP5. Monitoring supplier firms working conditions (International Labour Organization Standards).					
Funders:					
F1. Fair distribution of income between owners and workforce.					
F2. Prioritizing environmentally sustainable investments.					
F3. Prioritizing socially driven investment.					
F4. Monitoring the ethical behavior of the banks and other financial firms you work with. Avoiding those showing unethical conducts and abuses.					
People:	1	2	3	4	5
P1. Staff retention.					
P2. Motivation / well-being.					
P3. Organizational climate.					
P4. Staff input into decisions.					
P5. Relations between staff & management.					
P6. The ratio between the highest and lowest paid.					
P7. Participative management implementation.					
P8. Percentage of women in the top management team.					
P9. Percentage of women in the middle management line.					
P10. Ergonomics.					
P11. Flexibility and teleworking.					
P12. Hiring and promoting employees from the local community.					
P13. Minimizing employees' commuting to work.					
P14. Percentage of disabled employees.					
Customers:					
C1. Product/ service information to customer is fair and transparent.					
C2. Fair prices to customers.					
C3. Minimizing packaging.					

C4. Customers trust us because they find we meet their needs in the fairest way.					
C5. Cooperation with customers.					
C6. Minimizing carbon print caused by logistics between the organization and its customers.					
C7. The organization's products/services allow its customers to responsibly consume from a social and/or environmental point of view.					
Broad Society:	1	2	3	4	5
S1. Fair taxation.					
S2. Respecting and promoting the local language and culture in the markets in which the organization operates.					
S3. Minimizing environmental impacts of production and logistics.					
S4. Reputation.					
S5. Local sports sponsorship.					
S6. Local culture sponsorship.					
S7. Cooperation with local social movements.					

17. Thinking about your answers above and any other positive (but non-financial) impacts, please list below the three most significant changes to your organizations since adopting the ECG Balance Sheet.

      1)

      2)

      3)

Economic and Financial impacts of ECG:

18. Since producing your ECG Balance Sheet, please describe what has happened to the economic value your organization delivers compared with the average position of your industry/sector, (Being: 1 Much lower than the average; 2 Lower than the average; 3 On the average; 4 Above the average; 5 Much better than the average):

Item:	1	2	3	4	5
EV1. Sales revenue.					
EV2. Profit					
EV3. Market Share					
EV4. Productivity					
EV5. Customers Satisfaction					
EV6. Product/Service Quality					
EV7. Product and/or Process Innovation.					
EV8. Brand image.					
EV9. Cost reduction.					
EV10. Product/service differentiation.					
EV11. Improvement in management processes.					

19. How much impact do you feel ECG has had on your economic performance? (1 very negative impact, 2 negative impact, 3 no impact, 4 little impact, and 5 major impact):

Item:	1	2	3	4	5
EV1. Sales revenue.					
EV2. Profit					
EV3. Market Share					
EV4. Productivity					
EV5. Customers Satisfaction					
EV6. Product/Service Quality					
EV7. Product and/or Process Innovation.					
EV8. Brand image.					
EV9. Cost reduction.					
EV10. Product/service differentiation.					
EV11. Improvement in management processes.					

20. Please summarise in a few brief sentences, the financial impact that you feel ECG has had on your business (if any):

21. Finally, if you were to describe to another business (or organization) which was considering joining the ECG movement, the impact on your business or organization since adopting ECG principles, please write what that impact has been. Please try not to generalize and be as specific as possible about your own experience.
(Max 100 words please)

A BIG THANK YOU FROM THE ECG INTERNATIONAL MOVEMENT. WE REALLY APPRECIATE YOUR CONTRIBUTION. NOT ONLY WILL IT HELP US UNDERSTAND MORE ABOUT ECG AND HOW WE SHOULD DEVELOP IN THE FUTURE BUT IT WILL ALSO ENABLE US TO COMMUNICATE BETTER WITH THOSE CONSIDERING JOINING OUR MOVEMENT.

IF YOU WOULD LIKE A COPY OF THE SURVEY RESULTS, PLEASE TICK HERE ...... AND PROVIDE AN E-MAIL.