Sustainability and firms' mission in a developing country: The case of voluntary certifications and programs in Costa Rica

Jorge A. Valenciano Salazar

Francisco J. André

Gregorio Martín-de-Castro

Abstract: Voluntary environmental and social certifications represent a channel by which firms can contribute to sustainable development. Using qualitative and quantitative methods we explore the motivations and obstacles that Costa Rican companies face when adopting Carbon Neutral (CN) and Fairtrade (FT) certifications. CN is a domestic certification aimed at reducing or offsetting carbon emissions and fighting climate change. FT is a well-known international label that guarantees compliance with environmental and social standards. We conclude that ethical and environmental reasons influence the managers' decision, along with economic and strategic incentives, such as improving the image of the company and the relationship with stakeholders. High investment and certification costs are ranked as the most difficult obstacles to overcome. By exploring the differences between both certifications, we find out that increasing sales, market shares or prices are more important motivations for the FT companies than for CN ones.

Keywords: Carbon Neutral; Fairtrade; Motivations; Obstacles; Costa Rica.

1. Introduction

Incorporating the United Nations (UN) Sustainable Development Goals (SDGs) is an important challenge to countries, companies, and policy makers involving environmental, economic, and social concerns (UN 2019). The Sustainable Development (SD) concept was popularized in the

business and management literatures thanks to Stuart L. Hart's 1995 seminal work on the Natural Resource-Based View (NRBV). Such a view is understood as the most proactive environmental and social firm's strategy "to sever the negative links between environment and economic activity in the developing countries of the South" (Hart 1995, 996). Thus, SD is strongly related to the developed-developing countries link. As Hart (1995) remarked, SD implies recognizing the link between material consumption in the North (developed countries) and environmental degradation in the South (developing countries).

Under a NRBV and Stakeholders' logics (Freeman 1984), companies should understand these links by building new markets, especially in developing countries, while reducing their environmental negative externalities. In doing so, companies develop social and environmental capabilities that can reinforce their business models and lead to competitive success and superior performance (Porter and van der Linde 1995; Aragón-Correa and Sharma 2003; Bansal and Clelland 2004). Such success can help increase operations' efficiency by reducing energy inputs and waste, avoiding penalties or stakeholders' conflicts, improving sales, market access and funding, due to stakeholders' engagement and a better corporate image and reputation (Bansal and Hunter 2003).

Apart from these business-driven incentives, the literature has identified other drivers for companies to undertake sustainable practices. The Micro-Foundations of the strategy framework (Foss 2011; Barney and Fellin 2013; Molina-Azorín 2014) highlight the top management personal characteristics, such as personal and ethical motives, as the ultimate driver of firms' social and environmental commitment.

Under the logic of the Institutional Theory (Bansal and Hunter 2003), we can frame voluntary environmental and social certifications and programs (VESCPs) as non-mandatory instruments available for companies willing to adopt the SD principles and improve their social, ethical, and

environmental behavior (OECD 2000). By adopting these VESCPs, firms can reduce the environmental impact of business activities and promote social development (Delmas and Toffel 2008; Martín-de Castro et al. 2017). Given the voluntary nature of these approaches, it seems relevant to determine what are the main factors driving firms to adopt them and the main obstacles that may prevent them from doing so. This is the central question that we tackle in this article.

Although VESCPs have been traditionally used by firms operating in developed and high-income countries, they are being increasingly adopted by companies in developing countries as well. Vogel (1997) stated that countries and customers with stricter environmental standards often force foreign producers in countries with weaker domestic standards, which is known as the 'California effect', and pointed out how Latin American governments closely follow American pesticide regulations, due to the importance of the US market for Latin American agricultural exports. Following this seminal idea, some scholars consider that, to a large extent, the diffusion of VESCPs in developing countries is driven by the international trade relations and the role of environmentally aware consumers. Prakash and Potoski (2006) found that, if key export markets have widely adopted ISO 14001, trade can help disseminate this certification and counter a possible environmental race to the bottom. Marcoux and Urpelainen (2012) find out that this effect is relevant only in those countries where the domestic adoption levels are low enough as compared to the global average. Wo and Ma (2016) show that local Chinese suppliers with high levels of export intensity are more likely to adopt positive environment strategies. Gamso (2018) considers that companies in developing countries only experience trade-based diffusion of ISO 14001 through their exports to countries with high levels of per capita income, high levels of education and where a wide range of firms are certified.

Our field study is carried out in Costa Rica. We care about the adoption of VESCPs by firms in this country and analyze the main drivers and obstacles to this adoption. Costa Rica is considered

a developing country with a wide range of exports from agricultural commodities to products with high technological content, such as electronics and medical devices (see e.g. Gereffi, Frederick and Bamber 2019). On the other hand, it has an active role in pursuing sustainability and fighting climate change, promoting organic farming and other environmental dimensions. In addition, ecotourism is an important economy activity in the country, mainly demanded by European and American tourists. Among these environmental dimensions, the commitment to achieve country carbon neutrality by the middle of this century is perhaps one of the most ambitious goals, by which this country was named 'UN Champion of the Earth' for pioneering role in fighting climate change (see Nations Environment Programme 2019).

The main motivations and contributions of this research are the following. First, given the aforementioned importance of developing countries in the SD vision, and the fact that most studies about VESCPs have been conducted in developed countries, it seems relevant to address a developing one. Moreover, we consider Costa Rica a particularly interesting case for the reasons stated in the previous paragraph.

Second, most studies about voluntary programs, particularly in developing countries, focus on ISO 14001 (see, e.g., Nishitani 2010; Neves et.al. 2017; Gamso 2018). In the case of Costa Rica, there are a few exceptions that have addressed other voluntary approaches (although with a different approach to ours) such as the Costa Rican Certification for Sustainable Tourism (Rivera 2002), the Blue Flag beach certification program (Blackman et al. 2014), organic certifications (Lyngbæk, Muschler and Sinclair 2001; Blackman and Naranjo 2012) Carbon Neutral coffee (Birkenberg and Birner 2018) and Fairtrade (Sick 2008; Snider et al. 2017; Dragusanu and Nunn 2018). Our article addresses two voluntary programs that are not so well studied, such as Carbon Neutral (CN) and Fairtrade (FT). These have been selected for two reasons: for their especial

interest and relevance in Costa Rica, and for their role in driving companies to collaborate with the achieving of the UN SDGs.

Third, we focus on the main drivers and obstacles that Costa Rican companies face when adopting these voluntary programs. To the best of our knowledge, there is no sdudy in the literature that presents an analysis and ordering of the motivations and obstacles that Costa Rican companies face when adopting VESCPs. Particularly, we wonder whether these environmental and social approaches are adopted only for economic-strategic reasons or, on the contrary, the ethical perceptions also play a leading role in the incorporation of more sustainable practices.

We get a closer look at CN and FT in order to explore their similarities and differences in terms of firms' perception and ethical implications. Although both are voluntary approaches, there are significant differences that may have a reflection in the motivations and obstacles perceived by firms. One first important difference is that CN has an essentially environmental nature, whereas FT also incorporates an important social dimension apart from the environmental one. It seems natural to wonder how this additional social component can modify firms' perception and predisposition to adopt a voluntary certification.

Additionally, there are other important differences. First, while FT is an international label, CN is a domestic program, although in other countries, there exist different certifications that are similar in nature (see e.g. Okereke 2007; Ball et al. 2009; Murray and Dey 2009; Zeppel and Beaumont 2013; Birchall, Murphy and Milne 2015; Lee, Jung and Hwang 2016). Second, FT is mainly oriented to agricultural producers and agroindustrial companies (typically, cooperatives) while CN includes companies of all the economic sectors and also public institutions. Third, FT promote the differentiation of goods by guaranteeing their traceability and ensuring certain social and environmental production conditions, including a minimum price for producers (Ruben 2009). CN, for its part, does not guarantee differentiated prices for adopting companies.

We carry out two complementary research approaches. First, as an exploratory qualitative approximation, we perform a series of in-depth face to face interviews with managers of certified Costa Rican companies. Second, as a quantitative approach, we use a survey to measure the importance given by CN and FT certified firms to different motivations and obstacles. Then, we explore the differences and similarities in the drivers of both certifications by statistically comparing the answers of both groups of companies.

Section 2 presents the main elements on both certifications and the literature on companies' motivations and obstacles to adopt VESCPs. Section 3 describes our methodology. Section 4 presents and discusses our findings. Section 5 presents the main conclusions.

2. Background

2.1 VESCPs and the UN Sustainable Development Goals (SDGs)

The implementation of SD principles implies the adoption of environmental and social management initiatives pointed at the heart of the firm's strategy and mission (Martín-de-Castro, Amores-Salvadó and Navas-López 2016). An effective way of public adhesion to these social and environmental principles is through the adoption of voluntary certifications and programs. These practices enable companies to reduce their negative environmental impact and increase their positive impact on social development. They require the assessment of social and environmental impacts, establishing and monitoring social and environmental goals, and undergoing management review (Darnall and Edwards 2006). In sum, they constitute a set of management processes focused on the identification, measurement, and control of firm's social and environmental impacts (Bansal and Hunter 2003).

FT and CN certifications encourage companies to collaborate with the fulfillment of some of the SDGs. Through Fairtrade standards, the FT certification can facilitate poverty reduction (SDG-1), alleviate hunger, improve nutrition and food security, and promote sustainable agriculture (SDG-2). It can also help to promote sustained, inclusive, and sustainable growth, full and productive employment, and decent work (SDG-8) and reduce inequality (SDG-10). By adopting the CN certification, firms can contribute to ensure access to more sustainable energy (SDG-7), promote more resilient infrastructures and sustainable industrialization (SDG-9), and combat climate change (SDG-13) (see UN 2019). In addition, such initiatives help signal environmental and social commitment (Connelly et al. 2011) to relevant company's audiences, such as investors, competitors, customers, Public Administrations, or non-governmental organizations (NGOs), and they give the company legitimacy in the eyes of society and the subsequent 'license to operate'. This is especially important for companies operating in developing countries (Hart 1995).

Although the well-known Porter hypothesis (Porter and van der Linde 1995) states a generalized positive effect of environmental management on firms' performance, the effective implementation of each certification involves specific benefits and obstacles, as Darnall and Edwards (2006) remarked. In what follows, we review the main characteristics of the two approaches under study in this research.

2.2 The Carbon Neutrality Program

Decarbonization is now widely seen as a key objective worldwide and, accordingly, many countries are designing and implementing policy programs specifically aimed at becoming carbon neutral. In this context, the CN program is a public initiative that seeks to engage the private sector on the path of decarbonization.

In 2007, the Costa Rican Government pledged to become one of the first nations to be carbon neutral (Ball et al. 2009; Flagg 2018). The CN program is an important policy instrument to achieve this goal by reducing or offsetting companies' greenhouse gases emissions. The CN program began in 2012, being one of the first public CN programs worldwide. In 2020 there were around 119 participants, including public institutions, as well as national and multinational companies (MINAE 2020).

The organizations taking part in the program can choose between three actions (or, most likely, a combination of them) in order to obtain the CN logo. The first strategy ("removal") is to prove that the company owns some forest that can act as carbon sinks to remove a certain amount of carbon from the atmosphere. The second one is carbon "abatement", which consists of reducing the business-as-usual emissions by using cleaner technologies. The third action ("compensation") is to offset the emissions that have not been abated or removed by purchasing carbon credits from a public environmental agency. From 2012 to 2019, about 886,751 tons of CO_2 equivalent have been abated, removed, or offset by participants in the program. Out of the three options, the predominant one (45.9% of business-as-usual emissions) was carbon removal in own forests and tree plantations. Carbon abatement represented 27.52% and compensation accounted for 26.58% (MINAE et al. 2019).

Apart from the one in Costa Rica, other CN programs introduced throughout the World include the Australian Government's Carbon Neutral Program, British Columbia's Carbon Neutral Government Program, Carbon Offset Funds of London, Chilean Carbon Management Program, Ecuadorian Carbon Neutral Environmental Recognition, New Zealand Carbon Neutral Government Program and Climate Neutral Now, which is developed by the UN Framework Convention on Climate Change.

2.3 The Fairtrade certification

World Fair Trade Organization (WFTO) and Fairtrade International (FTO) are two global networks that have jointly led the process and set the principles and standards of the Global Fair Trade movement. According to WFTO and FTO (2018, p. 4), this movement "is made up of individuals, organizations and networks that share a common vision of a world in which justice, equity and sustainable development are at the heart of trade structures and practices so that everyone, through their work, can maintain a decent and dignified livelihood and develop their full human potential". Over 4,000 growers' organizations, representing over two-and-a-half million small-scale producers and workers in over 70 countries work with the WFTO or FTO. Their products are sold in thousands of shops, supermarkets, and many other sales points around the world (WFTO and FTO 2018). In developing countries, FT producers are mainly cooperatives and growers' associations, most of them operating in the agricultural sector.

The FT certification seeks compliance with some social and environmental principles in developing countries. On the social side, these principles include gender equality, access of workers to social security, freedom of association, collective bargaining, no discrimination in any aspect of employment (race, age, national origin, religion), and provision of a safe and healthy working environment, among others (see Ruben 2009; WFTO and FLO 2018).

Regarding the environmental aspects, FT involves certain regulations to reduce the impact of the agricultural activity. This includes some measures to reduce the negative environmental and health effects of agrochemicals, such as avoiding certain types of toxic pesticides, adopting good environmental practices to protect the soil and water resources, reducing energy consumption, greenhouse gas emissions and waste from all actors in the chain of production, distribution, and consumption (Sellare, Meemken and Qaim 2020; WFTO and FLO 2018).

FT also encourages that the small-scale producers are grouped in cooperatives or growers' associations. In line with this spirit, the National Cooperative Development Institute was created in 1973. This is a public institution in charge of promoting and developing cooperatives in Costa Rica, especially in rural areas. In addition, according to Law 7072, the creation of cooperatives is encouraged by means of income tax exemptions.

2.4 Motivations and obstacles to implement Voluntary Environmental and Social Certifications

There is a growing number of works dealing with VESCPs and the companies' motivations and obstacles to adopt them. Through an extensive literature review search and our qualitative analysis (see subsection 3.1 below), we have identified ten motivations and six obstacles as the most relevant (see Table 1).

Insert table 1 about here

Table 1 shows that most of the reported motivations to adopt voluntary certifications and programs (M_1 to M_9) are related to economic and strategic aspects, in coherence with the well-known Porter hypothesis and strategic thinking (Hart 1995; Aragón-Correa and Sharma 2003; Martín-de Castro et al 2017).

However, apart from purely economic and strategic motivations, some studies show that companies can adopt environmental certifications in order to improve their environmental performance, in accordance with their concern for ecological and social sustainability, which is capture in motivation M_{10} on Table 1. When managers or owners consider environmental quality as a public good to be preserved, their decisions can be guided, not only by profit maximization, efficiency or competitiveness, but also by ethical and social notions, placing the interest of others ahead of self-interest (see e.g. Rest 1986; González-Benito and González-Benito 2005; Zeppel and Beaumont 2013; Schaltegger and Burritt 2018). Moreover, Ostrom (1990) showed that, under certain circumstances, individuals can cooperate to preserve some commons, instead of just maximizing individual utility.

Table 2 presents a selection of empirical studies analyzing these motivations, specifying the sample size of companies and the country or countries of each study.

Insert table 2 about here

Along with these positive motivations, the companies also face some barriers and obstacles when it comes to adopting social and environmental certifications. Table 3 shows a review of the studies addressing such obstacles.

Insert table 3 about here

Most studies in the literature are conducted in developed countries and focus on ISO 14001, which is the most widely adopted corporate environmental certification, launched in Geneva in 1996 by the International Organization for Standardization (Bansal and Hunter, 2003). Therefore, focusing on different voluntary approaches, such as CN and FT, in a developing country, such as Costa Rica, can enrich the vision given in the literature and help to compare how motivations and obstacles differ across different certifications and contexts.

3. Methodology

To gain a deeper understanding of the motivations and obstacles of Costa Rican companies to adopt CN and FT certifications, and given the relative scarcity of studies and information on this topic, we carried out an exploratory research in two stages: First, a qualitative inductive approach (see e.g. Anteby et al., 2014) by means of face-to-face interviews, and second, a quantitative approach through a questionnaire using the Likert scale.

Shah and Corley (2006) stress the value of mixed qualitative-quantitative research and highlights the role of in-depth interviews in "fine-grained" research. In this sprit, our first qualitative stage helped us to get some first-hand information on the motivations and obstacles expressed by managers when adopting environmental certifications. This information, jointly with our literature review, served as a highly valuable input to develop a questionnaire that allowed us to test the importance given to these motivations and obstacles by the managers of CN and FT certified companies in the second quantitative stage.

3.1 **Qualitative stage: Face-to-face interviews**

In the first stage, we conducted nine in-depth, semi structured face-to-face interviews with eleven managers in charge of the environmental area of their companies, and with experience on environmental certifications. Table 4 shows the main characteristics of the interviewees. We used open-ended questions to explore their actual motivations and obstacles avoiding preconceived ideas (Edmondson and McManus 2007). On September 2016, a first round of three interviews provided us with some preliminary knowledge about the firms' motivations and obstacles to adopt VESCPs (emphasizing CN and FT). Based on this first round and our literature review, we elaborated a questionnaire for the online survey. A second round of six interviews was conducted in August 2017, to deepen some details and validate the questionnaire.

Apart from other VESCPs, six of the companies whose managers were interviewed were part of the CN program, one was in the first stage of the process of joining the CN program, which consist in a greenhouse gas emissions inventory, and one was certified as a FT producer. One of the companies did not have any of the evaluated certifications at the moment of the interview, but it joined the CN program afterwards, in 2019. Two out of the nine interviewed companies belong

to the manufacturing sector, three to banking and finance, three to services, and one to the agro-industrial sector (see Table 4).

In general terms, the interview sought to cover the following aspects: (i) general characterization of the company: economic activity, number of employees, environmental and social certifications that the company has, among others; (ii) main drivers and obstacles that the company faces in obtaining the VESCP; (iii) main technological and management changes brought about by VESCPs. For the purposes of this article, the second block turns out to be the most relevant one. Our data analysis followed grounded theory techniques (Corbin and Strauss, 2015) working iteratively between our qualitative data and the literature, in order to discover the main motivations and obstacles of firms when adopting the FT and CN certifications.

Insert table 4 about here

3.2 Questionnaire

A five-point Likert scale questionnaire was used to assess the motivations and obstacles faced by certified companies in Costa Rica. Each interviewee was asked to rate the importance level of the 10 motivations and the 6 obstacles specified above (see Table 1) when adopting CN or FT certifications. For motivations, 1 means very low importance, 2 low, 3 moderate, 4 high, and 5 very high importance. When assessing the obstacles, 1 means that an obstacle was easily overcome by the company and 5 that it was very complicated to overcome.

On September 2017, we sent the questionnaire by email to all the CN and all the FT certified in the country: 74 CN (MINAE 2020) and 29 FT companies, basically cooperatives (COCAFE 2021; FLOCERT 2019). In March 2018, 11 of the CN companies and 11 of the FT cooperatives

had returned the questionnaire properly answered. None of the respondents had both certifications (CN and FT) when they answered the questionnaire. Among the respondents, 9 were General Managers, 5 Quality Managers, 5 Environmental Managers and 3 of them had other leadership positions within the companies.

In Costa Rica, all FT cooperatives (and thus, all our respondents) belong to the agroindustry sector. In the case of the CN companies, 7 of the respondents (around 64%) belong to the service sector (see Table 5). This feature is consistent with the productive structure of Costa Rica, where this sector represented the 68% of the value added to the GDP in 2017 (World Bank 2019). We compared the answers between CN and FT companies using the Mann-Whitney test, which is a non-parametric technique commonly used to compare the distributions of two samples (Mann and Whitney 1947).

Insert table 5 about here

4. Results and discussion

4.1 Qualitative results

By comparing the main insights from the in-depth interviews and the literature review, we initially observed that the main motivations have different nature (see Table 6). On the one hand, there are economic and strategic purposes, in accordance with the NRBV (Hart, 1995) and Institutional Theory (Bansal and Clelland, 2004), such as increased sales and product differentiation through a good corporate reputation and image (Martín-de Castro el al., 2017) and cost reduction and efficiency. Oher motivations have to do with environmental individual incentives and beliefs of owners or managers, including ethical commitment and the willing to become a reference in the industry/region (Molina-Azorín, 2014).

In one way or another, environmental and social concern was mentioned as the most prominent driver in four of the interviews. One of the managers declared that "ownership has strong conviction for the protection of the natural environment and sustainable development. In fact, this was the main reason for adopting CN". Other managers made statements such as "it is part of the social and environmental concern of the company", "it is within the policy of social and environmental responsibility of the company" and "we want to collaborate with the SDGs and carbon neutrality goal of Costa Rica".

Insert table 6 about here

Nevertheless, the majority of consulted managers mentioned economic and strategic arguments (sometimes together with environmental and social ones). A manager of a banking company declared that "the company is concerned about environmental sustainability, and together with it, many associated benefits are generated: efficiency, an environmental management system (EMS) generates a comparative advantage and social awareness (...). Economic motivations include cost savings (efficiency), increasing the market size or opting for green financing from the Inter-American Development Bank".

Another manager from a manufacturing firm expressed that "the company has experienced savings in water and electricity. Solar panels save 90% of electricity". Also, some of the mangers showed a certain belonging and proud feeling, showing to the interviewer the national awards won in the sustainability area, while another pointed out that "the importance of Carbon Neutrality is highlighted as the main driver along with public recognition and the green image".

Two of the interviewees emphasized "improving green image and enhancing public recognition" as the main motivator, identifying environmental certifications and ecological labels

as mechanisms of market differentiation. This finding is consistent with previous studies, such as Morrow and Rondinelli (2002) in Gernamy, Zutshi and Sohal (2004) in Australia and Faggi, Zuleta and Homberg (2014) in Argentine. Two of the managers reported “the company’s relationship with stakeholders” as the main motivation and pointed out that VESCPs can be “a tool to maintain proper relationships with the government or organized consumer groups”.

These three main groups of drivers complement each other, that is, the country's sustainability awareness, the green image of the company and the relationship with stakeholders are motivations that reinforce each other in the company's decision to adopt VESCPs.

Regarding more specifically the certifications under study (CN, and FT), interviewed managers from the manufacturing and financial sector stated that the CN certification complemented the green vocation of the company, which in all cased already had other certifications such as ISO 14001. The manager of the FT company reported that the main motivation to be certified was price premiums and access to differentiated markets in developed countries. This gives a clue about the different motivations under the adoption of both certifications that is confirmed in the quantitative stage.

On the other side, large investments associated with clean production technologies and inherent difficulties in the design and implementation of VESCPs were identified as the main obstacles, jointly with certification costs and certain internal and external stakeholders’ resistance. Environmental investments largely depend on industry and specific business operations. In that sense, one of the managers declared that “apart from the carbon removals that the company traditionally applies (sinks in its own farms), in order to achieve CN certification, the company has made large investments in clean technologies; among them: installation of solar panels, replacing the old luminaires for LED lights”. Another manager said that “large investments have been made

in the production plant with the aim of reducing the water footprint, developing recycling processes and saving electricity by installing solar panels".

Jointly with the costs associated to environmental innovation investments, accreditation and administrative costs are also common obstacles mentioned by the interviewed managers. Some of them specified in monetary terms those costs, which could be considered as barriers for many companies. One declared that "the association, despite being small, paid US $ 2,000 in 2015 and another US $ 2,000 in 2006 as part of the certification and expertise carried out by the verification company. In addition to another 150 dollars each year for a Fairtrade organization that operates in Costa Rica and Panama and that it is mandatory to pay". Nevertheless, some managers reported that "many of the investments in green technologies can be recovered in the long term mainly through induced cost savings".

4.2 Quantitative results

Tables 7 and 8 show the quantitative results concerning the firms' motivations and obstacles respectively to adopt FT and CN. In both tables, the information is displayed in the following way: columns 2 (ranking) and 3 (average score in the Likert scale) show the result for the FT firms. Columns 4 and 5 correspond to the CN firms. The 6th column shows the p-value for the Mann-Whitney test corresponding to the null hypothesis that the respective score distributions in both sub-samples are the same. Finally, columns 7th and 8th represent the average ranking and score of each motivation (Table 7) and obstacle (Table 8) if the sample is taken as a whole, without making any distinction between both subsamples (FT and CN).

4.2.1 Motivations

A first conclusion is that the ranking of motivation is not exactly the same for CN and for FT firms. Nevertheless, the Mann-Whitney test shows that, in statistical terms, the scores given by both groups are not significantly different except for two of the motivations (seeTable 7).

Insert table 7 about here

As a first important difference between both groups, "increase sales, market shares or prices" (M_1) is the first driver for cooperatives to achieve the FT certification, with an average score of 4.73. Nevertheless, this motivation is ranked only in the sixth position by CN companies (mean score, 2.73). This difference is consistent with the different nature of both certifications. FT is regarded by cooperatives as an opportunity to sell their products in differentiated markets, getting access to concerned consumers and obtain price premiums. CN, for its part, does not guarantee higher prices. Lyngbæk, Muschler and Sinclair (2001), Méndez et al. (2010), Barham et al. (2011), and Weber (2011) found that FT and organic producers in Mexico and Central America received higher prices than not-certified ones. Dragusanu and Nunn (2018) found similar results for FT cooperatives in Costa Rica. Although some managers said they had not fully met their sales expectations in the FT market (see e.g., Haight 2007; Sick 2008; Snider et al. 2017), this element still seems an important motivation.

On the other hand, CN is not an ecolabel as such, but rather a company certification, which can be perceived as a moderately important market instrument by companies. Being a domestic program, CN is also less internationally recognized than FT. Finally, the result is also consistent

with our finding that the main motivation of CN companies is to contribute to the environmental sustainability of Costa Rica rather than increasing direct economic benefits.

The second significant difference refers to the motivation "following competitors' strategy (M_9)", which has a moderate importance to get FT certification (7th position, mean = 2.73) but is in the last position for CN firms (mean = 1.36). Since FT is adopted only by companies and cooperatives belonging to the same sector (the agro-industrial one), this adoption seems to be a relevant market differentiation strategy. Those producers that were not yet FT-certified may be at a disadvantage and have an important incentive to get the certification in order to get a market share within the green and ethical chains (see, Dragusanu and Nunn 2018; Ruben 2009). Since CN includes companies from all sectors, there is no such a direct pressure from the industry to follow the competitors' strategy.

Despite these differences, we also observe that there are some common features in both groups, from which we can extract some general conclusions. Importantly, the top motivations include SD concerns (M_{10}) along with economic and strategic elements (mainly, M_5 and M_6), suggesting that both sets of drivers are not mutually exclusive. The environmental concern turns out to be the first motivator for CN firms and the second one for FT firms, but the average Likert score is not statistically different between both groups. This conclusion is consistent with the recent theoretical stream of Micro-Foundations in strategy and corporate environmentalism (Foss 2011; Barney and Fellin 2013; Molina-Azorín 2014), which remarks the key role of top management individual features, such as top management individual beliefs, ethical motivations and competences, and their interaction as determinants of firms' environmental strategic posture. Jamali and Karam (2018) highlight the importance of doing more research on micro foundations on sustainability in emerging economies and its effective implementation in corporate practices, such as the adoption of VESCPs.

Ethical and environmental concerns have been widely documented as important drivers to adopt environmental or social certifications. For example, in a study of 35 small businesses in the U.S., Cater, Collins and Beal (2017,185) concluded that "shared values" (ethical, religious, or business) and the desire to help others (altruism) led social entrepreneurs to find and sustain FT businesses in connection with four motivating factors: direct relationships with producers, support for social causes, the desire for the preservation of craftsmanship, and the desire to share aesthetic products". According to Zeppel and Beaumont (2013, 14), New Zealand tourism entrepreneurs reported "personal concern about the environmental impacts of climate change" and the willing to do "the right thing for the environment" as motivations to adopt carbon offset programs. Okereke (2007, 481) found that UK FTSE 100 companies undertook carbon management activities because of a genuine concern about their own environmental impact. Poksinska, Dahlgaard and Eklund (2003), González-Benito and González-Benito (2005), Mariotti, Kadasah and Abdulghaffar (2014), and Santos et al. (2016) showed that the ecological and ethical concerns were important for many companies to obtain the ISO 14001 certification.

Improving the green image, enhancing public recognition and social legitimacy of the company (M_5) and improving the relationship with stakeholders, such as government, communities, environmental groups, and consumers (M_6) also appear among the most relevant motivations in both groups of firms (second and third for CN firms, third and fourth for FT firms).

The result about M_5 fits with two of the most prominent theoretical frameworks used to understand why companies go green and social. First, the Institutional Theory (Bansal and Clelland 2004), which states that companies respond to institutional and legal pressures by adapting their behavior to social norms and uses, in order to achieve legitimacy and social acceptance. This fact is especially relevant for companies operating in developing countries (Hart 1995). Second, in a parallel research stream, the NRBV (Hart 1995; Aragón-Correa and Sharma 2003) understands

social and environmental postulates, such as corporate certifications, as strategic tools to improve companies' corporate image and reputation (Amores-Salvadó, Martín-de-Castro and Navas-López 2014) and reinforce their sustainable business models. André and Valenciano-Salazar (2020) also found that green image is an important criterion for some Costa Rican managers when they decide to implement ISO 14001 and CN. Green image and public recognition have been found in different countries among the main motivations for companies when adopting carbon reduction actions (Okereke 2007; Zeppel and Beaumont 2013), ISO 14001 (see, e.g. Morrow and Rondinelli 2002; Yiridoe et al. 2003; Zeng et al. 2005; Schylander and Martinuzzi 2007; Mariotti, Kadasah and Abdulghaffar 2014) or developing an EMS (Ormazabal and Sarriegi, 2014).

Regarding the relationship with stakeholders (M_6), VESCPs constitute a signal of the company's globally accepted management practices, both in developed countries (Delmas 2001; Bansal and Bogner 2002; Fryxell and Szeto 2002; Poksinska, Dahlgaard and Eklund 2003, Martín-de Castro et al. 2017) and developing countries (Gavronski, Ferrer and Paiva 2008; Mariotti, Kadasah and Abdulghaffar 2014). Stakeholders' engagement is a strategic tool to effectively implement proactive corporate environmentalism (Hart 1995) that can be framed under the Stakeholders framework (Freeman 1984) and the Signaling Theory (Connelly et al. 2011). These theories remark the implications of mission statement and strategic behavior for all company's constituencies, and the relevance of trustworthy and solid relationships between the company and their main audiences, in the market (customers, suppliers, competitors, allies, investors) and beyond-the market, (NGOs, the Media, Public Administrations or local communities).

Our results confirm the role of international customers and the trade-based diffusion of FT and CN in Costa Rica. Such diffusion occurs by three mechanisms: (i) FT cooperatives aim at selling their agricultural products in the international FT market and, although their products are marketed by means of intermediaries (known as FT traders), final consumers are mostly located in

developed countries, mainly Europe and United Stated. (ii) Well-known and influential multinational companies that produce in Costa Rica, such Sykes Latin America, RIU Hotels and Resorts, Adobe Rent a Car, Proquinal, Procter & Gamble International Operations, Plycem, Panasonic, Hewlett-Packard, Wiener Lab, Holcim, Gensler, Intel, among others (see MINAE 2020) have joined the CN program. The acceptance of the CN program by these important international companies can generate a diffusion effect within the country. (iii) There is a group of consumers in Costa Rica who are aware about VESCPs and can incentivize trade-based diffusion of FT and CN in Costa Rica (see e.g. Valenciano-Salazar, André and Soliño 2021).

4.2.2 *Obstacles*

According to Table 8, the perceptions of both groups of firms seem to be closer in the case of obstacles than in the case of motivations. The Mann-Whitney test indicates that there are no significant differences between the two subsamples, except in the case of "the resistance of shareholders, owners or managers (O_6)", which is moderately more difficult to face by FT cooperatives (mean= 2.82) than CN companies (mean = 1.18) (see Table 8). This difference is probably due to the fact that the FT certification is typically adopted by agricultural cooperatives, requiring the agreement of the majority of the shareholders, which may be reluctant to make changes in their plots. On the contrary, the CN certification is normally adopted by private companies, where the decisions are more easily made by owners or managers.

Insert table 8 about here

An interesting result is that “finding information and preparing documentation (O_3)” was identified as the second most difficult obstacle to achieving CN certification (mean = 3.18), but the

lowest for FT companies (mean = 2.73). Although the differences in the scores are not statistically significant, it seems natural to wonder why this obstacle is ranked so differently. A plausible explanation is that CN companies must register all greenhouse gas emissions and then demonstrate their reduction or compensation, which can be expected to be an important obstacle.

As we concluded in the qualitative interviews, "high investment costs in clean technologies" (O_1) is the most difficult obstacles faced both by CN and FT companies. Also important are the certification costs (O_2), which is the second obstacle for FT and the third one for CN firms. Previous studies have pointed out certification cost and clean technology costs as important barriers in developed countries (Babakri, Bennett and Franchetti 2003; Bansal and Bogner 2002; Ormazabal and Sarriegi 2014; Santos et al. 2016; Yiridoe et al. 2003) and developing countries (Mariotti, Kadasah and Abdulghaffar 2014; Pérez-Ramírez et al. 2012; Tellman, Gray and Bacon 2011) including Costa Rica (André and Valenciano-Salazar 2020; Snider et al. 2017).

5. Conclusions

This research has explored the main motivations and obstacles of two particularly relevant VESCPs in Costa Rican companies, such as FT and CN. In doing so, several theoretical streams, including trade-based diffusion of environmental programs, the NRBV, Institutional Theory and Micro-Foundations of Strategy have been used to frame the main highlights.

Among the most important motivations, our research shows that managers who voluntarily adopted CN or FT certifications in Costa Rica declared to be genuinely concerned about the environment. This result is consistent with the country's policy, which maintains a strong component of environmental education and sensitization. This finding is also consistent with previous studies reporting that ethical aspects are similar in importance to economic and strategic

ones when adopting environmental certifications or taking part in environmental programs. In fact, this evidence shows that top managers' personal values, beliefs and motivations strongly influence firms' strategy, as the Micro-Foundations points out (Foss 2011; Molina-Azorín 2014).

Other prominent motivations such as "improving green image, enhancing public recognition, and social legitimacy of the company" and "improve relationships with stakeholders" are directly linked to firm's competitiveness and social acceptance, in coherence with the strategic theoretical perspectives framing the firm and the natural environment and social responsiveness, including the Natural Resource-Based View (Hart, 1995) and the Institutional Theory (Bansal and Clelland, 2004) and Stakeholders perspective. Effectively, by adopting VESCPs such as FT and CN managers can reinforce the company's business model through two complimentary mechanisms: (i) increased reputation and image leads to product differentiation, increase sales and product prices, domestically but especially in international markets, in coherence with the postulates of the NRBV; and (ii) the social and environmental recognition of the firm, which reinforces the company's resilience and survival (Ortiz-de Mandojana and Bansal 2016) and the necessary 'license to operate' (Bansal and Clelland 2004). The last argument is especially relevant for those multinational companies operating in developing countries (Hart, 1995) and domestic companies exporting to markets with high social and environmental standards, which is in line with the principle of trade-based diffusion of VESCPs (Prakash and Potoski 2006. Marcoux and Urpelainen 2012; Wo and Ma 2016; Gamso 2017, 2018).

We found some differences in the companies' motivations to adopt FT and CN. To some extent, this is due to the different nature of both certifications. While FT is mainly focused on international trade and product differentiation in order to address aware customers in international markets, CN is domestic certification aimed at certifying the firm as a whole rather than specific products. It is worthy of mention that environmental sensitization seems particularly important for

those firms taking part in the Costa Rican CN Program as compared to FT firms, which also consider environmental motivations as important, but less important than increasing sales or getting price premiums. The CNP program is becoming an important instrument to fight climate change and achieve a cleaner economy in Costa Rica, since CN companies must guarantee the reduction or offset of their greenhouse gas emissions.

The adoption of CN and FT certifications also face important barriers. We find out that the main one is related to the costs associated to auditing/certification and the required investment in clean technologies. Achieving a neutral carbon footprint, or to get high standards of ecological and social production in the agriculture sector are challenges that companies must overcome through technological change. Companies in developing countries such as Costa Rica perceive these changes as expensive and difficult to implement. These barriers towards social and environmental firm's practices are common issues in the specialized literature and reflect the problem of time framing. Managers and shareholders are usually concerned and focused on the short-term return of their actions but, apart from the short-term impacts, sustainable business practices also involve long-term benefits in the form of organizational resilience (Ortiz de Mandojana and Bansal 2016). Specifically, the induced improvements in terms of firm image and legitimacy (Amores-Salvadó et al., 2014) can render firms long-term higher survival rates, increased sales and growth, and reduction of financial volatility. In that sense, our results suggest that managers, shareholders, and investors should change their time frames about sustainable business practices and take into account, not only short-term, but also long-term benefits in the equation.

Acknowledgements: We appreciate valuable feedback from an anonymous referee. J.A. Valenciano acknowledges support from the Scholarship Department of the National University of Costa Rica, (grant JB-C-1106-2016). F.J. André acknowledges funding from the Spanish Ministry of Science and Innovation (project PID2019-105517RB-I00).

References

Amores-Salvadó, J., G. Martín-de-Castro, and J.E. Navas-López. 2014. "Green Corporate Image: Moderating the Connection Between Environmental Product Innovation and Firm Performance." *Journal of Cleaner Production* 83 (15): 356-365. https://doi.org/10.1016/j.jclepro.2014.07.059

André, F.J., and J.A. Valenciano-Salazar. 2020. "Becoming Carbon Neutral in Costa Rica to Be More Sustainable: An AHP Approach." *Sustainability* 12: 737. doi:https://doi.org/10.3390/su12020737.

Anteby, M., H. Lifshitz, and M. Tushman. 2014. "Using Qualitative Research for "How" Questions". *Strategic Management Journal*. 36(6), 3

Aragón-Correa, J.A., and S. Sharma. 2003 "A Contingent Resource-Based View of Proactive Corporate Environmental Strategy." *Academy of Management Review* 28: 71–88. https://doi.org/10.5465/amr.2003. 8925233

Babakri, K., R. Bennett, and M- Franchetti. 2003. "Critical Factors for Implementing ISO 14001 Standard in United States Industrial Companies." *Journal of Cleaner Production* 11, (7): 749-752. https://doi.org/10.1016/S0959-6526(02)00146-4

Ball, A., I. Mason, S. Grubnic, and H. Phil. 2009. "The Carbon Neutral Public Sector." *Public Management Review* 11 (5): 575-600. https://doi.org/10.1080/14719030902798263

Bansal, P., and I. Clelland. 2004."Talking Trush: Legitimacy, Impression Management, and Unsystematic Risk in the Context of the Natural Environment." *Academy of Management Journal* 47: 93–103. https://doi.org/10.5465/20159562

Bansal, P., and T. Hunter. 2003."Strategic Explanations for the Early Adoption of ISO14001." *Journal of Business Ethics* 46: 289-299. https://doi.org/10.1023/A:1025536731830

Bansal, P., and W. Bogner. 2002 "Deciding on ISO 14001: Economics, Institutions, and Context." *Long Range Planning* 35 (3): 269-290. https://doi.org/10.1016/S0024-6301(02)00046-8

Barham, B.L., M. Callenes, S. Gitter, J. Lewis, and J. Weber. 2011. "Fair Trade/Organic Coffee, Rural Livelihoods, and the "Agrarian Question": Southern Mexican Coffee Families in Transition." *World Development* 39 (1): 134–145. https://doi.org/10.1016/j.worlddev.2010.08.005

Barney, J., and T. Felin. 2003 "What Are Microfoundations?" *Academy of Management Perspectives* 27 (2). https://doi.org/10.5465/amp.2012.0107

Birchall, S. J., M., Murphy, and M., Milne. 2015 "Evolution of the New Zealand Voluntary Carbon Market: An Analysis of CarboNZero Client Disclosures." *Social and Environmental Accountability Journal* 35 (3): 142-146. https://doi.org/10.1080/0969160X.2015.1061444

Birkenberg, A., and R. Birner. 2018. "The World's First Carbon Neutral Coffee: Lessons on Certification and Innovation From a Pioneer Case in Costa Rica." *Journal of Cleaner Production* 189: 485-501. https://doi.org/10.1016/j.jclepro.2018.03.226

Blackman, A., and M.A. Naranjo. 2012. "Does Eco-Certification Have Environmental Benefits? Organic Coffee in Costa Rica." *Ecological Economics* 83: 58-66. https://doi.org/10.1016/j.ecolecon.2012.08.001

Blackman, A., M.A. Naranjo, J. Robalino, F. Alpízar, and J. Rivera. 2014. "Does Tourism Eco-Certification Pay? Costa Rica's Blue Flag Program." *World Development* 58: 41-52. https://doi.org/10.1016/j.worlddev.2013.12.002

Cater, J.J., L.A. Collins, and B.D. Beal. 2017."Ethics, Faith, and Profit: Exploring the Motives of the U.S. Fair Trade Social Entrepreneurs." *Journal of Business Ethics* 146 (1): 185-201. https://doi.org/10.1007/s10551-015-2934-4

Chin, K.S. S. Chiu, and V.M. Rao Tummala. 1999. "An Evaluation of Success Factors Using the AHP to Implement ISO 14001-Based EMS." *International Journal of Quality & Reliability Management* 16 (4): 341-362. https://doi.org/10.1108/02656719910248226

COCAFE.2021.Consorcio de Cooperativas de Caficultores de Guanacaste y Montes de Oro, R.L https://www.coocafe.com/

Connelly, B., T. Certo, D. Ireland, and C. Reutzel. 2011. "Signaling Theory: A Review and Assessment." *Journal of Managemen* 37 (1): 39-67. https://doi.org/10.1177/0149206310388419.

Corbin, J. M., & Strauss, A. L. (2015). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. Thousand Oaks, CA: Sage Publications.

Dai, J., H.K. Chan, and R. W.Y. Yee. 2018. "Examining Moderating Effect of Organizational Culture on the Relationship Between Market Pressure and Corporate Environmental Strategy." *Industrial Marketing Management* 74: 227-236. https://doi.org/10.1016/j.indmarman.2018.05.003

Darnall, N., and D. Edwards. 2006. "Predicting the Cost of Environmental Management System Adoption: The Role of Capabilities, Resources and Ownership Structure." *Strategic Management Journal* 27 (4): 301-320. https://doi.org/10.1002/smj.518

Darnall, N. 2006 "Why Firms Mandate ISO 14001 Certification." *Business & Society* 45 (3): 354-381. https://doi.org/10.1177/0007650306289387

Delmas, M., and M. Toffel. 2008. "Organizational Responses to Environmental Demands: Openning the Black Box." *Strategic Management Journal* 29 (10): 1027–1055. https://doi.org/10.1002/smj.701

Delmas, M. 2001. "Stakeholders and Competitive Advantage: The Case of ISO 14001." *Production and Operations Management* 10 (3): 343-358. https://doi.org/10.1111/j.1937-5956.2001.tb00379.x

Dragusanu, R., and N. Nunn. 2018. "*The effects of Fair Trade Certification: Evidence From Coffee Producers in Costa Rica".* Cambridge, Massachusetts.: Working Paper. National Bureau of Economic Reseach. https://www.nber.org/papers/w24260.pdf.

Edmondson, A., and S. McManus (2007). "Methodological Fit in Management Field Research". *The Academy of Management Review,* 32(4), 1155–1179. https://doi.org/10.5465/amr.2007.26586086

Faggi, A.M., G.A. Zuleta, and M. Homberg. 2014. "Motivations for Implementing Voluntary Environmental Actions in Argentine Forest Companies." *Land Use Policy* 41: 541-549. https://doi.org/10.1016/j.landusepol.2014.04.011

Flagg, J.A. 2018. "Carbon Neutral by 2021: The past and Present of Costa Rica's Unusual Political Tradition." *Sustainability* 10 (296). https://doi.org/10.3390/su10020296

FLOCERT. 2019. *Customer database.* http://www.flocert.net/fairtrade-services/fairtrade-certification/fairtrade-customer-search/

Foss, N.J. 2011. "Why Micro-Foundations for Resource-Based Theory Are Needed and What They May Look Like." *Journal of Management* 5 (37). https://doi.org/10.1177/0149206310390218

Freeman, R. 1984. *Strategic Management: A Stakeholder Aapproach.* Cambridge University Press.

Fryxell, G.E., and A. Szeto. 2002. "The Influence of Motivations for Seeking ISO 14001 Certification: An Empirical Study of ISO 14001 Certified Facilities in Hong Kong." *Journal of Environmental Management* 65 (3): 223-238. https://doi.org/10.1006/jema.2001.0538

Gamso, J. 2017. "Trade Partnerships and Environmental Performance in Developing Countries". *The Journal of Environment & Development* 26 (4). https://doi.org/10.1177/1070496517729727

Gamso, J. 2018. "Trade-Based Adoption of Voluntary Environmental Programs in the Developing World: Racing to the Top or Stuck in the Mud?" *Policy Sciences* 51(4): 515-543. https://doi.org/10.1007/s11077-018-9319-3

Gavronski, L., G. Ferrer, and E.L. Paiva. 2008. "ISO 14001 Certification in Brazil: Motivations and Benefits." *Journal of Cleaner Production* 16 (1): 87-94. https://doi.org/10.1016/j.jclepro.2006.11.002

Gereffi, G., S. Frederick, and P. Bamber. 2019. "Diverse Paths of Upgrading in High-tech Manufacturing: Costa Rica in the Electronics and Medical Devices Global Value Chains". *Transnational Corporations* 26 (1) (2019), pp. 1-30

González-Benito, J., and O. Gonzáles-Benito. 2005. "An Analysis of the Relationship Between Environmental Motivations and ISO14001 Certification." *British Journal of Management* 16 (2): 133-148. https://doi.org/10.1111/j.1467-8551.2005.00436.x

Haight, C. 2007. *Does Fair Trade Coffee Help the Poor? Evidence From Costa Rica and Guatemala?* Fairfax, Virginia: Mercatus Center's Global Prosperity Initiative. George Mason University. https://dx.doi.org/10.2139/ssrn.1359159

Hart, S. 1995. "A Natural Resource-Based View of the Firm." *Academy of Management Review* 20: 986–1014. https://doi.org/10.5465/ amr.1995.9512280033

Jamali, D., and C. Karam. 2018. "Corporate Social Responsibility in Developing Countries as an Emerging Field of Study." *International Journal of Management Reviews* 20 (1): 32-61. https://doi.org/10.1111/ijmr.12112

Lee, E., C.S. Jung, and M.S. Hwang. 2016. "Investigating Supportive Conditions for Participation in Voluntary Environmental Programs." *Journal of Environmental Planning and Management* 59 (7): 1323-1340. https://doi.org/10.1080/09640568.2015.1074889

Lyngbæk, A. E., R. G. Muschler, and F. L. Sinclair. 2001. "Productivity and Profitability of Multistrata Organic Versus Conventional Coffee Farms in Costa Rica." *Agroforestry Systems* 53 (2) 205–213. https://doi.org/10.1023/A:1013332722014

Mann, H.B., and D.R. Whitney. 1947. "On a Test of Whether One of Two Random Variables Is Stochastically Larger Than the Other." *The Annals of Mathematical Statistics* 18 (1): 50–60. DOI: 10.1214/aoms/1177730491

Manrique, S., and C.M. Martí-Ballester. 2017. "Analyzing the Effect of Corporate Environmental Performance on Corporate Financial Performance in Developed and Developing Countries." *Sustainability* 9 (11): 1957. https://doi.org/10.3390/su9111957.

Marcoux, C., and J. Urpelainen (2012) "Dynamics of Spatial Interdependence: The Contingent Effect of International Trade on Voluntary Environmental Standards", *Environment and Planning C: Government and Policy* 30(5): 871-890. https://doi.org/10.1068/c11113

Mariotti, F., N. Kadasah, and N. Abdulghaffar. 2014. "Motivations and Barriers Affecting the Implementation of ISO 14001 in Saudi Arabia: An Empirical Investigation." *Total Quality Management & Business Excellence* 25 (12): 352–1364. http://dx.doi.org/10.1080/14783363.2014.912038

Martín-de Castro, G., J. Amores-Salvadó, J.E. Navas-López, and R. Balarezo-Nuñez. 2017. "Exploring the Nature, Antecedents and Consequences of Symbolic Corporate Environmental Certification." Journal of Cleaner Production 164 (15): 664-675. https://doi.org/10.1016/j.jclepro.2017.06.238

Martín-de-Castro, G., J. Amores-Salvadó, and J. Navas-López. 2016. "Environmental Management Systems and Firm Performance: Improving Firm Environmental Policy Through Stakeholder Engagement." *Corporate Social Responsibility and Environmental Management* 23 (4): 243-256. :https://doi.org/10.1002/csr.1377

Méndez, V.E., et al. 2010. “Effects of Fair Trade and Organic Certifications on Small-Scale Coffee Farmer Households in Central America and Mexico.” *Renewable Agriculture and Food Systems* 25 (3): 236-251. https://doi.org/10.1017/S1742170510000268

MINAE. 2020. *Dirección de Cambio Climático [Climate Change Department]*. https://cambioclimatico.go.cr/programa-pais-carbono-neutralidad/quienes-forman-parte/

MINAE, IMN and DCC. 2019. "Costa Rica: 2do. Informe Bienal de Actualización ante la Convención Marco de Naciones Unidas sobre el Cambio Climático". San José, Costa Rica. http://cglobal.imn.ac.cr/index.php/publications/bur2019/

Molina-Azorín, J.F. 2014. "Microfoundations of Strategic Management: Toward Micro–Macro Research in the Resource-Based Theory." *BRQ Business Research Quarterly* 17 (2): 102-114. https://doi.org/10.1016/j.brq.2014.01.001

Morrow, D., and D. Rondinelli. 2002."Adopting Corporate Environmental Management Systems: Motivations and Results of ISO 14001 and EMAS Certification." *European Management Journal* 20 (2): 159-171. https://doi.org/10.1016/S0263-2373(02)00026-9

Murray, J., and C. Dey. 2009. "The Carbon Neutral Free for All." *International Journal of Greenhouse Gas Control* 3 (2): 237-248. https://doi.org/10.1016/j.ijggc.2008.07.004

Neves, F., E. G. Salgado and L. A. Beijo. 2017. Analysis of the Environmental Management System based on ISO 14001 on the American continent. *Journal of Environmental Management*, 199: 251-262. https://doi.org/10.1016/j.jenvman.2017.05.049

Nishitani, K. (2010) Demand for ISO 14001 adoption in the global supply chain: An empirical analysis focusing on environmentally conscious markets. *Resource and Energy Economics* 32(3): 395-407. https://doi.org/10.1016/j.reseneeco.2009.11.002

OECD. 2020. *Voluntary Approaches for Environmental Policy: An Assessment.* First. Paris: Organisation for Economic Cooperation and Development Publishing. https://doi.org/10.1787/9789264180260-en

Okereke, C. 2007. "An Exploration of Motivations, Drivers and Barriers to Carbon Management: The UK FTSE 100." *European Management Journal* 25 (6): 475-486. https://doi.org/10.1016/j.emj.2007.08.002

Ormazabal, M., and J.M. Sarriegi. 2014. "Environmental Management Evolution: Empirical Evidence from Spain and Italy." *Business Strategy and the Environment* 23: 73–88. https://doi.org/10.1002/bse.1761

Ortiz de Mandojana, N., and P. Bansal. 2016. "The Long-Term Benefits of Organizational Resilence Through Sustainable Business Practices." *Strategic Management* 37 (8): 1615-1631. https://doi.org/10.1002/smj.2410

Ostrom, E. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action.* First. Cambridge, United Kingdom: Cambridge University Press.

Pan, J.N. 2003. "A Comparative Study on Motivation for and Experience with ISO 9000 and ISO 14000 Certification Among Far Eastern Countries." *Industrial Management & Data Systems* 103 (8): 564-578. https://doi.org/10.1108/02635570310497611

Prakash, A., and M. Potoski. 2006. "Racing to the Bottom? Trade, Environmental Governance, and ISO 14001". *American Journal of Political Science* 50(2): 350-364. https://doi.org/10.1111/j.1540-5907.2006.00188.x

Pérez-Ramírez, M., B. Phillips, D. Lluch-Belda, and S. Lluch-Cota. 2012. "Perspectives for Implementing Fisheries Certification in Developing Countries." *Marine Policy* 36 (1): 297-302. https://doi.org/10.1016/j.marpol.2011.06.013

Poksinska, B., J.J. Dahlgaard, and J.A.E. Eklund. 2003. "Implementing ISO 14000 in Sweden: Motives,Benefits and Comparisons with ISO 9000." *International Journal of Quality & Reliability Management* 20 (5): 585-606. https://doi.org/10.1108/02656710310476543

Porter, M.E., and C. van der Linde. 1995. "Toward a New Conception of the Environment-Competitiveness Relationship." *Journal of Economic Perspectives* 4 (9): 97-118. www.jstor.org/stable/2138392

Quazi, H.A., Y.K. Khoo, C.M. Tan, and P.S. Wong. 2001. "Motivation for ISO 14000 Certication: Development of a Predictive Model." *Omega* 29 (6): 525-542. https://doi.org/10.1016/S0305-0483(01)00042-1

Rest, J. 1986. *Moral Development: Advances in Research and Theory.* New York: Praeger.

Rivera, J. 2002. "Assessing a Voluntary Environmental Initiative in the Developing World: The Costa Rican Certification for Sustainable Tourism." *Policy Sciences* 35 (4): 333-360. https://doi.org/10.1023/A:1021371011105

Ruben, R. 2009. "The Development Impact of Fair Trade: From Discourse to Data." In *The Impact of Fair Trade*, by Ruerd Ruben, 19-47. Wageningen, The Netherlands: Wageningen Academic Publishers.

Santos, G., M. Rebelo, N. Lopes, M.R. Alves, and R. Silva. 2016. "Implementing and Certifying ISO 14001 in Portugal: Motives,Difficulties and Benefits After ISO 9001 Certification." *Total Quality Management* 27 (11): 1211–1223. https://doi.org/10.1080/14783363.2015.1065176

Schaltegger, S., and R. Burritt. 2018. "Business Cases and Corporate Engagement with Sustainability: Differentiating Ethical Motivations." *Journal of Business Ethics* 147: 241–259.

Schylander, E., and A. Martinuzzi. 2007. "ISO 14001 – Experiences, Effects and Future Challenges: A National Study in Austria." *Business Strategy and the Environment* 16 (2): 133 - 147. https://doi.org/10.1002/bse.473

Sellare, J., E.M., Meemken and M. Qaim. 2020. "Fairtrade, Agrochemical Input Use, and Effects on Human Health and the Environment". *Ecological Economics* 176: 106718. https://doi.org/10.1016/j.ecolecon.2020.106718

Shah, S. K., and K.G. Corley (2006). "Building Better Theory by Bridging the Quantitative-Qualitative Divide". *Journal of Management Studies*, 43(8), 1821–1835. https://doi.org/10.1111/j.1467-6486.2006.00662.x

Sick, D. 2008. "Coffee, Farming Families, and Fair Trade in Costa Rica: New Markets, Same Old Problems?" *Latin American Research Review* 43 (3): 193 - 208. https://www.jstor.org/stable/20488155

Snider, A., I. Gutiérrez, N. Sibelet, and G. Faure. 2017. "Small Farmer Cooperatives and Voluntary Coffee Certifications:Rewarding Progressive Farmers of Engendering Widespread Change in Costa Rica." *Food Policy* 69: 231–242. https://doi.org/10.1016/j.foodpol.2017.04.009

Tellman, B., L.C. Gray, and C.M. Bacon. 2011. "Not Fair Enough: Historic and Institutional Barriers to Fair Trade Coffee in El Salvador." *Journal of Latin American Geography* 10 (2): 107-127. https://doi.org/10.1353/lag.2011.0037

United Nations Environment Programme. 2019. *Costa Rica Named 'UN Champion of the Earth' for Pioneering Role in Fighting Climate Change.* https://www.unenvironment.org/news-and-stories/press-release/costa-rica-named-un-champion-earth-pioneering-role-fighting-climate

United Nations. *Sustainable Development Goals.* 2019. https://sustainabledevelopment.un.org/post2015/transformingourworld

Valenciano-Salazar, J.A., F.J. André, M. Soliño. 2021. "Societal awareness of environmental certifications in Costa Rica" *Journal of Cleaner Production* 286: 124966. https://doi.org/10.1016/j.jclepro.2020.124966

Vogel, D. 1997. "Trading Up and Governing Across: Transnational Governance and Environmental Protection." J*ournal of* European *Public Policy* 4: 556-571. https://doi.org/10.1080/135017697344064

Weber, J. 2011. "How Much More Do Growers Receive for Fair Trade-Organic Coffee?" *Food Policy* 36 (5): 678-685. https://doi.org/10.1016/j.foodpol.2011.05.007

Wu, J., and Z. Ma. 2016. Export Intensity and MNE Customers' Environmental Requirements: Effects on Local Chinese Suppliers' Environment Strategies. *Journal of Business Ethic*s 135: 327-339. https://doi.org/10.1007/s10551-014-2459-2

World Bank. *World Bank Statistics.* 2019. https://datos.bancomundial.org/indicator/NV.SRV.TOTL.ZS?locations=CR

World Fair Trade Organization (WFTO) & Fairtrade International (FLO). 2018. " The International Fair Trade Charter." https://wfto.com/sites/default/files/2018_FTCharter_English_SCREEN.pdf

Yiridoe, E.K., J.S. Clark, G.E. Marett, R. Gordon, and P.Duinker. 2003. "ISO 14001 EMS Standard Registration Decisions Among Canadian Organizations." *Agribusiness* 19 (4): 439–457. https://doi.org/10.1002/agr.10069

Zeng, S.X., C.M. Tam, V. Tam, and Z.M. Deng. 2005. "Towards Implementation of ISO 14001 Environmental Management Systems in Selected Industries in China." *Journal of Cleaner Production* 13 (7): 645-656. https://doi.org/10.1016/j.jclepro.2003.12.009

Zeppel, H., and N. Beaumont.2013. "Assessing Motivations for Carbon Offsetting by Environmentally Certified Tourism Enterprises." *Anatolia: An International Journal of Tourism and Hospitality Research* 24 (3): 297-318. https://doi.org/10.1080/13032917.2012.759982

Zutshi, A., and A. Sohal. 2004. "Environmental Management System Adoption by Australasian Organisations: Part 1: Reasons, Benefits and Impediments." *Technovation* 24 (4): 335-357. https://doi.org/10.1016/S0166-4972(02)00053-6

Table 1 Motivations and obstacles for companies to adopt voluntary environmental and social approaches.

Motivations	**Obstacles**
• Increasing sales, market share or prices through market differentiation (**M_1**) • Reducing the financing cost or increasing market value of the company (**M_2**) • Saving production costs or increasing productivity (**M_3**) • Receiving technical assistance and information from environmental agencies (**M_4**) • Improving green image, enhancing public recognition and social legitimacy of the company (**M_5**) • Improving the company's relationship with stakeholders (**M_6**) • Preparing firms for mandatory regulations (**M_7**) • Certification demands on the part of the companies that lead the value chain (**M_8**) • Mimicking the strategy of the competitors (**M_9**) • Commitment to sustainability development goals of the country (**M_{10}**)	• High investment cost in clean technologies (**O_1**) • High certification s' cost (**O_2**) • Searching for information and preparing documentation during and after the certification process (**O_3**). • The resistance of employees to incorporate new environmental practices (**O_4**) • Designing and implementing an EMS (**O_5**) • The aversion of shareholders and owners (**O_6**)

Table 2 Survey of studies about companies' motivations to adopt VESCPs.

Authors	Location	Approaches	Sample	Motivations
Chin, Chiu and Tummala (1999)	Hong Kong, China	ISO 14000	6	M_1, M_{10}
Quazi et al. (2001)	Singapore	ISO 14000	61	M_3, M_7
Lyngbæk, Muschler and Sinclair (2001)	Costa Rica	Organic	20	M_1, M_5
Fryxell and Szeto (2002)	Hong Kong, China	ISO 14001	29	M_3, M_5, M_6, M_{10}
Morrow and Rondinelli (2002)	Germany	ISO 14001 and EMAS	5	M_3, M_5, M_8, M_7, M_{10}
Pan (2003)	Taiwan, Hong Kong. Japan and Korea	ISO 14001	2,951	M_3, M_5, M_6, M_9
Poksinska, Dahlgaard and Eklund (2003)	Sweden	ISO 14001	135	M_1, M_3, M_6, M_9, M_{10}
Babakri, Bennett and Franchetti (2003)	United States	ISO 14001	177	M_8
Yiridoe et al. (2003)	Canada	ISO 14001	41	M_2, M_5, M_7, M_{10}
Zeng et al. (2005)	China	ISO 14001	108	M_1, M_3, M_5,
González-Benito and Gonzáles-Benito (2005)	Spain	ISO 14001	184	M_3, M_{10}
Zutshi and Sohal (2005)	Australia	EMAS	3	M_3, M_5, M_1
Darnall (2006)	The United States	ISO 14001	135	M_4, M_8
Okereke (2007)	UK		100	M_3, M_5, M_{10}
Schylander and Martinuzzi (2007)	Austria	ISO 14001	71	M_2, M_5, M_{10}
Gavronski et al. (2008)	Brazil	ISO 14001	63	M_2, M_3, M_6
Méndez et al. (2010)	Central America	Fairtrade	18	M_1
Barham et al. (2011)	Southern Mexico	Fairtrade-organic	845	M_1
Weber (2011)	Southern Mexico	Fairtrade-organic	845	M_1
Zeppel and Beaumont (2013)	Queensland, Australia.	Carbon Offset	83	M_1, M_2, M_5, M_{10}
Faggi et al. (2014)	Argentine	VEAs	3	M_5, M_7, M_{10}
Mariotti et al. (2014)	Saudi Arabia	ISO 14001	66	M_1, M_3, M_6, M_8, M_{10}
Ormazabal and Sarriegi (2014)	Spain and Italy	EMAS	70	M_3, M_5, M_7, M_9, M_{10}
Santos et al. (2016)	Portugal	ISO 14001	46	M_3, M_5, M_7, M_{10}
Cater, Collins and Beal (2017)	The United States	Fairtrade	35	M_{10}
Manrique and Carmen-Pilar (2017)	Worldwide	VEAs	2982	M_2
Martín-de Castro et al. (2017)	Spain	ISO 14001	157	M_1, M_5, M_6
Dai, Chan and Yee (2018)	China	VEAs	250	M_6, M_7, M_8, M_9
André and Valenciano-Salazar (2020)	Costa Rica	ISO 14001 and CN	24	M_1, M_3, M_5, M_{10}

Notes: CN- Carbon Neutral, EMAS- Eco-management and audit scheme, VEAs- Voluntary environmental approaches, MSCC- Marine Stewardship Council Certification

Table 2 Empirical studies about obstacles for companies to adopt voluntary environmental and social approaches.

Authors	Location	Certifications or approaches	Sample Size	Obstacles
Chin et al. (1999)	Hong Kong, China	ISO 14001	6	O_1, O_3, O_5
Babakri et al. (2003)	United States	ISO 14001	177	O_1, O_2, O_4, O_6
Yiridoe et al. (2003)	Canada	ISO 14001	41	O_1, O_2
Zutshi and Sohal (2005).	Australia	EMAS	3	O_3, O_4, O_6
Schylander and Martinuzzi (2007)	Austria	ISO 14001	71	O_1, O_3, O_5
Tellman et al. (2011)	El Salvador	Fairtrade	2	O_2
Mariotti et al. (2014)	Saudi Arabia	ISO 14001	66	O_2, O_3, O_4, $0_{6.}$
Ormazabal and Sarriegi (2014)	Spain and Italy	Environmental Management	70	O_1, O_2, O_3, O_4,
Ho, Abdul-Rashid and Raja Ghazilla (2016)	Malaysia	MES	25	O_1, O_2, O_4
Santos et al. (2016)	Portugal	ISO 14001	46	O_1, O_2, O_4, O_6
Snider et al. (2017)	Costa Rica	VEAs in coffee	20	O_1, O_2, O_5, O_6,
André and Valenciano-Salazar (2020)	Costa Rica	ISO 14001 and Carbon Neutral	24	O_1

Note: MES- Material Efficiency Strategy, VEAs- Voluntary environmental approaches.

Table 3 Experts interviewed in Costa Rica about companies' motivations and obstacles to get VESCPs.

Company number	Type of company	Interviewees' position	Sector (Activity)	W	Main costumer	Environmental certifications
C_1	National private company	MM	Manufacturing (Cleaning Products)	74	NC	CN, ISO 14001, EBF
C_2	National cooperative	MM, EM	Banking and finance	345	NC	CN, ISO 14001
C_3	National private company	CSRC, EM	Service (Car Sales)	809	NF and NC	CN, ISO 14001
C_4	National private company	MM	Manufacturing (Plastic)	37	NF and NC	ISO 14001, ISO 9001, Esencial Costa Rica. D2W, CN (on the first step of the process)
C_5	Public company	MM	Banking and finance	97	NF and NC	ISO 14001, EBF, OHAS 18000.
C_6	Public company	MM	Banking and finance	86	NF and NC	CN, ISO 14001
C_7	Growers' association (69 small growers)	GM	Agro-industrial (Coffee and Sugar Cane)	5	IF and IC	Fairtrade, Eco-LOGICA, USDA organic
C_8	National private company	GM	Services (Travel agency)	17	IC	CST, CN, EBF
C_9	National private company	CCRC	Services (Car Sales)	1100	NF and NC	CN, ISO 14001

Notes: GM-General Manager, MM- Management Manager, EM- Environmental Manager, CSRC- Corporate Social Responsibility Coordinator, CST- The Costa Rican Certification for Sustainable Tourism; CN-Carbon Neutral, EBF- Ecological Blue Flag, OHAS - Occupational Health and Safety Management, USDA - The United States Department of Agriculture, NC- National consumers, NF- National firms, IC-International consumers, IF-International firms, W-number of workers. *The name of the interviewees and companies are omitted for the sake of anonymity.

Table 4 Participating companies and position of the respondent in the quantitative evaluation.

RP	Type of company	Activity	W	MC	Certification
GM	National private company	Service (tourism agency)	17	IC	CN
EM	National public company	Banking and finance	5800	NC and NF	CN
GM	Multinational	Service (rent a car)	50	IC and NC	CN
EM	National private company	Agro-industrial (pineapple)	n.a.	IF and IC	CN
QM	Multinational	Manufacturing (technology)	1400	IF and NF	CN
QM	National cooperative	Industrial (electrical energy)	650	NC and NF	CN
CSRC	National private company	Service (car sales)	1100	IC	CN
QM	National public company	Banking and finance	86	NC and NF	CN
EM	National private company	Manufacturing (cleaning products)	74	NC	CN
EM	National private company	Service (hospital)	941	NC and IC	CN
EM	National private company	Service (hotel)	58	IC and NC	CN
GM	Cooperative (4800 growers)	Agro-industrial (coffee)	260	IF and IC	FT
GM	Growers' association (69 growers)	Agro-industrial (coffee and sugar)	5	IF and IC	FT
GM	Cooperative (25 growers)	Agro-industrial (pineapple)	4	IF and IC	FT
GM	Cooperative (242 growers)	Agro-industrial (sugar)	5	IF and IC	FT
MMa	Cooperative (498 growers)	Agro-industrial (coffee)	66	IF and IC	FT
EA	Cooperative (7000 growers)	Agro-industrial (coffee and sugar)	n.a.	IF and IC	FT
GM	Cooperative (620 growers)	Agro-industrial (coffee)	36	IF and IC	FT
GM	Cooperative (137 growers)	Agro-industrial (coffee)	12	IF and IC	FT
QM	Cooperative (2701 growers)	Agro-industrial (coffee)	24	IF and IC	FT
QM	Cooperative (380 growers)	Agro-industrial (coffee)	n.a.	IF and IC	FT
GM	Cooperative (911 growers)	Agro-industrial (coffee)	182	IF and IC	FT

Notes: RP-Respondent position, EA-Working into the environmental area, GM-General Manager, MMa-Market Manager, QM- Quality Manager, EM- Environmental Manager, CSRC- Corporate Social Responsibility Coordinator, MC-Main Costumer, NC- National consumers, NF- National firms, IC-International consumers, IF-International firms, W-number of workers, n.a.-not available.

*The name of the interviewees and companies are omitted for the sake of anonymity.

Table 6 Companies' motivations and obstacles to adopt social and environmental certifications highlighted in the interviews.

Company	C_1	C_2	C_3	C_4	C_5	C_6	C_7	C_8	C_9
Motivations									
Increasing sales, market shares or prices	✓	✓	✓	✓			**✓***		
Reducing the financing cost		✓		✓					
Increasing efficiency, cost reductions		✓		✓	✓			✓	
Improving reputation and green image	✓		**✓***			**✓***			✓
Improving the company's relationship with stakeholders					**✓***	✓		**✓***	
Preparing firms for mandatory regulations					✓				
Motives related with environmental awareness	**✓***	**✓***		**✓***	✓	✓	✓		**✓***
Obstacles									
Clean investment	**✓***	**✓***	✓		✓		**✓***	✓	✓
Certification costs				**✓***	**✓***		✓	**✓***	
Preparing information and documentation			**✓***	✓	✓	✓			**✓***
Resistance of employees and/or suppliers				✓		**✓***			

***Main aspect emphasized by the manager**

Table 5 Motivations for Costa Rican companies to achieved environmental certifications.

Motivations	FT firms (n=11)		CN firms (n=11)		Mann-Whitney	Overall (n=22)	
	R	Mean	R	Mean	p value	R	Mean
Commitment to the quality of the environment and the sustainable development goals of the country (M_{10})	2	4.54 (0.31)	1	4.64 (0.15)	0.5563	1	4.59(0.17)
Improving green image, enhancing public recognition and social legitimacy (M_5)	3	4.09 (0.25)	2	4.36 (0.24)	0.4165	2	4.23(0.17)
Improving the relationship with stakeholders (M_6)	4	3.73 (0.30)	3	4.18 (0.23)	0.2684	3	3.95(0.19)
Increasing sales, market shares or prices (M_1)	1	4.73 (0.19)	6	2.73 (0.27)	0.0002***	4	3.73(0.27)
Saving production costs or increasing productivity (M_3)	8	2.64 (0.53)	4	3.91 (0.37)	0.1019	5	3.27(0.27)
Preparing firm for mandatory regulations (M_7)	9	2.45 (0.28)	5	2.91 (0.34)	0.2603	6	2.68(0.22)
Receiving technical assistance and information from environmental agencies (M_4)	5	2.91 (0.49)	8	1.73 (0.27)	0.0763	7	2.32(0.31)
Certification demands on the part of the companies that lead the value chain (M_8)	6	2.73 (0.43)	7	1.82 (0.42)	0.063	8	2.27(0.31)
Following competitors' strategy (M_9)	7	2.73 (0.38)	10	1.36 (0.28)	0.0126*	9	2.05(0.27)
Reducing the financing cost or increasing market value of the company (M_2)	10	1.73 (0.38)	9	1.73 (0.36)	1	10	1.73(0.26)

Legend: * $p<0.05$; ** $p<0.01$; *** $p<0.001$. Standard errors in parentheses.

Notes: R=Ranking; Likert scale (level of importance): 1=very low, 2=low, 3=moderate, 4=high, 5=very high

Table 6 Obstacles for Costa Rican companies to achieve environmental certifications.

Obstacles	FT firms (n=11)		CN firms (n=11)		Mann-Whitney test	Overall (n=22)	
	R	Mean	R	Mean	p value	R	Mean
High investment costs in clean technologies (O_1)	1	3.54 (0.43)	1	3.64 (0.36)	0.9459	1	3.59 (0.28)
High costs of certification (external auditors, verification costs) (O_2)	2	3.36 (0.53)	3	3.09 (0.41)	0.7109	2	3.23 (0.33)
Difficulty finding information and preparing documentation (O_3)	6	2.73 (0.51)	2	3.18 (0.42)	0.5444	3	2.95 (0.33)
Resistance of employees (O_4)	3	3 (0.43)	4	2.54 (0.43)	0.4192	4	2.77 (0.30)
Difficulty in designing and implementing an EMS (O_5)	4	2.82 (0.38)	5	2.27 (0.31)	0.2906	5	2.54 (0.24)
Resistance of shareholders, owners, or managers (O_6)	5	2.82 (0.44)	6	1.18 (0.12)	0.0020***	6	2 (0.29)

Legend: * p<0.05; ** p<0.01; *** p<0.001. Standard errors in parentheses.

Notes: R: Ranking. Likert scale: 1=very easy, 2=easy, 3=moderate, 4=difficult, 5=very difficult.